THE DEVELOPMENT AND TESTING OF THE LIVELY LATER LIFE PROGRAMME (3LP) FOR INSTITUTIONALISED ELDERLY PEOPLE IN MALAYSIA

(Volume 1)

AKEHSAN DAHLAN

A thesis submitted in partial fulfilment of the requirement for the degree of Doctor of Philosophy

QUEEN MARGARET UNIVERSITY 2011
Abstract

Changes in demographic characteristics and modernisation in Malaysia have contributed to relocation of many elderly people to an elderly institution which is rapidly growing in number in Malaysia in spite of traditional cultural values and the personal beliefs towards elderly people.

Living in elderly institutions is often associated with deterioration in well-being as a result of negative issues in institutions such as occupational injustice, loss of meaningful relationships, loss of autonomy and individuality which lead to psychological problems such as depression. Subsequently these issues affect several domains in life including future orientation towards ageing (ERA), general self-efficacy (GSE) and quality of life (QoL).

Various lifestyle redesign programmes based on occupational therapy have been conducted to prevent such deterioration. However, such programmes are conducted in Western countries and were design for elderly people in the community. To date, there is no substantial work exploring the applicability of such programmes to elderly people in institutions and in different sets of cultures, values and beliefs such as in Malaysia. This provides justification for the need for such a study.

The aim of this concurrent embedded experimental mixed methods study was to explore the effect, and identify the ideographic experience, of forty-six elderly people living in a public funded elderly people institution in Malaysia before and after participated in a new lifestyle redesign programme known as the Lively Later Life Programme (3LP) on ERA, GSE and QoL. Another thirty-six elderly people in a control group participated in an ‘in-house’ programme.

After six months of taking part in the 3LP, there were statistical significant changes in the scores of the study measures for the participants in the experimental group. In addition, the participants provided ideographic experiences exemplified in various themes relating to the experience of taking part in the 3LP which supported and elaborated the changes in the scores of the study measures.

Findings from this study contribute to evidence based practice in occupational therapy, validate and expand previous lifestyle redesign programmes. In addition, the findings demonstrate that a lifestyle redesign programme based on occupational therapy can be successfully transferred to a different setting, transcend cultural barriers and philosophies of life.

Keywords

Aged; institutions for elderly people; Lifestyle; occupational therapy; mixed methodology; quality of life; expectations regarding ageing; self-efficacy.
Acknowledgments

There are so many people whom I would like to thank, to convey my deepest gratitude and to whom I greatly indebted. They have provided me with so much support, love and attention throughout the rollercoaster ride of my PhD life.

Firstly, I would like to thank the wonderful supervisory team, Prof. Dr. Maggie Nicol and Dr. Donald Maciver. Thank you for your continuous compassion, encouragement, physical and emotional support whenever I needed it, especially during those ‘blip’ times.

I am grateful to Queen Margaret University for providing me the opportunity to study, for Ministry of Higher Education, Malaysia and University of Technology MARA, Malaysia for the opportunity afforded by this PhD studentship.

I am also grateful for Prof. Florence Clark and her colleagues, Prof. Gail Mountain and her colleagues for giving me the inspiration to design the Lively Later Life Programme for elderly people in the institution.

Special thanks are due to the Department of Social Welfare for allowing me to conduct the study and to all of the participants in this study who provided me with so much information, who taught me so many things, meanings and priorities in life. It was indeed a great privilege to know and work with all of you.

Special thanks also to my family, my in-laws, my brothers, my sisters and my friends, especially my Mum, a 92 year old petit lady with the ‘courage of a thousand men’, who provided me with so much strength and the reason to go on. Without you, I would never have survived. Thanks Mum!

Thank you for Mr. David Owen for proof reading the thesis. This thesis would not be a thesis without your help.

Thank you to Nik Tahirah Nik Hussin who has been an excellent librarian and wonderful friend, who often lent an ear for my sob stories and who provided me with so much encouragement and help to go on.

Finally, I would like to thank my wonderful wife who has become a ‘father’ and a mother throughout the process of study, for understanding, for tolerance, for enduring the times I had to be away from home. Indeed, it would not possible without you. To my ‘cinta’ who gives me so much loves, so much strength and reason to live. I am really sorry papa was not there when you took your first steps or when needed me the most, but I promise that I will make it up to you … somehow, someday.
Dedication

This thesis is dedicated to my late father, Hj. Dahlan Bin Hj. Basri and my late sisters, Saemah and Sadiah Hj. Dahlan.
**Acronyms and Abbreviations**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHO</td>
<td>World Health Organisation</td>
</tr>
<tr>
<td>3LP</td>
<td>Lively Later Life Programme</td>
</tr>
<tr>
<td>ERA</td>
<td>Expectations Regarding Ageing</td>
</tr>
<tr>
<td>ERAS</td>
<td>Expectations Regarding Ageing Scale</td>
</tr>
<tr>
<td>GSE</td>
<td>General Self-efficacy</td>
</tr>
<tr>
<td>GSES</td>
<td>General Self-efficacy Scale</td>
</tr>
<tr>
<td>WHOQoL-Brief</td>
<td>Brief Version of World Health Organisation Quality of Life</td>
</tr>
<tr>
<td>QoL</td>
<td>Quality of Life</td>
</tr>
<tr>
<td>NHMS III</td>
<td>Third National Health and Morbidity Survey</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
</tr>
<tr>
<td>DOSW</td>
<td>Department of Social Welfare</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health, Malaysia</td>
</tr>
<tr>
<td>MWFC</td>
<td>Ministry of Women, Family and Community, Malaysia</td>
</tr>
<tr>
<td>ADL</td>
<td>Activities of Daily Living</td>
</tr>
<tr>
<td>OT</td>
<td>Occupational Therapy</td>
</tr>
<tr>
<td>CINAHL</td>
<td>the Cumulative Index to Nursing and Allied Health Literature</td>
</tr>
<tr>
<td>MyAIS</td>
<td>Malaysian Abstracting and Indexing System</td>
</tr>
<tr>
<td>IPA</td>
<td>Interpretative Phenomenological Analysis</td>
</tr>
<tr>
<td>β</td>
<td>Beta</td>
</tr>
<tr>
<td>α</td>
<td>Alpha</td>
</tr>
<tr>
<td>SD</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>IADL</td>
<td>Instrumental Activities of Daily Living</td>
</tr>
<tr>
<td>AOTA</td>
<td>American Occupational Therapist Association</td>
</tr>
<tr>
<td>FSQ</td>
<td>Functional Status Questionnaires</td>
</tr>
<tr>
<td>SEEP</td>
<td>Self-Efficacy Enhancing Programme</td>
</tr>
<tr>
<td>QUANT</td>
<td>Emphasis on Quantitative research</td>
</tr>
<tr>
<td>Quali</td>
<td>Less emphasis on qualitative research</td>
</tr>
<tr>
<td>MMSE</td>
<td>Mini Mental State Examination</td>
</tr>
<tr>
<td>GDS</td>
<td>Geriatric Depression Scale</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Form</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------</td>
</tr>
<tr>
<td>CR</td>
<td>Cardio-respiratory</td>
</tr>
<tr>
<td>IC</td>
<td>Interest Checklist</td>
</tr>
<tr>
<td>HRQOL</td>
<td>Health Related Quality of Life</td>
</tr>
<tr>
<td>CONSORT</td>
<td>Consolidate Standards of Reporting Trials</td>
</tr>
<tr>
<td>CI</td>
<td>Confident Interval</td>
</tr>
<tr>
<td>$p$</td>
<td>Probability</td>
</tr>
<tr>
<td>Md</td>
<td>Median</td>
</tr>
<tr>
<td>$d$</td>
<td>Effect size</td>
</tr>
<tr>
<td>COT</td>
<td>College of Occupational Therapy</td>
</tr>
<tr>
<td>USA</td>
<td>United States of America</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>AAM</td>
<td>Active Ageing Model</td>
</tr>
<tr>
<td>IQR</td>
<td>Inter-quartile range</td>
</tr>
<tr>
<td>$u$</td>
<td>Mann-Whitney scores</td>
</tr>
<tr>
<td>E</td>
<td>Experimental Group</td>
</tr>
<tr>
<td>C</td>
<td>Control Group</td>
</tr>
<tr>
<td>PRE</td>
<td>Pre experiment</td>
</tr>
</tbody>
</table>
Table of Contents Volume 1

Abstract ........................................................................................................................................... i
Acknowledgements ......................................................................................................................... ii
Dedication ........................................................................................................................................... iii
Lists of acronyms and abbreviations ............................................................................................... iv

CHAPTER 1: SETTING THE SCENE AND BACKGROUND OF THE STUDY .................................................... 1
1.0. Introduction ................................................................................................................................... 2
1.1 Introduction to the socio, demographic and economic characteristics of elderly people in Malaysia ................................................................. 4
1.2 The implications of changes in health, socio-demographic and economic characteristics ........................................................................................................ 6
1.3 Core values and perceptions towards elderly people ................................................................. 9
1.4 Health and social welfare provision for elderly people in Malaysia ........................................ 11
1.5 Care for elderly people in Malaysia ......................................................................................... 12
1.6 Institutionalised elderly people in Malaysia .......................................................................... 13
1.7 Significance of the study ............................................................................................................. 15
1.8 Scope of the study ....................................................................................................................... 17
1.9 Study process ............................................................................................................................. 18
1.10 Synopsis of the thesis ................................................................................................................. 20
1.11 Conclusion ............................................................................................................................... 21
1.12 Summary points of Chapter 1 ............................................................................................... 22
CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK OF THE STUDY .......................................................... 23

2.0 Introduction .................................................................................................................................................. 24

SECTION 1: Inter-related issues in elderly institutions .......................................................... 28

2.1 Introduction .................................................................................................................................................. 28

2.2 Main issues in elderly institutions ........................................................................................................... 28

2.2.1 Issue 1: Occupational injustice ........................................................................................................... 29

2.2.2 Issue 2: Lack of meaningful relationships .......................................................................................... 32

2.2.3 Issue 3: Lack of autonomy and individuality ...................................................................................... 34

2.2.4 Issue 4: Depression, social isolation and loneliness ........................................................................ 37

2.3 Conclusion ................................................................................................................................................. 40

SECTION 2: EFFECT OF THE ISSUES ........................................................................................................... 41

2.4 Introduction ................................................................................................................................................. 41

2.5 EXPECTATION REGARDING AGEING (ERA) ......................................................................................... 41

2.5.1 Defining ERA ........................................................................................................................................ 41

2.5.2 Evaluation of ERA ............................................................................................................................ 43

2.5.3 The implication of low and high ERA .............................................................................................. 44

2.5.4 Factors influencing ERA .................................................................................................................. 46

2.5.5 ERA amongst the community and institutionalised elderly people ........................................ 48

2.5.6 Conclusion ........................................................................................................................................... 50

2.6 GENERAL SELF EFFICACY (GSE) ......................................................................................................... 51

2.6.1 Introduction ........................................................................................................................................ 51

2.6.2 Evaluating self-efficacy .................................................................................................................... 52

2.6.3 Factors influencing self efficacy ...................................................................................................... 54

2.6.4 Self efficacy amongst elderly people in the community and in institutions ................................ 56
CHAPTER 3: METHODOLOGY AND DESIGN OF THE STUDY ............ 102

3.0 Introduction ........................................................................ 103

SECTION 1: Study design and method ........................................ 104

3.1 Introduction ........................................................................ 104

3.2 Purpose of the study .............................................................. 108

3.3 Objectives of the study ........................................................... 108

3.4 Questions of the study ............................................................ 109

3.5 Hypothesis of the study .......................................................... 109

SECTION 2: Theoretical perspective of the study ......................... 110

3.6 Introduction ........................................................................ 110

3.7 Types and classification design in mixed methods ................ 114

3.8 Steps in mixed methods ........................................................ 116

3.10 Data analysis process and interpretation in mixed methods .... 119

SECTION 3: The study context .................................................... 120

3.11 Introduction to the institution and residents ......................... 120

3.12 Participants recruitment and inclusion criteria .................... 124

3.13 Screening process and tools ................................................ 129

3.14 Phases and stages of the study ............................................. 130

3.14.1 Phase 1: Pre experimental phase .................................... 131

3.14.2 Phase 2: Experimental Phase ......................................... 132

3.14.3 Phase 3: Post-experimental phase .................................. 132

SECTION 4: Method of data collection and integrations ............... 135

3.15 Quantitative research design .............................................. 135

3.15.1 Method of data collection ............................................... 136

3.15.1.1 Pre experimental stage .............................................. 136

3.15.1.2 Post experimental stage .............................................. 137
3.15.3 Translation of study measures ....................................................... 147
3.15.4 Sample size and power ................................................................. 149
3.15.5 Randomisation, concealment and blinding ................................. 151
3.15.6 Data analysis .................................................................................. 154
3.16 Qualitative research design ............................................................... 159
3.16.2 Pre experiment focus groups ......................................................... 162
3.16.2 Post experimental focus groups .................................................... 162
3.16.4 Qualitative research question and focus groups questions .......... 168
3.16.5 Sampling ........................................................................................ 170
3.16.6 Data analysis .................................................................................. 172
3.16.7 Translation of the themes emerged and presentation of the quotes 179
3.17 Mixed methods data integration ......................................................... 179
SECTION 5: Ethical issues ....................................................................... 181
3.18 Validity, reliability and trustworthiness .......................................... 183
3.19 Conclusion ......................................................................................... 191
3.20 Summary points of Chapter 3 .......................................................... 192

CHAPTER 4: THE INTERVENTION ......................................................... 195
4.0 Introduction .......................................................................................... 196
4.1 In house programme .......................................................................... 196
4.2 Proposed intervention - Lively Later Life Programme (3LP)........... 197
4.2.1 Introduction – the need for a health promotional programme in the institution ................................................................................. 197
4.2.2 The aim and objectives of 3LP ....................................................... 198
4.2.3 The emblem of the 3LP ................................................................. 200
4.2.4 Theoretical framework of 3LP ..................................................... 202
4.2.4.1 Health promotion and education (lifestyle re-design) .......... 202
CHAPTER 7: EXPECTATIONS REGARDING AGEING (ERA) – RESULTS, FINDINGS AND DATA INTEGRATION ...................................................... 259

7.0 Introduction ............................................................................. 260

7.1 Quantitative and qualitative data integration from pre 3LP ........ 260

7.1.1 Pre 3LP quantitative results .................................................. 260

7.1.2 Pre 3LP qualitative findings .................................................. 262

7.1.2.1 Super-ordinate theme 1: Adjustment and adaptation ........ 262

7.1.2.2 Super-ordinate theme 2: Future hopes and wishes .......... 264

7.1.3 Discussion and data integration pre 3LP for ERA ............... 266

7.1.3.1 Introduction ..................................................................... 266

7.1.3.2 Discussion ...................................................................... 266

7.1.3.3 Conclusion for pre 3LP ................................................... 274

7.2 Quantitative and qualitative data integration from post 3LP for ERA ................................................................. 274

7.2.1 Post 3LP quantitative results ............................................... 274

7.2.2 Post 3LP qualitative findings ............................................... 277

7.2.2.1 Master theme 2: ‘I can’ ................................................... 278

7.2.2.2 Master theme 3: ‘I have’ .................................................. 279

7.2.2.3 Master theme 4: ‘Next week’ .......................................... 280

7.2.2.4 Master theme 5: ‘I feel’ .................................................... 281

7.2.2.5 Master theme 6: ‘I want’ .................................................. 281

7.2.3 Data integration and discussion post 3LP for ERA ............ 283

7.2.3.1 Introduction ................................................................... 283

7.2.3.2 Discussion .................................................................... 283

7.2.3.3 Conclusion post 3LP for ERA ........................................ 286

7.3 Overall conclusion ................................................................. 287
CHAPTER 8: GENERAL SELF-EFFICACY (GSE) – RESULTS, FINDINGS AND DATA INTEGRATIONS

8.0 Introduction ........................................................................................................... 292

8.1 Quantitative and qualitative data from pre 3LP ............................................... 292

8.1.1 Pre intervention quantitative results ............................................................... 292

8.1.2 Pre intervention qualitative findings ................................................................. 293

8.1.2.1 Super-ordinate theme 1: Apprehension and distress............................... 294

8.1.2.1.1 Master theme 1: External issues .......................................................... 294

8.1.2.1.2 Master theme 2: Internal issues .......................................................... 296

8.1.2.2 Super-ordinate theme 2: Adjustment and adaptation .............................. 297

8.1.2.2.1 Master theme 2: Acceptance (Reda) .................................................. 297

8.1.3 Discussion and data integration for pre 3LP in GSE .................................... 298

8.1.3.1 Introduction ............................................................................................... 299

8.1.3.2 Discussion ................................................................................................. 299

8.1.3.3 Conclusion for pre 3LP in GSE ................................................................. 306

8.2 Quantitative and qualitative data from post intervention of the 3LP ............... 307

8.2.1 Post 3LP quantitative results ........................................................................... 307

8.2.2 Post 3LP qualitative findings .......................................................................... 309

8.2.2.1 Super-ordinate theme: ‘being able to’ (changes in life) ......................... 310

8.2.2.1.1 Master theme 2: ‘I can’ ........................................................................ 310

8.2.2.1.2 Master theme 3: ‘I know / I have’ ........................................................ 311

8.2.2.1.3 Master theme 4: ‘Next week’ ............................................................... 312

8.2.2.1.4 Master theme 5: ‘I feel’ ........................................................................ 313

8.2.3 Data integration and discussion for post 3LP in GSE ................................. 314
CHAPTER 9: QUALITY OF LIFE (QoL) - RESULTS, FINDINGS AND DATA INTEGRATION. .................................................................................................................................................. 322

9.0 Introduction.................................................................................................................................................. 323

9.1 Quantitative and qualitative data integration from pre 3LP .......................................................... 323

9.1.1 Pre intervention quantitative results.................................................................................................. 323

9.1.1.1 Analysis of question 1: How do you rate your quality of life? .................................................. 323

9.1.1.2 Analysis of question 2 - How satisfied are you with your health? .............................................. 325

9.1.1.3 Analysis of all domains in WHOQoL – Physical, psychological, social relationships and environment .................................................................................................................................................. 325

9.1.2 Pre intervention qualitative findings ................................................................................................ 327

9.1.2.1 Master theme 1: Contentment (Syukoor) .................................................................................. 328

9.1.2.2 Master theme 2: Acceptance ........................................................................................................ 330

9.1.3 Discussion and data integration for pre 3LP .................................................................................. 331

9.1.3.1 Introduction .................................................................................................................................................. 331

9.1.3.2 Discussion .................................................................................................................................................. 331

9.1.3.3 Conclusions for pre 3LP .................................................................................................................. 341

9.2 Quantitative and qualitative data post 3LP ....................................................................................... 343

9.2.1 Post intervention quantitative results ............................................................................................. 343

9.2.1.1 Analysis of question 1: How do you rate your quality of life? .................................................. 343

9.2.1.2 Analysis of question 2 - How satisfied are you with your health? .............................................. 345
9.2.1.3 Analysis of all domains in WHOQoL for post intervention for experimental group and control group .............................................. 346
9.2.1.4 Differences pre and post intervention for all domains in WHOQoL 348

9.2.2 Post intervention qualitative findings ............................................ 349

9.2.2.1 Master theme 1: ‘I am busy’ ...................................................... 350
9.2.2.3 Master theme 3: ‘I have’ .......................................................... 354
9.2.2.5 Master theme 5 : ‘I feel’ .......................................................... 356

9.2.3 Discussion and data integration for post 3LP .................................. 357

9.2.3.1 Introduction ............................................................................ 357
9.2.3.2 Data integration ..................................................................... 358
9.2.3.3 Conclusion for post 3LP .......................................................... 366

9.3 Overall Conclusion ........................................................................ 367

9.4 Summary points for Chapter 9 ....................................................... 370

CHAPTER 10: CONCLUSION AND FUTURE DIRECTION ......................... 373

10.0 Introduction .................................................................................. 374

10.1 Contribution of the findings to occupational therapy (OT) ............ 374

10.1.1 Process in occupational engagement ........................................ 376

10.1.1.1 Previous findings supported .................................................. 376

10.1.1.2 New contribution ................................................................ 382

10.1.1.3 Challenge .......................................................................... 389

10.1.2 Benefits of engagement in occupations ..................................... 392

10.1.2.1 Previous finding supported .................................................. 392

10.1.2.2 New contribution ................................................................ 393

10.1.3 The issues in the elderly institution .......................................... 394

10.1.3.1 Supported .......................................................................... 394
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.1.3.2</td>
<td>New contribution</td>
<td>396</td>
</tr>
<tr>
<td>10.2</td>
<td>Limitation of the study</td>
<td>397</td>
</tr>
<tr>
<td>10.3</td>
<td>Recommendation for future research</td>
<td>399</td>
</tr>
<tr>
<td>10.4</td>
<td>Practice recommendation from the findings</td>
<td>400</td>
</tr>
<tr>
<td>10.5</td>
<td>Policy implications from the findings</td>
<td>403</td>
</tr>
<tr>
<td>10.6</td>
<td>Summary of points for Chapter 10.</td>
<td>404</td>
</tr>
</tbody>
</table>
## List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1.1:</td>
<td>Total population and number of elderly people in Malaysia.</td>
<td>4</td>
</tr>
<tr>
<td>Table 2.1:</td>
<td>Comparison of WHOQoL means scores (SD) amongst elderly people.</td>
<td>71</td>
</tr>
<tr>
<td>Table 3.1:</td>
<td>Phases and stages of the study</td>
<td>130</td>
</tr>
<tr>
<td>Table 3.2:</td>
<td>Stages of data collection and list of the study measures.</td>
<td>137</td>
</tr>
<tr>
<td>Table 3.3:</td>
<td>Description of the quantitative outcome measures.</td>
<td>144</td>
</tr>
<tr>
<td>Table 3.4:</td>
<td>Focus groups questions for pre and post experimental</td>
<td>166</td>
</tr>
<tr>
<td>Table 3.5:</td>
<td>Qualitative research questions</td>
<td>168</td>
</tr>
<tr>
<td>Table 3.6:</td>
<td>Method to establish validity of the study</td>
<td>185</td>
</tr>
<tr>
<td>Table 4.1:</td>
<td>Core content in the group session of 3LP.</td>
<td>224</td>
</tr>
<tr>
<td>Table 4.2:</td>
<td>Differences between 3LP and ‘In-house’ programme.</td>
<td>227</td>
</tr>
<tr>
<td>Table 5.1:</td>
<td>Characteristics of the participants (pre randomization)</td>
<td>235</td>
</tr>
<tr>
<td>Table 5.2:</td>
<td>Characteristics of the participants in experimental and control groups.</td>
<td>236</td>
</tr>
<tr>
<td>Table 5.3:</td>
<td>Results of the interest checklist pre intervention.</td>
<td>238</td>
</tr>
<tr>
<td>Table 5.4:</td>
<td>Summary of number of activities conducted based on gender and age groups.</td>
<td>240</td>
</tr>
<tr>
<td>Table 7.1:</td>
<td>Results of ERA pre intervention and differences between groups</td>
<td>261</td>
</tr>
<tr>
<td>Table 7.2:</td>
<td>Results of ERA post intervention and differences between groups</td>
<td>275</td>
</tr>
<tr>
<td>Table 7.3:</td>
<td>Wilcoxon signed rank test on ERA for experimental and control group pre and post intervention.</td>
<td>276</td>
</tr>
<tr>
<td>Table 8.1:</td>
<td>Results of GSE pre intervention and differences between groups</td>
<td>293</td>
</tr>
</tbody>
</table>
Table 8.2: Results of GSE post intervention and differences between groups 307
Table 8.3: Wilcoxon signed rank test on GSE for experimental and control group pre and post intervention. 308
Table 9.1: Descriptive analysis of question 1 WHOQoL-Bref. 324
Table 9.2: Mann-Whitney U Test for Question 1 and 2 of the WHOQoL -Bref pre experimental study for experimental group and control group. 324
Table 9.3: Descriptive analysis of question 2 WHOQoL-Bref. 325
Table 9.4: WHOQoL-Bref scores and Mann-Whitney U Test for all domains pre experimental study for experimental group and control group. 326
Table 9.5: Descriptive analysis of the question 1 post experimental. 343
Table 9.6: Mann-Whitney U Test for Question 1 and 2 of the WHOQoL-Bref post experimental for experimental group and control group. 344
Table 9.7: Wilcoxon Signed rank Test for question 1 and 2 WHOQoL-Bref between experimental group and control group. 345
Table 9.8: Descriptive analysis of the question 2 post experimental 345
Table 9.9: WHOQoL-Bref scores and Mann-Whitney U Test for all domains post experimental study for experimental group and control group. 347
Table 9.10: Wilcoxon Signed rank Test for all domains in WHOQoL – Bref pre and post for experimental group and control group. 349
Table 10.1 Key contributions to Occupational Therapy 376
# List of Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1.1</td>
<td>The study process.</td>
<td>19</td>
</tr>
<tr>
<td>Figure 2.1</td>
<td>The literature review framework.</td>
<td>27</td>
</tr>
<tr>
<td>Figure 2.2</td>
<td>Main issues in elderly institution.</td>
<td>29</td>
</tr>
<tr>
<td>Figure 2.3</td>
<td>Conceptual framework of the study.</td>
<td>98</td>
</tr>
<tr>
<td>Figure 3.1</td>
<td>The methodology framework.</td>
<td>103</td>
</tr>
<tr>
<td>Figure 3.2</td>
<td>Typology of the study</td>
<td>107</td>
</tr>
<tr>
<td>Figure 3.3</td>
<td>Steps in mixed methods</td>
<td>117</td>
</tr>
<tr>
<td>Figure 3.4</td>
<td>The process of screening and selection of the participants in the study.</td>
<td>128</td>
</tr>
<tr>
<td>Figure 3.5</td>
<td>The process of the concurrent embedded experimental design</td>
<td>134</td>
</tr>
<tr>
<td>Figure 3.6</td>
<td>Translation process of the study measures.</td>
<td>148</td>
</tr>
<tr>
<td>Figure 3.7</td>
<td>Data analysis process in the quantitative study.</td>
<td>158</td>
</tr>
<tr>
<td>Figure 3.8</td>
<td>Process and Participants in focus groups. Focus group distribution pre and post experimental phase</td>
<td>165</td>
</tr>
<tr>
<td>Figure 3.9</td>
<td>Data analysis process of the qualitative study.</td>
<td>178</td>
</tr>
<tr>
<td>Figure 4.1</td>
<td>Emblem for 3LP</td>
<td>201</td>
</tr>
<tr>
<td>Figure 4.2</td>
<td>Representation of veins in 3LP leaves on the leaves</td>
<td>201</td>
</tr>
<tr>
<td>Figure 4.3</td>
<td>Theoretical framework for 3LP.</td>
<td>202</td>
</tr>
<tr>
<td>Figure 4.4</td>
<td>Approaches in 3LP.</td>
<td>209</td>
</tr>
<tr>
<td>Figure 4.5</td>
<td>Interrelated Characteristics in 3LP.</td>
<td>211</td>
</tr>
<tr>
<td>Figure 4.6</td>
<td>SEEP and strategies.</td>
<td>215</td>
</tr>
<tr>
<td>Figure 4.7</td>
<td>The 3LP model.</td>
<td>218</td>
</tr>
<tr>
<td>Figure 4.8</td>
<td>Guideline topic for individual session</td>
<td>221</td>
</tr>
<tr>
<td>Figure 6.1</td>
<td>The continuum of preliminary emerged themes and linkages in the pre experimental phase for all groups.</td>
<td>249</td>
</tr>
<tr>
<td>Figure 6.2</td>
<td>Super-ordinate themes and master themes in the pre</td>
<td>251</td>
</tr>
</tbody>
</table>
experimental phase.

Figure 6.3: Themes shared amongst the domains in the pre experimental Phase.

Figure 6.4: Subthemes emerged and linkages in the post experiment phase for all focus groups.

Figure 6.5: Themes emerged in the post experimental phase.

Figure 6.6: Themes shared amongst domains in the post experimental phase.

Figure 7.1: Box plot distributions between experimental groups and control group in total ERA scores.

Figure 7.2: Themes from pre intervention focus group.

Figure 7.3: Box plot distribution of scores for total expectation regarding aging pre-intervention and post-intervention for experimental groups and control group.

Figure 7.4: Post intervention themes for experimental group.

Figure 7.5: Integration of pre and post ERA for the experimental group.

Figure 8.1: Box plots distributions between the experimental group and control group in GSE pre intervention.

Figure 8.2: Pre intervention themes for GSE.

Figure 8.3: Box plots distributions between the experimental group and control group in GSE post intervention.

Figure 8.4: Box plots distribution of scores for GSE pre and post intervention.

Figure 8.5: Post intervention themes for GSE in the experimental group.

Figure 8.6: Integration of pre and post intervention for GSE for the experimental group.

Figure 9.1: Box plots for all domains in WHOQoL-Bref pre experimental study for experimental group and control group.
Figure 9.2 : Themes for pre experimental focus groups. 328
Figure 9.3 : Box plots for all domains in WHOQoL-Bref post experimental study for experimental group and control group. 348
Figure 9.4: Themes for post experimental focus groups. 350
Figure 9.5 : Integration pre and post intervention for the experimental group. 369
### Boxes

<table>
<thead>
<tr>
<th>Box</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Box 3.1</td>
<td>General purpose of MM.</td>
<td>115</td>
</tr>
<tr>
<td>Box 3.2</td>
<td>Strength of the association.</td>
<td>156</td>
</tr>
</tbody>
</table>

### Formula

<table>
<thead>
<tr>
<th>Formula</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula 3.1</td>
<td>Effect size for non-parametric testing.</td>
<td>156</td>
</tr>
</tbody>
</table>
CHAPTER 1:

SETTING THE SCENE AND BACKGROUND OF THE STUDY
1.0. Introduction

‘Unlike the developed world that became richer before getting older, developing countries are getting older before becoming richer’

(World Health Organisation, 2007)

As in many countries in the world, the socio-demographic landscape of Malaysia is changing. It is predicted that by the year 2020¹ (or perhaps earlier), Malaysia will fall under the category of an ageing country as defined by the United Nations (2009). The development of economic circumstances, advancement in health care, coupled with declining birth rate and longer life expectancy has evoked some degree of trepidation. The development has brought some less positive consequences, for example changing the core values, beliefs and social fabric characteristics of the society. Many young people, men and women, have moved from the rural areas to the urban areas to seek a better life, opportunity and standard of living, thus disregard the role associated with parenting and caring for elderly parents. Furthermore, living in an extended family system is deteriorating as a result of modernisation which emphasises on independency and individualism. Consequently, many ageing parents find themselves living on their own, with a lack of social support, financial resources and deteriorating health conditions. This results in many ageing parents having to be sent to or to seek alternative care in public or private elderly institutions which are rapidly growing in number in Malaysia.

Living in an institution is often associated with reduced well-being, such as deterioration in physical, mental and social functioning as a result of negative issues in elderly institutions; such as occupational deprivation, loss of meaningful social relationship, loss of familiarity, loss of autonomy and individuality (Ice, 2002; Chung, 2004; Holthe et al. 2007; Chuang and Abbey, 2009; Wadensten, 2010; Morgan-Brown et al. 2011). Subsequently, the deteriorations have an impact on

¹2020 is the year that Malaysia hopes to be a developed country as suggested by former Prime Minister, Tun Dr. Mahathir Muhammad.
several important domains of life such as future orientation towards life, general self-efficacy and quality of life.

There are various occupational therapy programmes that could be conducted to prevent the deteriorations, to maintain or to enhance the important domains in life as above, and help elderly people to thrive in the institutions. For example occupational therapy programmes that redesign a lifestyle through reengagement in individualised, meaningful, valued and self-directed occupations. However, such programmes are conducted in the developed countries and were designed for elderly people who live in community settings (Clark et al. 1999; Matuska et al. 2003; Horowitz and Chang, 2004; Mountain et al. 2008). Thus, there is a need for such programmes to be conducted for institutionalised elderly people in Malaysia. This study intended to provide such a programme.

The aim of this study is to develop and evaluate an occupational therapy based intervention programme known as the Lively Later Life Programme (3LP). The aim of 3LP is to improve the expectations regarding ageing (ERA), general self-efficacy (GSE) and quality of life (Qol) amongst institutionalised elderly people in Malaysia and to understand the ideographic experience of the elderly people in these domains before and after the implementation of 3LP.

The following sections will explore the socio demographic characteristics of elderly people in Malaysia, the changes in core values and beliefs as a result of urbanisation and modernisation of its society that has brought the rise in demand for health care and institutionalised services. In relation to this, health services for elderly people and conditions of the institutionalised elderly people in Malaysia will also be explored. This chapter will also provide significant, scope and process of the study and an overall synopsis of the thesis.
CHAPTER 1

1.1 Introduction to the socio, demographic and economic characteristics of elderly people in Malaysia

Malaysia is a developing country which has two regions; West Malaysia (Peninsular Malaysia) and East Malaysia (Sarawak and Sabah) separated by the South China Sea. It consists of 13 states, occupying 329,293 km$^2$. The population of Malaysia in 2009 was estimated to be 26 million people and a growth rate of 1.72% annually. The country is characterised by a wide range of ethnic diversity – Malay, Chinese, Indian and other ethnic groups. These ethnic groups are affiliated with various religious practices; Islam (66.4%), Buddhism (19.2%), Christianity (9.1%) and Hinduism (6.3%). Further, they speak a vast variety of main languages and several indigenous languages (Asmah, 1992). The diversity and complexity of the demographic characteristics produce diverse and complicated cultural values in the ethnicity of Malaysia.

Like any other country in the world, the proportions of elderly people in Malaysia is not only increasing but rapidly ageing. According to the Malaysian Department of Statistics (2009), it is anticipated that Malaysia will become a mature society as shown in Table 1.1 (Mafauzy, 2000; Latiffah et al, 2005; Pala, 2005; Malaysia Department of Statistics, 2009). The mean life expectancy has increased from 66.4 to 70.2 years in males and from 70.5 to 75.0 in females (Malaysian Health Facts, 2008). Improvements in the quality of health, quality of food, advancements in health and quality of life have contributed to longevity in the Malaysian elderly people (Ministry of Health, Malaysia, 2009).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population (millions)</td>
<td>20.1</td>
<td>23.3</td>
<td>26.1</td>
<td>27.7</td>
<td>28.9</td>
<td>31.8</td>
<td>34.9</td>
<td>38.0</td>
<td>41.1</td>
</tr>
<tr>
<td>Number of elderly people 60+ (%)</td>
<td>1.2</td>
<td>1.5</td>
<td>1.7</td>
<td>1.9</td>
<td>2.1</td>
<td>2.7</td>
<td>3.4</td>
<td>4.2</td>
<td>4.9</td>
</tr>
<tr>
<td></td>
<td>6.0</td>
<td>6.4</td>
<td>6.5</td>
<td>6.9</td>
<td>7.3</td>
<td>8.5</td>
<td>9.7</td>
<td>11.1</td>
<td>11.9</td>
</tr>
</tbody>
</table>

Table 1.1: Total population and number of elderly people in Malaysia, 1995 – 2030
The economic characteristics of elderly people change when they reach the retirement age of 58. In addition, many elderly people in Malaysia have a very low level of income and have to be dependent on their children for financial assistance (Lillard and Willis, 1997; Masud et al. 2006; Masud and Haron, 2008; Yin-Fah et al. 2010) and their burden is exacerbated by medical expenses and the rising cost of living especially in urban areas. Thus, many elderly people have to move to rural areas, ‘balik kampong’ (return to the land) (Selvaratnam and Tin, 2007: p. 321) or have to live with their children because of income inadequacy. The economic characteristics of rural elderly people are roughly similar to the elderly in urban areas.

A survey of 350 elderly people living in the rural areas of Mersing points out that 59.2% were unemployed with no pension, 28.3% were working in odd jobs. 49.4% relied on their children for financial assistance (Shahar et al, 2001).

There is an interrelationship between the economic characteristics of the elderly people and their level of education. In general, the current Malaysian elderly people are not well educated (Shahar et al. 2001; Masud and Haron, 2008). This reflects the development of the education policies and opportunities that existed before and after the independence of the country in 1957. For example, in 1979, 75% of the elderly people had never attended school and only 0.3% had tertiary education (Sim, 2002). Furthermore, the trend is more apparent for elderly people who lived in the rural areas (Masud and Haron, 2008). A cross sectional study by Shahar et al (2001) indicated that 48% (168) of the sample never attended school and the majority (62.2%) were women. However, the education level is improving and is predicted that, in 2020 only 20.3% of elderly people will never have attended school and 5.9% will have tertiary education (Sim, 2002; Rabieyah and Hajar, 2003; Department of Statistic, Malaysia 2009).
1.2 The implications of changes in health, socio-demographic and economic characteristics

Although the ageing population in Malaysia is lower than in neighbouring countries such as Singapore and Indonesia (United Nations, 2009), it is impossible for the government to ignore the social and economic impact of the ageing population as it has various consequences.

Increasing numbers of elderly people has implications for the provision of health services - as elderly people in Malaysia live longer they will require more health care and hospitalisation for chronic illness, functional dependency, sensory deficits and cognitive impairment (Yeoh, 1980) which will increase government expenditure on health services. Thus, the real challenges in the elderly people are not longevity but caring, maintaining health and well-being (Arokiasamy, 1999).

Increase in age is often associated with increased disability and risk of disease (Azman et al. 2003; Poi et al. 2004; Latiffah et al, 2005; Lee and Khair, 2007; Momtaz et al. 2010). A number of sources point out that there are deteriorations in health status amongst the elderly people in Malaysia regardless of their living arrangements, whether they live in the community or in institutional settings, or live in urban or rural areas.

Medical problems related to the elderly people in Malaysia are mainly eyesight problems (Tan et al, 1996), rheumatism (Chia, 1996) or musculoskeletal related problems like fracture (Lee and Khir, 2007). The main cause of death in public hospitals is related to cardio-respiratory diseases (Malaysian Health Facts, 2006, 2007, 2009) and in a multi stage random sampling strategy amongst elderly people in Malaysia, Momtaz et al. (2010) found that 77.7% of the samples have at least one chronic condition. Early literature indicated that 85.5% of elderly people could cope with activities of daily living (ADL) but that performance deteriorated with advancing age (Chen, et al, 1996). Cognitive impairment seems to affect 6 – 8 per cent of Malaysian elderly people and is correlated with independency in ADL.
performance regardless of gender (Yeoh 1980; Chen 1987; Krishnaswamy et al. 1997; Sherina et al. 2004). Findings from Third National Health and Morbidity Survey (NHMS III 2006) indicated that the prevalence of hospitalisation increased with age. There was 78.4% utilisation of public hospitals in 2002, 23.3% of the utilisation was by elderly people. Those who were admitted had an average length of stay of 10.1 days compared with 5.9 days in 1996. (Institute of Public Health, Malaysia, 2008).

This shows that the health state of the elderly people in Malaysia is deteriorating with age. Similarly, a cross sectional study by Sherina et al (2004) on 263 elderly people indicated that the prevalence of problems related to physical health, dependency in functional abilities and cognitive impairment are 60.1%, 15.7% and 22.4% respectively. The deteriorations are more apparent for institutionalised elderly people (Visvanathan et al. 2005; Mohd Aznan and Samsul, 2007; Ang and Zaiton, 2008; Latipah and Henachi, 2008).

Elder people in Malaysia are at risk of under nutrition (Shahar et al., 2000). The risk of under nutrition was found to be significantly associated with chronic illness, functional disability and depressive symptoms (Sherina and Mustakim, 2002; Sherina et al, 2004; Visvanathan et al, 2005) and the depression or other constructs of psychological wellbeing are more apparent in elderly people living in rural areas than in urban areas (Latiffah et al, 2005). Furthermore, depressive symptoms are associated with the prevalence of falls and fall related problems amongst the elderly people who live alone in rural areas (Rizawati and Mas Ayu, 2008). Thus, the problem of maintaining health and prolonging independence in the elderly people is considered a major challenge in the ageing population in Malaysia (Mafauzy, 2000, Lit, 2007).

As well as decline in health status as described above, there are also changes in the social fabric of the Malaysian society (Johnson and DaVanzo, 1998; Sim, 2007; Norzareen and Nobaya, 2010) Urbanisation and modernisation of the country has changed the characteristics of society in Malaysia. For example, changes in the role
of women and their participation in the labour force. Delay in marriage, smaller family size, migration of the younger generation to urban areas, more jobs and educational opportunities which consequently changes the structure of the family system (Aminah, 1996; Johnson and DaVanzo, 1998; Arpita, 2000; Sim, 2002; Yap et al, 2005; Sim, 2007; Norzareen and Nobaya, 2010).

The extended family structure is being replaced by a nuclear family structure, consequentially affecting the role of the family as care givers for the elderly people (Martin, 1989; Mubarak, 1997; Ng et al, 2005; Selvaratnem and Tin, 2007; Sim, 2007, Cheng Sim, 2003). For example, the urban population increased from 33.5 (as a % of total population) in 1970 to 65.1 % in 2005; elderly people who lived in an extended family decreased from 57.8 % in 1991 to 43.8 % in 2000, whilst the average household size decreased from 5.2 people in 1980 to 4.6 people in 2000 (Department of Statistics Malaysia, 2008). In addition, the fertility rate has been continuously in decline, for example the fertility for all races was 4.2 children born/women in 1975 and 2.1 in 2009, whilst the birth rate also continuously declined from 23.7 births/1000 population to 22.24 in 2009.

These changes have created a vacuum that has seen the development of many private and public nursing homes and other institutional care settings which reflect demand and ability to purchase and are perceived as a significant care option. For example, the first nursing home was established in 1983, and by the year 2001, there were 50 moderate-size nursing homes which contain 40 beds, but there were also many smaller homes (fewer than 10 beds) in operation. These were located in bungalows and private residences. By the year 2007, there were 478 moderate sized residential homes for elderly people run by private companies or non-governmental organisations (NGOs) and seven public elderly institutions (Department of Social Welfare, Malaysia – DOSW, 2007) and the number of people admitted to public elderly institutions increased from 1,686 people in 2002 to 2,040 in 2007 (DOSW, 2007).
As the need and demand increases, placing the elderly people in an institution or nursing home is becoming an increasingly common practice. This is in spite of the cultural expectation and assumption that placing the elderly people in nursing home is a violation to core values, traditions and personal beliefs.

1.3 Core values and perceptions towards elderly people

As in many countries, elderly people in Malaysia are respected (Mansor, 2010). This deep-rooted core value is derived from culture, personal belief and religious affiliations shared amongst the various races in Malaysia (Fortine and Richardson, 2005; Yusaini, 2007; Mansor, 2010). In the teachings of Confucius, Islam and Christianity ethics of filial piety put a strong emphasis on respect and care for the elderly people (Sugirtharjah, 1994; Dai and Dimond, 1998; Darr, 2002; Zang and Montgomery, 2003; Zhan et al. 2008; Wu et al. 2009; Khalaila, 2010; Mertens, 2010; Chou, 2011). Family has long been regarded as a care institution which bears the responsibility for looking after its older members.

According to culture of the Chinese population; based on the teachings of Confucius, there are five ethical codes relating to relationships:

a. Filial piety (highest respect to parents),
b. Loyalty (to the nation),
c. Respect (to spouse),
d. Fraternity (with brothers and sisters) and
e. Trust (towards friends), (Sugirtharjah, 1994; Dai and Daimond, 1998; Zang and Montgomery, 2003; Zhan et al. 2008; Wu et al. 2009).

The Malay ethnic group, which constitutes 66.4% of the population which is Muslim, perceive respect to elderly parents as a duty second to prayer, as God has said:
‘...do not say to them (the parents) a word of disrespect, or scold them, but say a generous word to them. And act humbly to them in mercy, and say, ‘My Lord, have mercy on them, since they cared for me when I was small’

(Quran 17: 23-24)

In addition, there is a verse in the bible that says:

‘Honour your father and your mother, so that you may live long in the land the LORD your God is giving you’

(Exodus 20:12)

Therefore, older people in Malaysia, who are also known as ‘Warga Emas’ (Golden Citizens), are greatly respected and usually are cared by their family. Furthermore, the elderly people themselves do not believe in independence as they expect to be cared by their family in the future (Yang et al. 2006).

In addition to religious affiliation, the cultural core values amongst people in Malaysia also play a significant role in shaping perception towards elderly people. The cultural value requires people to respect elderly people and it is deeply embedded in daily life as illustrated in proverbs as below:

“Syurga di bawah telapak kaki ibu” (Heaven is under mother’s feet)
- Malay proverbs-

The core content of cultural value is comprised of five traditional values and one religious traditional value. They are ‘compliance’, ‘preserving face’, ‘adab’ (mannerism), or ‘sopan-santun’ (politeness), ‘harmony’, ‘community spirit’ and spiritual wellbeing (Mastor et al. 2000; Yusaini, 2007; Zawawi, 2008; Mansor, 2010).

Compliance refers to the preference to avoid conflicts and to get along with people. Preserving face refers to maintaining self-dignity, to avoid ‘malu’ (shame) and the important of social acceptance. Adab and sopan santun refer to showing respect to
other people. Harmony is related to the importance of maintaining social harmony and willingness to forego personal freedom. Community spirit refers to the expectance that any decision taken must be discussed and takes account of overall approval, such as ‘We’ instead of ‘I’ (Yusaini, 2007; Zawawi, 2008; Mansor, 2010). Spiritual well-being puts pre-eminence on religious obligations and social influence (Sugirtharajah, 1994; Fontaine and Richardson, 2005; Yusaini, 2007). These values exert significant impact on elderly people. For example, decision to be relocated to an elderly institution. In order not to ‘lose face’ and avoid ‘malu’ (shame) the children will try to continue to live in an extended family system, i.e. having parents to live with them, as it is ‘adab’ and as a response to personal and religious belief. However, if the circumstances do not permit this, for example due to work commitments or migration to the city, a decision has to be made after discussions by the children either to leave the parents alone or to send them to an institution. The elderly people who are often financially dependent on the children generally have to comply with the children’s decision (less commonly, the children must agree with the decision of their elderly relatives) in order to maintain community spirit and family harmony (Yusaini, 2007), they have to forgo some personal freedom by living in the institute.

1.4 Health and social welfare provision for elderly people in Malaysia

Health care systems for elderly people in Malaysia are divided into public and private arrangements that co-exist to serve the needs of the country. The public health services are provided by the Ministry of Health (MOH), whilst social services are provided by the Department of Social Welfare (DOSW) under the administration of Ministry of Women, Family and Community (MWFC).

Elderly people in Malaysia aged 60 or above are entitled to free treatment and medication at the public hospitals and clinics. For those who can afford more expensive and ‘luxury’ health services, the private health sector offers alternative choices of care. However, these are often located at urban areas and are relatively expensive. In addition to modern medicine, many people seek health care from
CHAPTER 1

traditional healers (*bomoh*) for illness thought to be of supernatural origins, and some use a mixture of modern medicine and traditional care (Chen, 1981; Kamil and Teng, 2002). There are many elderly people especially those who live in the rural areas who opt for treatment from a traditional *bomoh* as it is accessible, trusted and relatively cheaper than modern medicine (Kamil and Teng, 2002).

The DOSW is also responsible for developing policies for elderly people in collaboration with the MOH. The national policies and health care programme for the elderly people, was formulated in 1996, aimed to provide health services, protection and standardised facilities for the elderly to maintain their dignity and self-esteem and, by improving their potential, to become more productive in assisting the development of the nation (MWFC, 2008). The programme included preventative services, medical and rehabilitation services, training, research, monitoring and coordination of the programme as additions to the existing health care for elderly people.

1.5 Care for elderly people in Malaysia

The care for elderly parents and elderly people in Malaysia generally comes in two forms, i.e. informal and formal care. Informal care is usually provided by children, family members, friends or neighbours in the home of the elderly people (Chen, 1987; Tracy and Tracy, 1993; Ngin and DaVanzo, 1999; Sim, 2002; Khadijah, 2008; Williams and Mooney, 2008; Norzareen and Nobaya, 2010) It is usually based on social relationships and known as ‘community care’. In addition, sometimes an ‘*amah*’ (home worker) is employed by the children to care for the elderly person. This type of ‘transfer responsibility’ is a popular type of care as it does not violate the children’s personal belief system or religious affiliations (Zhan et al. 2008).

The second care giving method is through the use of formal care. Formal care in this context refers to the use of either public or private nursing homes or shelter accommodation. As a result of the changes in demographic characteristics, need and demand for institutionalise care increases and placing the elderly people in the
institution or nursing home is becoming an increasingly common practice in spite of cultural expectations and assumptions that placing the elderly people in nursing home is a violation to tradition and personal belief.

However, private nursing homes are mainly located at urban areas which could not be accessed or afforded by many rural and economically constrained elderly people or their families. Therefore, the DOSW have provided free institutional services through eleven sheltered houses located throughout the country. These institutional services provide shelter, counselling, medical services and various other activities to maintain elderly people’s level of function. The main purpose of the establishment is:

‘(to) provide care to those in need so that they may lead a complete and better life.’

(Department of Social Welfare, 2007)

The institutions are pre-eminently for elderly people who are poor, who have no one to provide for them, no shelter, who are destitute, dependent in activities of daily living, who have limited physical ability and limited social support. This is similar to reasons for relocation for elderly people in early 70’s in Eastern countries like China and Hong Kong. They indicated that the reason for using institutionalised services is related to ‘three Ns’, i.e. Elderly people who have No children, No stable sources of income or financial support and No relatives (Zhan et al., 2008).

### 1.6 Institutionalised elderly people in Malaysia

There is scarcity of literature regarding institutionalised elderly people in Malaysia. This could be partly due to the fact that the emergence of nursing homes in Malaysia is relatively new, aligned with the rapid changes in social and demographic characteristics of the society.
The most comprehensive study conducted in nine public elderly institutions amongst 1081 residents indicated that the majority of the residents were male (58.6%), come from rural areas (81.1%), had no family members (61.7%), had no formal education (64.1%), dependent in at least in one ADL (72.7%), had cognitive impairment (75.6%), at risk of depression (78.9%), at risk of under nutrition (58.6%) and had at least one chronic illness (69.2%) (Zaiton et al. 2009). Their findings are consistent with previous findings regarding health and well-being amongst institutionalised elderly people in Malaysia (Sabariah, 1997; Al-Jawad et al. 2007; Mohd Aznan and Samsu, 2007; Ang and Zaiton, 2008; Latipah and Henachi, 2008).

Depression, cognitive impairment, chronic illness, malnutrition and deterioration in ADL function are frequently described in literature. Sabariah (1997) showed that 37.6% of 205 residents in two elderly institutions were depressed and the prevalence of the depression was higher among women (50.7%) than in men (30.3%). Al-Jawad et al (2007) point out that the probability of dementia amongst participants in their study were 36.5% (of 167 residents), whilst the prevalence for depression was 67.0%. Whilst Visvanathan (2005) found 86% of their sample were at risk of cognitive impairment, and 79% were at risk of depression.

In addition, it was found that the prevalence of hypertension and diabetes is 25.8% to 65.4% for diabetes and up to 74.2% for hypertension amongst institutionalised elderly people in Malaysia. (Mohd Aznan and Samsul, 2007; Teo et al. 2011). For example, 86.1% of 141 residents in two nursing homes suffered from chronic illness such as diabetes, rheumatoid arthritis, stroke and respiratory diseases. 61.1% were dependent in activities of daily living, 33.3% were cognitively impaired and 22.2% were depressed (Mohd Aznan and Samsul, 2007).

The prevalence of cardio-vascular related diseases amongst the residents in two elderly institutes was higher in rural elderly people. It was found that 51.1% of 92 residents in two public institutions had hypertension and high low density lipoprotein (LDL) profiles (Latipah and Henachi, 2008). Visvannathan (2005) found that of 1081 residents in six public institutions, 32.1% (n=347) and 26.6% (n=287) were
respectively at moderate risk and at high risk of under nutrition. In addition, Mohd Aznan and Shamsul (2007) found 61.1% of the participants are dependent in ADL as a result of deterioration in physical function which is similar with findings from Ang and Zaiton (2008).

However, it is not accurate to say that living in an institute is the cause of the decline in physical and mental wellbeing and the risk of under nutrition. Some of the elderly could have been predisposed to the conditions and the deteriorations could have occurred prior to admission to the institute. For example, living in rural areas, lack of education, lack of financial resources or social supports may cause deterioration in wellbeing and prompts them to choose to live in the institute and obtain health care.

Deterioration in health status combined with issues in elderly institutions such as occupational deprivation, reduction in socialisation opportunity and lack of autonomy will further reduced wellbeing (O’Sullivan and Hocking, 2006). This exemplified the need to conduct a health programme the will prevent further deteriorations in well-being.

1.7 Significance of the study

As in many developed counties, elderly people in Malaysia enjoy the benefits of better health facilities, good nutrition and good social care that enhance longevity. However, the real challenges lie not in increasing longevity, but in maintaining the quality of life to achieve the stage of successful ageing. Changes in demographic characteristics, social structure and economic status have shifted the direction of elderly care in Malaysia, thus a new programme is needed to ensure that the elderly living in institutional settings will have quality of life in the future (Lit, 2007). In addition, the study is aligned with the National Policies for the Elderly and the aims of the MOH in Malaysia, which encourage research into health promotion and education for elderly people. This research project aims to provide such a programme based on health promotion and lifestyle modification principles for elderly people living in institutionalised settings.
Health promotion and life style programmes that provide evidence on the use of occupations to influence health and wellbeing amongst elderly people living in the community have been conducted in Western countries (Clark et al. 1997; Horowitz and Chang 2004 and Mountain, et al., 2008). However, there is no substantial work exploring their applicability and the effectiveness for institutionalised elderly people with different cultures and sets of values and beliefs such as in Malaysia. Thus, this study will contribute to the body of knowledge regarding the applicability and the feasibility of this type of intervention for elderly people living in institutional settings. This study will also provide an opportunity for an exchange of information and knowledge regarding the similarity and the differences in occupations, as well as their cultural appropriateness to different countries, values and beliefs.

It is hoped that the results obtained will contribute to the enhancement of the understanding of the phenomena under study. Subsequently, a holistic intervention framework for elderly people who live in institutions can be formulated by policy makers and health professionals in Malaysia. Furthermore, it is hoped that the intervention proposed will be adopted by health professionals who work in the growing number of nursing homes and institutions for care in Malaysia.

Although there is ample evidence on the effect and contribution of occupations towards health (Pierce, 1998; Willcox, 2001; Christiansen, 2007; Kielhofner, 2007; Law, 2007; Lee, et al, 2008; Justine et al. 2010), the underlying mechanism is however poorly understood (Yerxa, 1989; Laliberte et al. 1997). Most literature focuses on the effect of engaging in occupations rather than the procedures of conducting the occupations; i.e. whether the occupations conducted were directed by the therapist or self-determined by the clients. Elderly people are more responsive and motivated to engage in an individualised and meaningful occupation than in an occupation that is directed by others (Muse, 2005; Richards et al. 2007; Kolanowski and Buettner, 2008; Suhonen et al. 2008; Cohen-Mansfield et al. 2010). In the light of this, this study will investigate the effect of engaging in meaningful and individualised occupations on health and wellbeing.
Engagement in occupation is considered important for elderly people (Stanley, 1995; Griffin and McKenna, 1998; O'Sullivan, 2004; Stevens-Ratchford, 2005; Nilsson and Fisher, 2006; Nimrod and Adoni, 2006; Krueger et al. 2007; Nilsson et al. 2007; Hill, Kolanowski and Kurum, 2010) Thus it is vital that the value of the effect of occupational engagement is investigated by examining the ideographic experience of the participants and exploring the therapeutic relationship between occupational engagement and health and wellbeing.

A qualitative method has various advantages in obtaining in-depth information about the value of the meaningful occupations as this method acknowledges the uniqueness and variation of human experiences. Furthermore, elderly people who live in institutions have a unique experience in living in the institute as a result of the institutional constraints which precludes engaging in occupation.

The findings of this study will contribute to the body of knowledge regarding the elderly in the institutions, namely the personal characteristics of the institutionalised elderly people, services required and the applicability of occupational therapy, health promotion and education.

Although there is a trend in developed countries to diminish institutional services, institutionalised services are required in Malaysia. The findings will determine the applicability of occupational therapy, health promotion and education towards elderly people in institutions in Malaysia.

1.8 **Scope of the study**

There are five definitions of terms used in this study, i.e. Elderly people, Institutionalised elderly people, ERA, GSE and QoL. Detail information about the definitions is in Appendix 1.1. The main scopes for this study are; Elderly people, Institutionalised elderly people and Lively Later Life Programme (3LP).
Elderly people

An elderly person in this study refers to a person who is aged above 60 years, as defined by WHO. Although people in Malaysia are perceived as ‘elderly’ after their retirement age of 58, the definition by WHO and declaration by United Nations will be adopted for this study. The elderly people in this study will encompass elderly people with varying characteristics such as location of previous residence, living arrangements, ethnicity, socio-economic status, core values and beliefs in life. However, the elderly people in the study will have one similar characteristic; they are all living in a government public funded institution.

Institutionalised elderly people

Institutionalised elderly people are elderly people aged 60 and above who live in care home settings (which include nursing homes, residential care homes and veteran’s homes), sheltered housing or sheltered accommodation or elderly institutions for lodging, assistance, support and medical services due to loss of ability to be independent in their natural environment despite help from families and friends and they are subjected to the rules and regulations in the institution.

Lively Later Life Programme (3LP)

3LP is the proposed intervention applied to the experimental group of the study. Further information of the programme is provided in Chapter 4.

1.9 Study process

The study process is set out as a series of steps from the development of ideas to the completion of the study (Polit, 2008). This study comprised seven steps as illustrated in Figure 1.1; they are distinctive from each other. However, the process was iterative.
CHAPTER 1

Stages

Main activities in each phase

- Problem identification.
- Reviewing related literature
- Identifying and defining theoretical framework
- Identifying scope of the study.
- Formulating research aims, objectives and research questions.
- Completing the research proposal

- Selecting research design
- Identifying study population
- Selecting sampling strategies
- Identifying method of data collection and analysis
- Preparation of baseline measures
- Preparation of the intervention manual
- Getting ethical approval

- Obtaining ethical clearance
- Informing authorities.
- Preparation of research tools and manuals.
- Creating a ‘buzz’ to encourage participations
- Getting consents
- Identifying local resources - briefing

- Taking baseline measures
- Pre focus groups
- Randomisation
- Conducting the intervention (for experimental groups)
- Outcome measures and post focus groups
- Data compilation

- Data analysis
- Data interpretation
- Data triangulations

- Compiling results and findings
- Writing results and findings

- Disseminating the findings
- Publications and conferences

Figure 1.1: The study process
1.10 Synopsis of the thesis

This thesis has **two volumes**. **Volume 1** has ten chapters. **Chapter 2** provides literature pertaining to issues in elderly institutions, the impact of the issues on expectations towards ageing, self-efficacy and quality of life which given rise to three important need; i.e. need to engage in occupations, need for meaningful relationship and need for autonomy. In addition, this chapter will also provide the theoretical framework to the study.

**Chapter 3** discusses the methodology adopted in the study and issues pertaining to the methodology adopted. In addition, information regarding the study participants and the research design will be explained.

Two types of interventions will be described in **Chapter 4**; i.e. the interventions that were conducted by the institute and the proposed intervention, the Lively Later Life Programme (3LP). The brief structure, theoretical perspective characteristics, and the components of the programme will be explained. Further information about the programme is in the **3LP manual** accompanying this thesis.

Results of the descriptive and inferential analysis of the participants in terms of their characteristics as asked in Section One of the questionnaire are presented in **Chapter 5**. Discussion regarding the results of the demographic characteristics will be provided accordingly.

**Chapter 6** will provide an overview about qualitative findings which include themes (super-ordinate, master and sub-themes) emerging from analysis of the focus groups pre and post intervention.

Chapters 7 to Chapter 9 will provide the quantitative results and qualitative findings pertaining to the main outcome measures and focus groups questions in three domains, i.e. expectations regarding ageing (**Chapter 7**) general self-efficacy (**Chapter 8**) and quality of life (**Chapter 9**). The qualitative findings will be
integrated to supplement the quantitative results, to provide an overall and broad picture of the domains under study. In addition, a comparison with previous literature will be made and any differences and similarities will be discussed.

Chapter 10 provides overall discussion regarding the contribution of the findings to theory and practice in occupational therapy. It also will explore the limitations of the study and recommendation for future research.

Volume 2 consists of the appendices and the references. Appendix 10 in volume two contains list of publications and presentation. Supplementary to this is a Manual for the Lively Later Life Programme (3LP).

1.11 Conclusion

The urbanisation and modernisation in Malaysia since the independence of the country in 1957 has brought changes in the socio-demographic characteristics of the Malaysian society. The migration of the populations from rural to urban areas for better social, educational and financial opportunities has changed the core values and beliefs in caring for elderly parents.

Consequently, the elderly are forced to live alone with limited financial resources and possibly health related problems. Alternatively, some of the elderly were sent to institutions for care. Living in institutionalised environment brings various negative implications as a result of the environment and constraints imposed by the institute, thus deterioration in health and well-being. An occupational therapy programme should be available to ensure health and wellbeing amongst elderly people in the institutions. This research is intended to test the provision of such a programme.
1.12 Summary points of Chapter 1.

- The number of elderly people in Malaysia from various ethnic and cultural backgrounds is increasing and Malaysia will be an ageing nation by the year 2020.
- Increase in age is often associated with the increased risk for deteriorations in physical, mental, social and cognitive functions, and this was currently experienced by many elderly people in Malaysia.
- Elderly people who live in rural areas are more exposed to the deteriorations than elderly people who lived in urban areas.
- The changes in the social fabric characteristics of the society as a result of the urbanisation and modernisation of the country led to the replacement of the core values and perception towards caring to elderly people. In addition, there is also the trend of declining fertility and mortality rates.
- Migration of the younger generation to the city looking for better financial security and standard of living cause many elderly to have to live alone with lack of financial stability and deterioration in health status.
- Subsequently many elderly have to be sent to institutions for care
- Literature indicates that living in an institute causes various physical and mental deteriorations which consequently affect the expectations towards future orientation in life, general self-efficacy and quality of life.
- Various occupational therapy based intervention programmes for elderly people have been successfully implemented; however, the programmes have been conducted in Western countries and for elderly people who live in the community.
- Thus, this provides an opportunity to develop a new program based on occupational therapy which is culturally appropriate to Malaysia and conducted for elderly people who live in institutions.
CHAPTER 2:
LITERATURE REVIEW
AND THEORETICAL FRAMEWORK OF THE STUDY
CHAPTER 2

2.0 Introduction.

This chapter will discuss the issues that are often associated with elderly people living in institutions and which affect several important aspects of life; such as expectations towards ageing, perceived self-efficacy and overall quality of life. Understanding the issues will facilitate understanding of the needs of elderly people who live in an institution. The needs identified will provide a theoretical framework for the study, which will enable an occupational therapy programme to be designed to cater for the needs of elderly people.

Information regarding the issues and how they affect a number of identified aspects of life are derived from various literature sources from developed countries in the Western and Eastern world such as United States of America, United Kingdom, Denmark, Netherlands, Hong Kong, Japan and Singapore. Furthermore, literature from developing countries such as Malaysia and Indonesia was also studied. Any differences as a result of cultural aspects will be highlighted and explored to provide further understanding. Literature from Eastern developed countries will focus on sources from Hong Kong, Taiwan, Korea, Japan and Singapore. This is because Eastern developed countries are experiencing a ‘double-edged sword crisis’ in which along with increasing prosperity there is the problem of an increasing ageing population and the negative impacts of urbanisation. This crisis has an impact on family structure as described in Chapter 1, which subsequently results in changes in health care policies. Changes in health care policy and family structure contribute to the increase in the number of nursing homes or institutions for elderly people. This situation is very similar in Malaysia. Furthermore, there is a similarity of the developed Eastern countries with Malaysia in terms of the collective concept of living in the society.

Literature was located and identified through computerised databases including CINAHL, EMBASE, PsycINFO, Cochrane Library and Zetoc. Manual searches were also performed to obtain literature only available in hard copy. Literature not available electronically or in hard copy was obtained by the inter-library request
process at Queen Margaret University. In addition, studies that had been conducted in Malaysia were accessed through Malaysian databases such as the MyAIS (Malaysian Abstracting and Indexing System), from Malaysian universities repositories, such as Universiti Putera Malaysia Institutional Repository which provided information on related articles published in the Malaysian Medical Journal, Malaysian Journal of Medical Sciences or the Malaysian Journal of Community Health. Related articles that were published in Bahasa (the local language) or English were accessed accordingly. Furthermore, personal communication with the authors was established in order to obtain the full text of related articles.

Personal communication was also conducted by writing to the original authors regarding the study measures, such as with Dr. Catharine Sarkisian for Expectations Regarding Ageing; Prof. Dr. Ralf Schwarzer for self-efficacy and several other scholars who wrote regarding related studies, especially studies conducted in Malaysia.

Moreover, Google scholar and Zetoc search engines were also used to ensure comprehensive search and the Google Scholar Alert system was created to enable the researcher to keep abreast of current literature. Communication with other researchers in relation to the research methodology was conducted through the internet, i.e. Methodspace (Methodspace.com) for Mixed Methods and Yahoo Interpretative Phenomenological Analysis (IPA) Group for qualitative data analysis.

The key words used for the search were ‘institution’, ‘nursing home’, ‘residential care home’, ‘aged care home’, ‘assisted living facilities’, ‘long-term care’, ‘long-term home’, ‘sheltered accommodation’ and ‘elderly care-home’. These were combined with the domains investigated, such as expectations regarding ageing, quality of life, self-efficacy and components in occupational areas such as activities or daily living, leisure/recreation and work with emphasis on elderly people who live in institutions.
The inclusion criteria for selection of the studies are elderly people (above 60 years old), living in the community or elderly people living in elderly institutions. The studies included are qualitative studies, quantitative studies (descriptive or inferential studies) and mixed methods studies. Studies that represent a higher level of evidence e.g. a systematic review, meta-analysis, randomised controlled trials studies were also included and were given priority for inclusion. Studies regarding elderly people in the community in relation to the domains investigated were also included for comparison purposes. No editorial or commentary was included in the inclusion criteria.

The aim of the review is to provide summary and evidentiary information regarding the issues affecting elderly people living in institutions and how the issues affect deteriorate self-efficacy, expectations towards ageing and overall quality of life.

The framework for this review is divided into three sections as shown in Figure 2.1.

**Section 1** will describe the definitions of institutions and four important issues related to living in the institution such as the lack of engagement in meaningful occupation, lack of meaningful relationship, lack of autonomy and individuality and the physical and psychological complications associated with living in an institutionalised setting.

**Section 2** of the review will discuss the implication of the issues towards three main domains in life; self-efficacy, expectations towards ageing and overall quality of life. Identifying and understanding the issues will enable the researcher to identify the needs of elderly people who live in the institute.

Most of the studies included in Sections 1 and 2 are descriptive types of studies that include qualitative and quantitative elements, e.g. cross sectional or survey types of studies.
Section 3 of the review will discuss the needs of elderly people who live in institutions. Identifying the needs of elderly people will provide a theoretical perspective for the study, thus a specific programme can be designed to establish the important elements in life which are affected by living in an institutionalised setting. Studies in this section are presented according to the pyramid of evidence; studies that have a high level of evidence such as from systematic reviews and meta-analysis, followed by clinical studies and descriptive studies.

Figure 2.1: The literature review framework.
SECTION 1: Inter-related issues in elderly institutions.

2.1 Introduction.

Elderly institutions are defined as formal or informal settings for three or more unrelated persons who are subjected to the institution’s limitation and live in the same place that provides a temporary or permanent alternative environment for lodging, protection, medical and social services due to loss of ability to be independent in their natural environment despite help from family and friends. This definition is similar to the definition of Barkay and Tabak, 2002, WHO (2002), Lai, et al. (2005) and Ward, et al. (2008).

These definitions provide the context for the definition of institutionalised elderly people. Institutionalised elderly people are elderly people aged 60 and above who live in care home settings (which include nursing homes, residential care homes and veterans’ homes), sheltered housing or sheltered accommodation or elderly institutions (Hasselkus, 2002). WHO (2002) state that there are differences in terminology for institutions between one country and another, thus terms such as continuing care home, community long term care or care home may be used differently or interchangeably. However, the underlying concept with regard to the service provided and reason for admission are the same (WHO, 2002).

2.2 Main issues in elderly institutions

Four main inter-related negative issues often discussed in the literature relate to the experience of living in institutions; these affect several aspects of elderly people’s lives. The issues are shown in Figure 2.2.
CHAPTER 2

Figure 2.2: Main issues in elderly institutions

2.2.1 Issue 1: Occupational injustice

Literature consistently shows that elderly people who live in institutions spend a high proportion of their daily life being inactive, alone or immobile (Nolan et al. 1995; Abbot, et al, 2000; Shochat et al. 2000; Mozley, 2001; Ice, 2002), spend many hours in bed and frequently take a nap during the day which affects their sleeping patterns (Ersser et al. 1999; Shochat et al. 2000; Fetveit and Bjorvatn, 2002; Beghe, 2005; Conn and Madan, 2006; Fetveit and Bjorvatn, 2006; Cheperon, Far and LoChiano, 2007; Eser, Khorshid and Cinar, 2007; Holthe et al. 2007; Tsai, Wong and Ku, 2008; Song et al. 2009; Gordon and Gladman, 2010; Neikrug and Ancoli-Israel, 2010) and seldom engage in occupation (Perkins et al. 1993; Nolan et al. 1995; Abbot, et al, 2000; Green and Cooper, 2000; Mozley, 2001; Ice, 2002; Hancock et al. 2006; Kolanowski and Litaker, 2006; Holthe et al. 2007; Harmer and Orrell, 2008; Chuang and Abbey, 2009; Cook and Stanley, 2009).
Nolan et al. (1995) describes the daily life of elderly people as being inactive and ‘busy doing nothing’ (p.532). This phenomenon has not changed much over the years. For example, Ice (2002) investigated the daily life of elderly people in nursing homes to identify whether there were any differences in the daily life of elderly people by comparing their findings with a study conducted in 1974 by Gottesman and Bourestom who found that residents spend 56% of their time doing nothing. The study conducted through 13 hours observation of 27 elderly people revealed that there was no significant difference in daily life compare to study that was conducted 25 years previously. They found that the resident spent 65% of their time doing little or nothing, 12% of their time is social activities and the majority of them spent their time in their room, sitting alone. Chung (2004) found institutionalised elderly people with dementia spend 90% of their time engaged in passive occupations and 10% of their time to engage in leisure activities. The elderly people stated that they lacked occupation and that ‘everyday is the same’ (Chuang and Abbey, 2009: p.1644).

This indicates that occupational injustice occurs in elderly institutions. Nilsson and Townsend (2010) indicated that there are four types of occupational injustice; occupational deprivation, occupation alienation, occupation marginalization and occupational imbalance. Other literature shows that there is occupational deprivation, alienation (Perrin, 1997; Hancock et al. 2006; O'Sullivan and Hocking, 2006; Haslam, 2008; Wadensten, 2010; Morgan-Brown et al. 2011) and disfranchisement amongst institutionalised elderly (French, 2002). Occupational deprivation is defined as

“A state of preclusion from engagement in occupations of necessity and/or meaning due to factors that stand outside the immediate control of the individual”

(Whiteford, 2000: p. 201)
Occupational alienation is defined as a

“Sense of isolation, powerlessness, frustration, loss of control, and estrangement from society or self as a result of engagement in occupation that does not satisfy inner needs”

(Wilcock, 2006: p. 343)

Occupational marginalization is defined as

“...social exclusion by restricting a population from experiencing autonomy through lack of choice in occupations”

(Nilsson and Townsend; 2010: p. 58)

Occupational disfranchisement is a situation in which the organisation provides for ‘unnecessary’ needs to the residents and tends ‘to do for’ the client in order to provide ideal services and meet responsibilities to employers (French, 2002; Brown et al. 2006). Subsequently personal abilities decline and the person becomes more dependent on the organisation (Brown et al. 2006).

Wenborn (2005) believes occupational deprivation in elderly institution is ‘unacceptably high’ (p. 337) and Perrin (1997) describes elderly institutions as ‘pictures of marked occupational poverty’ (p. 337). Although there are activities organised by the institute, however, they are often infrequent, incidental, unnecessary or conducted by a non-professional and solely for passing time (Gueldner et al. 1992; Van’T Leven and Jonsson, 2002; Kolanowski and Litaker, 2006; College of Occupational Therapy 1998). These types of activities do not motivate residents to participate and they need to be forced to participate (Van’T Leven and Jonsson, 2002; Holthe et al. 2007). This situation creates occupation alienation.

Motivation is an important factor for full engagement in occupation (Yerxa et al. 1989; Green and Cooper, 2000; Kielhofner, 2002; Ball et al. 2007). Without this people become inactive, alone or immobile in bed for many hours (Nolan et al. 1995; Abbot, et al, 2000; Shochat et al. 2000; Mozley, 2001; Ice, 2002). In addition, prolong disengagement results in loss of capacity, motivation and helplessness
Such an environment is illustrated by Brooker (2008):

‘The stereotype image of life in care homes is of residents sitting around the walls of a day-room sleeping or quite anxious, waiting for something to happen. There is little spontaneous conversation or activity of any kind. Days are dreary and depressing. The TV is on and sometime the radio too, but no one appears to pay much attention.’

(Brooker, 2008: p. 525)

Chuang and Abby (2009) investigated the culture in an institution in Taiwan through participant observation, in-depth interview and examination of other related sources. They found that life in the institute is overwhelmingly a collectivist way of life, filled with a forced routine and like living in a hospital. Life in the institute is like living in a public area with lack of personal space and limited privacy. They perceived that ‘every day is the same’ (p. 1644) with a schedule set by the staff which residents have to passively obey. The highlights of their day are mealtimes which they perceived as important parts of the day; more important than taking medicine or participating in social activities. There are similar findings regarding the culture in institutes in Western countries (Harmer and Orrell, 2008; Cook and Stanley, 2009). Cook and Stanley (2009) indicate that the residents felt that ‘time stands still’ (p. 397), and that there was an unchanging pattern in the participants life. They had no control over their environment and their own life which transform them into dependency and inactivity. Furthermore, the social environment in the institution does not promote engagement in occupations.

2.2.2 Issue 2: Lack of meaningful relationships

Social environment refers to the social connection with other people in the institution and in the community (Townsend, 1997). The social environment and social network amongst institutionalised elderly people are often confined within the institution itself, i.e. between staff and residents and between a resident and other residents and seldom a meaningful relationship. The relationship with other residents is often for adjustment to living in the institution (Abbot et al. 2000; Choi et
al., 2008; Chuang and Abbey, 2009) it is often a relationship of compromise to ensure harmony (Chao, 1995; Lee, 2010), infrequent, non-intimate (McKee, 1999; Kolanowski and Litaker, 2006; Hauge and Heggen, 2008) and fragile (Hauge and Heggen, 2008). However, McKee (1999) stressed that the intensity varies from institution to institution due to the physical environment and the care regime.

The relationships between staff and residents are often formal in manner as a result of the forced routine or the daily tasks imposed on the nursing staff (de Veer and Kerkstra, 2000; Williams et al. 2003; Stabell et al. 2004; Wadensten, 2005; Berglund and Kirkvold, 2007; Wilson and Davies, 2009; Wadensten, 2010; Morgan-Brown et al. 2011). Spending time on an assigned job is perceived to be more important than being with the residents which subsequently leaves the resident alone and doing nothing. A study of the culture in a Taiwanese nursing home concluded that the culture in the home created a tedious, monotonous, public and lonely life and full of compromise with other residents to ensure harmony.

Visits from family members and friends often decline over time (Barry and Miller, 1980; Pott et al. 2001; Yamamoto-Mitani et al. 2002; Gueldner et al. 1992; Gaugler, 2003; Gaugler, 2005; Cheng et al. 2010) and there are elderly people who sever links with their children as a result of feeling abandoned (Cheng, 2009), or voluntarily become detached emotionally from children and family members in order to re-establish their life in the institute (Lee et al. 2002). In addition, there are elderly people who prefer to seek solitude rather than intimate friends (McKeen et al. 1999).

The social culture and the living environment cultivate the institutional culture which eventually shapes the elderly people’s behaviour (Goffman, 1990, Price, 2004; Chuang and Abbey, 2009). The elderly people are exposed to a sedentary lifestyle, loneliness, boredom, negative self-esteem and deterioration in psychological well-being (Raynes, 1998; McKeen et al. 1999; de Veer and Kerkstra, 2000; Brooker, 2008; Chen, 2010; Chung et al. 2010). The sedentary lifestyle is opted for as a result of social expectation (Fiatarone et al. 1996), personal expectations regarding ageing (Sarkisian et al. 2005), perspectives towards re-location to an elderly institutional
such as it is a place to be idle, for rest or hospitalisation (Lee, 1997; Aminzadeh et al. 2009) and lack of opportunity and lack of resources to engage in meaningful occupation (Hancock et al. 2006; Harmer and Orrell, 2008; Chuang and Abbey, 2009). A sedentary lifestyle is often associated with lack of engagement in occupation (Richard, 2005; Yap and Davis, 2007; Rhodes and Blanchard, 2008; Chen, 2010). Lack of engagement in occupation causes deterioration in physical function (Chen, 2010), psycho-social function (Abbott et al. 2000; Van’T Leven and Jonsson, 2002, Marshall and Mackenzie, 2008), quality of life (Raynes, 1998; Gause and Masesar, 1999; Duncan-Myers and Huebner, 2000; Kane et al. 2003; Bond and Corner, 2004; Elavsky et al. 2005; Tu et al. 2006; Howel and Kimbely, 2007; Murphy et al. 2007; Lobo et al. 2008; Cooney et al. 2009; Justine et al. 2010). Furthermore, the environment in the institute is characterised by a lack of privacy and personal space, lack of variation in daily life and lack of opportunity to create an individual environment resulting in issues pertaining autonomy and individuality.

2.2.3 Issue 3: Lack of autonomy and individuality.

There are two separate dimensions of autonomy which are often discussed in the literature; autonomy in making decisions (decisional autonomy) and autonomy in relation to execution of tasks (executional autonomy) (Collopy, 1995).

Decisional autonomy is the ability to independently exercise choice to engage in tasks in relation to type, duration, participants and preference, for example a decision to engage in a type of occupation or delegating other people to engage in the tasks (Collopy, 1988; Collopy, 1995; Hertz, 1996; de Veer and Kerkstra, 2001; Welford et al. 2010). In another words, the people have personal control over the matters.

Executional autonomy is the ability to independently execute tasks without any assistance, for example from caregivers (Collopy, 1988; Collopy, 1995). These dimensions of autonomy are related to three inter-related domains; behaviour (physical) autonomy, emotional (psychological autonomy) and cognitive autonomy (Brocklehurst and Dickinson, 1996; Barkay and Tabak, 2002; Spear and Kulbok,
In addition, autonomy is closely related to the concept of independence and dignity (Anderson et al. 2009; Welford et al. 2010). These dimensions and domains of autonomy are often difficult to exercise by elderly people in institutions as a result of their health conditions and the regulations of the institutions (Barkey and Tabak, 2002; Boyle, 2004; Brooker, 2008; Choi et al. 2008).

There is an erosion of personal autonomy and internal locus of control associated with the institutionalised syndrome such as de-personalisation, loss of personal space, loss of meaning and sense of belonging in life as a result of institutional policy, rigidness of general routine and the hierarchical structure of the institution (Bowling and Fromby, 1992; Brown, 1995; Berglund, 2007; Brooker, 2008; Choi et al. 2008).

Elderly residents who lack autonomy often have feelings of powerlessness, dependency, depression, lack an internal locus of control, low self-efficacy, low self-esteem, they lack social contact, decreased general well-being and lack participation in occupation (Nystrom and Segesten, 1994; Lee, 1997; Madigan et al. 1999; Berglund, 2007). Nystrom and Segesten (1994) stress that the feeling of being powerless is often experienced in institutionalised elderly people, where they feel lack of influence over their own life because of environmental factors such as the organisational structure of the institute, lack of reciprocity and feeling of inferiority in relation to the institutional staff.

Barkey and Tabak (2002) who investigated the relationship between lack of autonomy with participation in occupation, satisfaction with life, social relationships and general wellbeing amongst 39 residents in an elderly institution found that that a high degree of autonomy perceived by the residents is associated with a higher degree of participation in occupations in the establishment, degree of socialisation and life satisfaction. They further suggested that expanding the perceived degree of
autonomy for institutionalised elderly people would enrich the elderly people’s life in the institute.

Perceived autonomy (decisional and executional), individuality and privacy is one of the important factors in daily life for institutionalised elderly people in Western countries (Mattiasson and Andersson, 1995; van Thiel and van Delden, 2001; Barkay and Tabak, 2002; Scott et al. 2003; Moser, Houtepen and Widdershoven, 2007; Rogers and Neville, 2007). However, autonomy, privacy, living in an institute with rules and regulations were not regarded as important barriers to adjustment for Chinese elderly people in Hong Kong (Lee, 1997; Lee, 2001). The rules and regulations are regarded as ‘important and necessary’ (Lee, 1999; p. 1123). Moreover, in a cross sectional study of 158 institutionalised elderly people Lee (2010) showed that the elderly residents who lived in a communal environment accepted the regulations without question and saw the regulations as the ‘law of the country’ which required them to fit into the system by changing their lifestyle and daily routine in order to live in a safe and harmonious environment. This could be partially due to stereotypical collectivism beliefs and culture such as preserving harmony, balance, making compromises, emphasis on collective needs and cooperation derived from the Confucian ethic of benevolence (Chao, 1995; Boyle, 2004; Wikipedia, 2010). The influence of personal belief and culture on the sense of autonomy was further identified by Spear and Kulbok (2004). They explained that there are internal and external antecedents to autonomy, such as perception towards the institutional environment, cultural issues and individual desire for control and independence.

This finding suggests that there are varieties of degrees in latitude of autonomy amongst elderly people in institution. This argument is supported by Boyle (2004) who found that elderly people in residential care were perceived to have more autonomy than elderly people in nursing homes, and elderly people in private homes were perceived have more autonomy than elderly using domiciliary services. This variation indicates that the institutional environment can influence latitude of autonomy.
Lack of autonomy in elderly institutions causes a lack of opportunity for elderly people to perform meaningful occupation. As a result, elderly people feel depressed, isolated and lonely and unable to thrive in the institution (Fressman and Lesster, 2000; Pot et al. 2006; Choi et al. 2008; Kim et al. 2009)

2.2.4 Issue 4: Depression, social isolation and loneliness

The elevated rate of depression amongst institutionalised elderly people has been well documented. The prevalence of depression amongst elderly people who live in elderly institutions is higher than elderly people who live in the community (Gueldner et al. 2001). Many elderly people are admitted due to depression and many appear to subsequently develop depression in the institution (Sabariah and Hanafiah, 1997; Fressman and Lester, 2000; Meeks and Tennyson, 2003; Davison et al. 2007; Meeks et al. 2007; Choi, et al, 2008; Kim et al. 2009; van Beek et al. 2011). The prevalence rate for depression amongst elderly people who live in institutions in Western countries ranges from 25 to 54% and for those with major depression it ranges from 5 to 31% (Brown et al, 2002; Jones et al, 2003; Choi et al, 2008), for example, up to 35% of residents in institutions experience major or minor depression in United States (Thakur and Blazer, 2008), 45% in 30 care homes in north-west England (Mozley et al. 2000), whilst the prevalence in Taiwan is 52 – 54% (Lin et al. 2005). Respectively 66.7% and 41.7% of elderly people in Korea and Japan living in institutions are depressed (Kim et al. 2009). In Malaysia, the prevalence of depression in establishments for the elderly is between 37.6 and 67.0% (Sabariah and Hanafiah, 1997; Al-Jawad et al. 2007).

Literature indicates that several inter-related factors contribute to the psychological issues, including depression, amongst institutionalised elderly people. These factors can be divided into two main areas, i.e. the environmental; factors that disturb familiarity and controllability such as lack of or inability to engage in meaningful daily occupation, lack of meaningful relationships. Thus the person has little
emotional and social support (Gurung et al. 2003; Cummings and Cockerham, 2004; lack of autonomy (Meeks and Depp, 2003; Berglund, 2007; Brooker, 2008; Choi et al. 2008; Kim et al. 2009) and other related factors, including health status and reason for admission (Sabariah and Hanafiah, 1997; Meeks and Tennyson, 2003; Pot et al. 2006; Al-Jawad et al. 2007; Luppa et al. 2010). This suggests that the depression is not solely the result of issues in the institutions, but is also due to issues prior to relocation to the institution, for example, cognitive impairment prior to relocation. Cognitive impairment disrupts social networks and can cause depression (Winningham and Pike, 2007; Gurung et al. 2003).

Depression amongst institutionalised elderly people may last from one or two of months to a year and is often associated with loss of independence, inability to continue with their past life, feelings of isolation and loneliness, loss of autonomy and control due to the institutional rules and regulations, staff shortage and high turnover, lack of meaningful activity and ambivalence towards other cognitively impaired residents (Guse and Masesar, 1999; Mozley, 2001; Heikkila and Ekman, 2003; Meek and Deep, 2003; Berglund, 2007; Meeks et al. 2007; Brooker, 2008; Choi et al. 2008; Kim et al. 2009).

For example, Choi et al. (2008) found that the most frequent cause of depression amongst the participants in their study was the loss of independence and inability to engage in meaningful occupations that relate to their roles and past lifestyle that would provide a sense of continuity. The occupations identified include daily activities, such as shopping, gardening, flower planting, cooking, cleaning the house, and social related activities such as attending clubs. The participants frequently said the words ‘trapped, stuck, confined, isolated and discouraged’ (Choi, 2008: p. 539) to describe their feeling about losing their autonomy. Subsequently, many of the elderly residents felt that they were ready to die and witnessing the deaths of other residents who were their friends caused depression and distress (Brooker, 2008). Another factor that causes depression is a high level of staff turnover, shortage of staff and poorly trained staff. High levels of staff turnover prevent residents from
establishing meaningful relationships that foster trust, which is important for their health and wellbeing (Brooker, 2008; Wilson and Davies, 2009).

Another cause of depression often discussed in the literature is the feeling of being socially isolated, confined and lonely. Loneliness is seldom experienced by dependent elderly people (Drageset, 2004). This is because dependent elderly people are often provided with social supports and health care needs that require social interaction from the staff, which reduces the sense of loneliness (Drageset, 2004). Many elderly people feel confined, that they are being cut off from the outside world and not a part of the larger community outside the institute (Choi et al. 2008; Brooker, 2008). Subsequently, elderly people spend most of their time being socially inactive and emotionally isolated (Nolan et al. 1995; McKee et al. 1999). Feeling isolated is one of the factors that relates to suicidal intent amongst institutionalised elderly people (Haight and Hendrix, 1998).

For residents who are socially active, they perceive that going out of the institute is not just a leisure activity, but a means to stay connected with the world outside the institute and as a means to maintain continuity with their life before admission to the institute (Choi et al. 2008). Furthermore, studies indicate that socialisation with family members and friends through visitation is often reduced or seldom occurred (Barry and Miller, 1980; Pott et al. 2001; Yamamoto-Mitani et al. 2002; Gueldner et al. 1992; Cheng et al. 2010).

Relationship with other residents is often limited, non-intimate and for adjustment rather than a meaningful relationship that provides emotional support (McKee et al. 1999; Cook et al. 2006; Hauge and Heggen, 2008), whilst the relationship with staff is often a clinically orientated relationship lacking emotional involvement (de Veer and Kerkstra, 2000; Berglund and Kirkvold, 2007; Holthe et al. 2007; Wilson and Davies, 2009). Subsequently, the elderly people feel isolated, lonely and depressed.

Other factors that contribute to depression are the physical and mental health conditions of elderly people. Deterioration of health conditions and re-location to an
elderly institution are important factors that contribute to depression (Pot et al. 2006; Winningham, 2005; Luppa et al. 2010) and the deterioration affects family life and relationships (Kwok, et al. 1998; Liu and Tinker, 2001; Shyu and Lee, 2002; Boggatz et al. 2009; Wu et al. 2009; Chang and Schneider, 2010). Literature indicates that depression is often associated with high rates of physical illness and related disability, cognitive impairment, pain, nutrition deficits and morbidity (Meeks and Tennyson, 2003; Sabariah and Hanafiah, 1997; Al-Jawad et al. 2007; Amer et al. 2009).

Depression has an impact on physical and psychosocial functions, such as increased mortality as a result of disease, decreased physical and interpersonal relationships (Berkam, 1995; Wu et al. 1999; Achterberg et al. 2003; Garssen, 2004; van Beek et al. 2011), cognitive impairment (Chi and Chau, 2000; Mozley et al. 2000; Paterniti et al. 2002; Winningham and Pike, 2007) and low self-efficacy (Gurung et al. 2003). Depression in combination with its negative consequences will eventually lead to lack of purpose in life and low life satisfaction with living in the institute (Berglund, 2007; Dwyer et al. 2008; Hedberg et al. 2010).

2.3 Conclusion

Four main inter-related issues are often discussed in the literature regarding institutionalised elderly people. These are occupational injustice, lack of meaningful relationships, lack of autonomy and psychological factors. These issues affect several domains in life, such as perception towards ageing, self-efficacy and quality of life.
SECTION 2: EFFECT OF THE ISSUES

2.4 Introduction

This section will discuss the impact of issues regarding occupation injustice, lack of meaningful relationship, issues regarding autonomy and individuality and issues regarding the psychological reactions towards several domains in elderly life such as expectations towards ageing, self-efficacy and quality of life.

This section will also discuss the definition of the domain, methods used to evaluate, factors influencing the domains and the status of the domains amongst elderly people. Understanding the impact of the issues towards domains of elderly life will aid understanding of the needs of elderly people who live in elderly institutions.

2.5 EXPECTATION REGARDING AGEING (ERA)

This section discusses the definition, the factors influencing expectations and the mechanism of expectations in health status. Furthermore, this section will discuss ERA amongst the community dwelling elderly people and institutionalised elderly people.

2.5.1 Defining ERA

Expectation is a confusing concept and not easily defined as there is inconsistency in the conceptual definition framework (Kravitz, 1996; Georgy et al. 2009). There are different definitions of expectations whereby wishes, hopes, desires, expectations, perceptions and beliefs are often used interchangeably in the literature (Kravitz, 1996).

Expectations can be defined as the act or state of expecting, ‘looking forward to’ or anticipation of what should happen as a right or due (Dady and Rugg, 2000;
CHAPTER 2

Merriam-Webster Online Dictionary, 2010). Expectations involve perception and strong belief towards future self, which can be positive (desires or wishes and expectations for the future) or negative (desires or wishes and expectations to avoid something occurring in the future) (Dady and Rugg, 2000; Sarkisian, 2002; 2005; Barron et al. 2007; Zysberg and Zisberg, 2008; Bradach et al. 2010). Thomson and Sunol (1995) described four types of expectations:

- Ideal expectations: the expectations that are desired and preferred and often associated with an idealistic belief.
- Predicted expectations: realistic situations that are anticipated and usually believed will happen.
- Normative expectations: expectations of what should happen or ought to happen.
- Unformed expectations: no expectations at all because of the inability to express feelings about the future.

Literature indicates that there are some conceptual similarities between views about ageing, anticipation, expectations regarding ageing, belief about ageing and perception about ageing (Dady and Rugg, 2000; Barron et al. 2007; Zysberg and Zisberg, 2008). Unlike other terms that are frequently used in ageing such as hope, wishes or affect, the term expectations have cognitive connotations, i.e. cognitive evaluation of the probability in attaining (successfully attain or not attaining (failure to attain) the things that are expected (Barron et al. 2007), whilst hope or wishes have emotional and motivational connotation (Herth, 1993; Duggleby, 2005; Barron et al. 2007; Bustin and Hughes, 2009).

Expectations may consist of perception and hopes (Barron et al, 2007; Coolican, 2007; Zysberg and Zisberg, 2008). People tend to perceive or have a belief about something e.g. having a positive or negative belief/perception that they will develop the expectations towards something that they perceive; conversely they may hope for something else. For example, elderly people may perceive deterioration in health function (negative perception towards future health status) as a result on evaluation.
of current health conditions, thus they will develop low expectations towards later life, but they may hope for a better health condition in the future. Perception can be positive, negative or neutral, good or bad but expectation usually encompasses a certain level of valuation such as high or low expectations (Coolican, 2007; Zysberg and Zisberg, 2008; Georgy et al, 2009). However, Wurm et al (2007) suggest that the concepts of expectations and perceptions are actually ‘age-related cognitions’ (p. 156).

For this study, an expectation regarding ageing is defined as a belief and individual perception regarding physical, mental and cognitive functions in the future. This can be expectancy of a higher level of functional abilities or expectancy of deterioration in physical, mental and cognitive abilities in later life; for example, elderly people’s belief that they will be able to maintain independence in performing ADLs in later life. This definition is aligned with the definitions of ERA by Sunol, et al (1995) and Sarkisian, et al (2001).

### 2.5.2 Evaluation of ERA

The contribution of the concept of ERA to health in later life is relatively new having been coined by Dr. Catherine Sarkisian, an Assistant Professor of Medicine, Geriatric Division at the University of California, Los Angeles in 2001. She and her colleagues found that health physicians often fail to understand the patients’ expectations towards health in later life which subsequently caused failure in health promotion amongst elderly patients (Sarkisian et al. 2001). They conducted a qualitative study using focus groups to identify the important domains of expectations towards later life in forty-nine elderly people. It was found that the most frequent domains in expectations in later life were physical, cognitive, social, sexual function and pain. These domains were used to developed 38 items questions of an ERA scale (Sarkisian et al. 2002).

The scale was subsequently used to identify expectations regarding ageing amongst 588 randomly selected community-residing elderly people aged 65 to 100. They
found that more than 50% of the participants felt that deterioration in physical functions, becoming depressed and being more dependent on other people was to be expected and they perceived that there is no way to escape the deterioration in their physical condition (Sarkisian et al. 2002). In addition, they found that elderly people who expect deterioration of functions in later life were less likely to seek health care for conditions associated with the ageing process and engaging in preventative health behaviour such as exercise (Sarkisian et al. 2002). The questions were later shortened to 12 items (Sarkisian et al. 2005). The validity and reliability of the questions is discussed in Chapter 3.

To date, there is no occupational therapy literature that has discussed the impact of ERA towards later life or to the occupational therapy rehabilitation programme. In addition, there is no literature regarding ERA in elderly people who live in an institution (Sarkisian – personal communication).

2.5.3 The implication of low and high ERA

A low level of ERA has various negative implications. Elderly people with a low level of ERA perceived that deterioration of health is a result of ‘normal’ ageing and is inevitable and age is the causal factor of the deterioration in health and well-being (Keller et al, 1989; Williamson and Fried, 1996; Goodwin et al, 1999; Sarkisian et al. 2001; Victor et al. 2004). In addition, they may perceive the deterioration of health conditions as ‘fate’ and determined by ‘powerful others’, thus they have to accept the conditions (Perrig-Chiello et al. 1999; Wu et al. 2004\(^1\); Armer and Radina, 2006; Hsin and Macer, 2006; Rodriguez and Young, 2006; Tsai and Tsai, 2007).

Low expectations towards ageing are often associated with low involvement in health related behaviours, such as engaging in physical related activities and low utilization of health services, such as seeking preventative care, screening, vaccination and reporting health problems to health professionals (Rakowski and Hickey, 1992; Goodwin et al, 1999; Levy et al, 2002; Sarkisian et al, 2002; Levy and Myers, 2004; Levy and Myers, 2005; Sarkisian et al, 2005). Thus, they are likely to
experience conditions such as arthritis, hearing loss, and difficulty in sleeping, heart conditions and respiratory problems (Williamson and Fried, 1996; Goodwin et al. 1999; Levy and Myers, 2005). In addition, low expectations towards future are one of the factors related to suicidal intent amongst institutionalised elderly people (Haight and Hendrix, 1998).

Conversely, high expectations towards ageing bring various health benefits such as better physical and mental health, thus contributing to longevity (Levy et al. 2002; Levy and Myers, 2004; Sarkisian et al. 2005; Km, 2009). A cross sectional study conducted by Kim (2009) on 99 elderly people who attended a community-based welfare centre in South Korea indicated that high expectation about ageing was associated with good physical health and mental health after controlling age, gender and education. Elderly people who have a higher level of ERA, (expecting a higher level of maintaining health status) are more likely to have better physical and mental health as seen in previous studies in the USA (Levy et al. 2002, Sarkisian et al. 2005). Kim (2009) states that the mediating factor for good physical and mental health functions amongst the participants of the study is participation in health promotional behaviour which in turn led to higher expectations regarding aging.

More evidence regarding the benefits of high ERA comes from a longitudinal study conducted by Levy and Myers (2004) on 241 elderly people between 1975 to 1995 as a part of the Ohio Longitudinal Study of Aging and Retirement. The aim of the study was to determine the effects of positive self-perceptions of aging towards preventative health behaviours. There were 130 participants who had a positive self-perception towards ageing at the baseline and it was found that after 20 years, they often practiced preventative behaviours such as diet, exercise, compliance with medication, regular visits to the doctor, taking less alcohol and avoiding tobacco.

Furthermore, they found that positive self-perception towards ageing contributed to longevity. Participants who had a positive perception towards ageing had a better survival rate of 7.5 years regardless of gender, age group and socio-economic status (Levy et al, 2004).
Thus, it can be concluded that a high perception towards ageing facilitates engagement in health related behaviour which subsequently facilitates health and wellbeing. The mechanism of the effect ERA in health status is presented in the next section.

### 2.5.4 Factors influencing ERA

Literature indicates that there are diverse factors that influence ERA including environmental factors such as the physical and social environment and personal factors such as physical and mental health condition, perceived quality of life, ethnicity, level of education and social support (Zorn, 1997; Sarkisian et al, 2002; Victor, Ross and Axford, 2004; Jang et al. 2004; Sarkisian et al. 2005; McNeil et al. 2006; Sarkisian et al. 2006; Bradach et al. 2010; Joshi et al. 2010).

Environmental factors play a significant role in influencing behaviour and perception by shaping norms, providing opportunities or reinforcing certain behaviour patterns (McNeil et al, 2006; Tietelman et al. 2010). McNeil, et al. (2006) states that social environment such as social support and social networks, socio-demographic position and facilities will influence engagement in occupation.

Engagement in occupation provides insight to future-self, fostering a sense of hope and purpose in life (Herth, 1993; Borell et al. 2001; Westburg, 2003; Duggleby, 2005; Meeks et al. 2007; Low and Molzahn, 2007; Mozley et al. 2007; Eakman et al. 2010), with subsequent development of positive expectations towards ageing. In addition, good interpersonal relationships provide social support and positive feedback about the ability to perform and the benefits of the occupations create a sense of achievement which subsequently initiates high expectations towards physical abilities in later life (Stashl et al. 2010). Facilities and opportunities that are available and accessible will encourage participation, for example in social related activities (Kolt et al. 2006; McNeil, et al., 2006; Kowal and Fortier, 2007; Haslam, 2008; Chen, 2010). Having a venue for socialisation to take place contributes to further social engagement (McNeil, et al., 2006; Chen, 2010). Physical and social
environments that are accessible was found to be a contributing factor to high scores in ERA scale amongst community dwelling elderly people in Korea (Kim, 2009).

Jang et al. (2004) investigated self-perceptions towards ageing in a cross sectional study of 312 elderly people between 60 to 90 years old in 5 Korean cities. The result of the study indicates that negative perceptions towards ageing amongst the sample correlates with low levels of education, economic status, having more chronic conditions and disability. These factors are consistent with other findings (Zorn, 1997; Sarkisian et al, 2002; 2005; McNeil et al. 2006; Sarkisian et al. 2006; Bradach et al. 2010; Joshi et al. 2010). These findings suggested that health problems make older people perceive their health status pessimistically, which subsequently leads to lower perceptions regarding ageing. The authors suggest that these have an adverse effect; alternatively positive perceptions towards ageing can be reinforced by having positive perceptions towards health. This has been shown by Levy et al. (2002) who found that a positive perception towards ageing has an impact on health belief and facilitates engagement in physical activities.

Ethnicity is said to be one of the factors that influences expectations. For example, there are differences in scores between ethnic groups. Sarkisian et al. (2006) conducted a study in a Los Angeles senior centre to 611 older adults that consisted of three ethnic groups; Non-Latino White (45%), African American (16%) and Latino (38%). The results point out that there is a significant difference in total ERA amongst the ethnic groups. The Latinos had lower age-expectation than non-Latino White and African American (scores of 37.1, 40.9 and 42.5 respectively) even after controlling other variables such as age, physical and health status. However, the differences become insignificant after adjustment of the education status.

There is a positive relationship between education and ERA. People with high education tend to have high ERA (Joshi et al. 2010). This finding suggests that expectations are flexible and can be improved through educational and promotional strategies, for example by portraying a positive aspect of aging and positive image of an elderly people. Bardach et al. (2010) in a pilot study indicated that there is a
CHAPTER 2

significant increase in the total ERA-38 scores of 7.99 (from pre-mean of 61.42 to post-mean 66.94) by using a short narrative and photos on students and middle-age adults. They suggested that any positive ageing intervention aimed at increasing expectations towards ageing should include ways that increase knowledge and a variety of positive future possibilities about oneself.

2.5.5 ERA amongst the community and institutionalised elderly people

It was found that elderly people in the community have a high level of ERA (Sarkisian et al. 2006; Kim, 2009; Joshi, 2010). However, it is difficult to determine the level as the level depends on various factors in the environment and personal factors (Zorn, 1997; Sarkisian et al, 2002; Victor, Ross and Axford, 2004; Jang et al. 2004; Sarkisian et al. 2005; McNeil et al. 2006; Sarkisian et al. 2006; Bradach et al. 2010; Joshi et al. 2010).

To date, there is no study that has been conducted to identify the expectations towards ageing amongst elderly people who live in an institution. However, it is postulated that elderly people in institutions have low level of ERA due to the issues in institutional environment:

a. Elderly people in the institutions often display lack of individuality, a sense of mastery, autonomy and self-efficacy as a result of the institutional environment and culture which in turn lead to loss of internal locus of control (Nystrom and Segesten, 1994; Lee 1997; Madigan et al. 1999; Berglund, 2007). Lack of internal locus of control or lack of autonomy is associated with a low level of future hopes (Duggleby, 2005). Furthermore, the environment factors in the institutional setting such as lack of socialisation and facilities also contribute to low levels of expectation regarding ageing (McNeil et al. 2006).

b. Living in elderly institutions is often associated with negative psychological features, such as depression. There are a variety of features associated with depression, such as loss of interest, psychomotor disturbance, cognitive
dysfunction, sleep disturbance and a negative view of world and self (such as hopelessness, low self-esteem, low mood, pessimistic about future, self-blame and difficulty in concentrating) (Quinn, 2000; Blazer, Celia and Hybels, 2004; Manthorpe and Iliffe, 2005). Negative views about the world and self contributes to low expectations regarding ageing.

c. Literature indicates that institutionalised elderly people are deprived of occupation. Engagement in meaningful occupation creates a sense of direction, a sense of ability and future self, increases socialisation, life satisfaction and increases mental and physical health function (Clark et al. 1997; Abbot, 2000; Haastregt et al. 2000; McGuinn and Mosher-Ashely, 2000; Van’T Leven and Jonsson, 2002; Steultjens et al. 2004; Lowis, et.al., 2005; Marshall and Mackenzie, 2008; Brooker, 2008; Borell et al. 2010) Lack of occupational engagement and occupational deprivation is postulated to have an impact on expectations regarding ageing by not having the opportunity to experience the sense of ability, achievement, future self and improvement in physical and mental health function. Furthermore, there are institutionalised elderly people who attribute lack of motivation and desire to engage in occupation as a part of the ageing process (Harmer and Orrell, 2006). Thus, it is predicted that elderly people will have low ERA.

d. One of the main reasons for admission is deterioration in health conditions that were unable to be managed by the family members (Choi et al. 2008; Kwok et al. 1998; Muilins and Hartley, 2002). Poor health condition have direct effects on self-perception towards health and poor self-perception towards health serves as a mediator of low expectation towards ageing (Jang, et. al., 2004; Schneider et al. 2004).

e. In a large cross-sectional study, Sarkisian, et al. (2005) found that sedentary elderly people who seldom engage in physical related activities (less than 30 minutes per week) in the community have low ERA. A sedentary lifestyle is
often associated with elderly people who lived in institution. Thus, it is postulated that institutionalised elderly people have low ERA.

f. A change in socio-demographic characteristics and culture has had an impact on family structure and ability to look after elderly parents. This has led to decisions to re-locate elderly parents to an institution (Kwok et al. 1998). Living in an institution has an impact on social connections with family members (Chai et al. 2008; Kwok et al. 1998; Brooker, 2008). In addition, there are elderly people in Eastern countries who severed ties with children as a result of re-location to the institution which they perceived as failure in care giving, disrespect and abandonment (Lee et al. 2002; Cheng and Chan, 2006; Cheng, 2009). Connection and socialisation with family members is an important element in life satisfaction amongst elderly people in an institute (Choi et al. 2008; Walsh and Waldman, 2008). Lack of socialisation and isolation from family members cause elderly people to have low perceptions regarding later life (Lee and Fan, 2008). This situation in turn is postulated to have an impact on the expectations towards ageing.

g. Previous literature indicates that many elderly people in institutions are depressed (Sabariah and Hanafiah, 1997; Gueldner et al. 2001; Brown et al. 2002; Jones et al, 2003; Lin et al. 2005; Al-Jawad et al. 2007; Choi et al, 2008) and have low expectations of the institution (Bowling and Fromby, 1992). Depression is associated with a lack of meaning and purpose in life amongst elderly people (Bohlmeijer et al. 2008; Hedberg et al. 2010). Not having a purpose in life and low expectations towards the environment are postulated to have a relationship to future expectations towards ageing, thus it is predicted that institutionalised elderly people have a low level of ERA

2.5.6 Conclusion

ERA consists of hope and perceptions regarding functions, such as physical, mental and cognitive abilities, continuing in the future. Literature indicates that there are
two main factors that contribute to high or low expectations in the ageing; the living
environment (physical and social) and personal factors such as health status. Previous literature as stated in Section 1 indicates that the environment and personal factors amongst institutionalised elderly people are poor. Although, to date there is no literature that reviews ERA amongst institutionalised elderly people, it is postulated that the issues in the institutions and the health status of the elderly people in the institute have the tendency to lower ERA.

2.6 GENERAL SELF EFFICACY (GSE)

This section will discuss the definition of self-efficacy, methods to evaluate self-efficacy and the factors influencing self-efficacy. Additionally, this section will discuss self-efficacy amongst the elderly people in community and elderly people who live in institutions.

2.6.1 Introduction

Self-efficacy theory was introduced and developed within the structure of the social-cognitive theory for analysing human motivation, thought and behaviour by Albert Bandura (1977). Social cognitive theory affirms that an individual’s acts are affected by internal and external influences and there is a triadic reciprocal relationship between personal characteristics, behaviour and factors in the environment (Bandura, 1997). The cognitive factors depend on self-regulated thought processes, which include belief in personal efficacy.

Belief in personal self-efficacy has an influence in various domains in human functioning, such as work related performance, including engagement in occupation (Gage et al. 1994; Roberts, Reneman et al. 2008; Dolansky and Weber, 2010), athletic performance (Moritz et al. 2000), health function (Holden, 1990), academic achievement (Multon et al. 1991). Self-efficacy is defined as an individual’s personal “belief in one’s capability to organise and execute courses of action required to produce given attainments” (Bandura, 1997; p.3).
For the purpose of this review, self-efficacy refers to the cognitive perception towards competency belief in facing and handling various issues related to living in an institution such as the conditions in the institutional environment, autonomy and individuality and the psychological implications of living in the institution as outlined in the review regarding the institution.

### 2.6.2 Evaluating self-efficacy

There are two constructs on how self-efficacy is perceived and evaluated; the domain-specific (task-specific) and generalised self-efficacy. Traditionally, self-efficacy is often measured in a specific situation or domain-specific situations in which people rate their confidence in ability to perform specific tasks (self-efficacy related to task performance) or an individual’s perceived capability of overcoming barriers or obstacles that may prevent engagement in specific tasks. For example, occupational performance self-efficacy (Gage et al. 1994), task self-efficacy for everyday activity for elderly people (Roberts, Dolansky and Weber, 2010; adjustment to nursing home placement (Johnson et al. 1998); self-efficacy related to falls (Cheal and Clemson, 2001), self-efficacy in engaging in occupations as a result of rheumatoid arthritis (Fohan and Backman, 2010); exercise self-efficacy scale (Perkins et al. (2008), self-efficacy for functional activity (SEFA; Resnick and Jenkins, 2000).

Self-efficacy beliefs can also be evaluated in general situations where an individual handles a wide range of tasks, known as general self-efficacy (GSE). GSE refers to one’s sense of global confidence and competence in personal coping ability to deal effectively with a wide range of stressful and demanding situations (Schwarzer, 1992; Schwarzer and Jerusalem, 1995; Johnson et al. 1998; Scholz et al. 2002; Luszczynska et al. 2005).

GSE is a relatively new construct. Initially it was coined by Ralf Schwarzer, a professor in psychology at the University of Berlin, Germany in 1992. He believed
that self-efficacy can be conceptualised in a generalised sense in which general self-efficacy refers to one’s coping ability, sense of global confidence and optimism to deal effectively in a wide range of novel, demanding and stressful situations (Schwarzer, 1992). Furthermore, Scholz, et al. (2002) and Luszczynska, et al. (2005) stressed that GSE could explain a variety of human behaviours and coping strategies when the issues investigate general issues. These include issues pertaining to GSE living in a specific location such as an elderly institution.

There are a variety of psychological constructs that relate to GSE, such as self-esteem, future orientation, social comparisons, stress appraisal, health and wellbeing (Taylor and Lobel, 1989; Schwarzer, 1992; Luszczynska et al. 2005). A validation study to determine the similarity of the constructs across culture and countries was conducted by Scholz, et al. (2002) in developed and developing countries in Europe and Asia. The results indicated that the construct of perceived self-efficacy is similar across cultures. Thus, it was stressed that the GSE is uni-dimensional and is a universal construct, which means that the constructs in self-efficacy belief intrinsically exist in all individuals’ regardless of culture.

The GSE concept is more appropriate for use for elderly people who live in an institution, than a specific domain. This is because living in the institution is often associated with a number of general issues which affect the level of GSE as mentioned in the institutional sections in this chapter such as occupational and social deprivation (Nolan et al. 1995; Abbot et al. 2000; de Veer and Kerkstra, 2000; Ice, 2002, Borroker, 2008; Chen, 2010), lack of autonomy and individuality (Lee, 1997; Lee, 1999; Fressman and Lester, 2000; Lee, 2001; Barkey and Tabak, 2002; Brooker, 2008; Choi et al. 2008), psychological complications as a result of social isolation and loneliness (Brown et al, 2002; Jones et al, 2003; Lin et al. 2005; Choi et al, 2008; Kim et al. 2009). These are inter-related issues often experienced by elderly people in institutions.
2.6.3 Factors influencing self efficacy

Bandura (1997) posits that there is a triadic reciprocal relationship between personal factors, environment and behaviour in the formation of self-efficacy. Furthermore, Bandura (1997) stresses that there are four sources of self-efficacy: performance accomplishment (enactive mastery), vicarious experiences, verbal persuasion and physiological and emotional states.

Performance accomplishments or enactive mastery are the strongest source of self-efficacy (Bandura, 1997). In this source of self-efficacy, experience of success in various tasks in life foster a strong sense of self-efficacy. Elderly people have many life experiences and Bandura (1997) stresses that life experiences strengthen their sense of perceived self-efficacy. In other words, as people age they gain more life experience and accomplishment, thus achieve stronger self-efficacy. The sense of accomplishment can be facilitated through modelling and physically assisting the person to complete tasks (Bandura, 1997). Empirical evidence also indicates this source of self-efficacy can be enhanced through reviewing the behaviour through the use of external aids (Fisher and Laschinger, 2001) and receiving positive feedback (Kalinowaski et al. 2004).

Vicarious experience is defined as an individual’s appraisal of their capabilities in comparison with other people’s attainments which include observing other people’s achievements or other people performing the tasks (Bandura, 1997; Pajares, 2002). This indicates that the vicarious experience is mediated through modelling especially for individuals who have limited prior experience and individuals who are not sure about their own capabilities in comparisons with other people. Bandura (1997) posits that vicarious experience is a weak source of self-efficacy information, but this source will be effective if the person observed have a similar characteristics. Thus, it is stated that by observing a model that has similar characteristics successfully performing the tasks improves the observer’s belief about their capabilities (Bandura, 1997; Pajares, 2002). This method has successfully improved perceived self-efficacy
in falls prevention programmes (Cheal and Clemson, 2001) and engaging in ADLs amongst elderly people in institutions (Chang, et al, 2007).

Another source of self-efficacy information is verbal persuasion. Verbal persuasion refers to verbal judgement from other sources of information that are perceived as trusted, reliable and knowledgeable in the area (Shazwarzer, 1992; Bandura, 1997; Pajares, 2002). Bandura (1997) asserts that verbal persuasion is less influential in facilitating the development of, or heightening, the perceived self-efficacy than either vicarious experience or performance accomplishment. However, he states that verbal persuasion will have more influence when it is used in additional to the stronger sources of self-efficacy information, i.e. vicarious experience or performance accomplishment and when persuasion was used to maintain perseverance when experiencing diversity or challenges in life.

The final source of self-efficacy information is physiological and emotional states. The physiological state of arousal includes fitness level, fatigue and pain which affect performance and influence judgement of personal self-efficacy, whilst the emotional states include mood and affect (Shazwarzer, 1992; Bandura, 1997; Pajares, 2002). Positive affect such as a feeling of happiness, excitement and other positive affects facilitate higher perception of self-efficacy. Negative affect such as feelings of excessive stress towards tasks will affect the efficiency of the self-ability to carry out the tasks. Therefore, altering negative affect and somatic reaction such as stress and fear towards tasks will affect self-efficacy (Bandura, 1997).

Bandura (1997) recommends that the sources of self-efficacy above should be included in a programme aimed at behaviour/lifestyle change, namely, provision of information, skill enhancement and opportunity to practice, exposure to positive role models, provision of verbal persuasion and encouragement to engage in tasks and establishing social supports.
2.6.4 Self efficacy amongst elderly people in the community and in institutions

Previous findings indicate that the levels of GSE amongst elderly people who live in the community were high (Scholz et al, 2005). However, there is a difference in the scores amongst elderly participants from Western and Eastern countries. It was found that the scores in elderly participants from Japan and Hong Kong is lower (20.22 and 23.05) than elderly participants in Western countries such as France, Great Britain and United States of America (32.19, 30.05 and 29.50 respectively). The authors stressed that the real differences do not really exist and are due to differences in cultural belief (individual and collective cultures). Differences in scores across cultures were also found by Luszczynska et al (2005). Furthermore, Wu et al (2004\(^2\)) stressed that belief in fate, external forces or a higher power have an effect on internal locus of control which is associated with self-efficacy amongst the Chinese elderly people. These beliefs and collectivist cultural values are also present in the Malaysian community (Azlin et al. 2007; Hosking et al. 2009; Keshavarz and Baharudin, 2009; Mansor, 2010).

A comparative cross sectional study in Korea indicates that there are significant differences in self-efficacy, health promotion behaviour and self-esteem amongst institutionalised elderly people and elderly people in the community (Kim et al. 2006). It was found that institutionalised elderly people have a significantly lower level of GSE, self-esteem and health related behaviour as compare with elderly people who live in the community. The authors stressed that the institutional environment and negative emotions such as low self-respect arose because the elderly could not live with their family for the last part of their life caused the low level of GSE and self-esteem. They also suggested that an educational programme with emphasis on a health promotional programme that stresses the importance of exercise to prevent chronic diseases and a support group could help to increase the self-efficacy and self-esteem amongst elderly people who live in an institutional setting.
There is limited literature available regarding GSE amongst institutionalised elderly people in Western and Eastern literature. However, based on the sources of self-efficacy and issues in elderly institutions, it is postulated that institutionalised elderly people have low perceived self-efficacy. The low level of general self-efficacy could be due to the following factors.

a. The situation of elderly people in institutions is often associated with deterioration in physical and mental health, such as increase in frailty, fatigue, depression, decreased mood, lack of meaning and purpose in life (Hedberg et al. 2010) and a negative view about world and self (hopelessness, low self-esteem, low mood, pessimistic about the future) (Quinn, 2000; Blazer, Celia and Hybels, 2004; Manthorpe and Iliffe, 2005). Sources of self-efficacy are physiological and emotional states (Bandura, 1997) and deterioration in physical and functional status affects self-efficacy (Mandes de Leon et al. 1996). Thus, the deterioration of physiological and emotional states is hypothesised to have an impact on self-efficacy. For example, frailty and depression have an impact on specific self-efficacy in engaging in occupation, which subsequently lowers general self-efficacy.

b. Elderly people in institutions are often deprived of occupation (Perrin, 1997; French, 2002; Atwal et al. 2003; Wenborn, 2005; Hancock et al. 2006; O’Sullivan and Hocking, 2006; Haslam, 2008). Occupation can influence and be influence by self-efficacy (Bandura, 1997; McAuley et al. 2000; Elavsky et al. 2005). Engagement in occupation facilitates a sense of self-efficacy, self-esteem (Gary, 2006; Geifer and Miko, 1995; Abbot, 2000; McAuley et al. 2000; Elavsky et al. 2005; McAuley et al. 2005; Murrock and Madigan, 2006; Cipriani et al. 2006; Resnick et al. 2006; McAuley et al. 2007; Shin et al. 2009). Thus, it is asserted that lack of occupation in the institutional elderly will lower self-efficacy.

c. Elderly people in institutions have poor social relationships and support from family members and friends (Barry and Miller, 1980; Pott et al. 2001;
CHAPTER 2

Yamamoto-Mitani et al. 2002; Gueldner et al. 1992; Cheng et al. 2010). Furthermore, the relationship between the residents and staff is insufficient to provide social support (de Veer and Kerkstra, 2000; Shattell, 2004; Berglund and Kirvold, 2007; Wilson and Davies, 2009), whilst relationships with other residents is often non-intimate and often for adjustment (McKee et al. 1999; Abbot et al. 2000; Hauge and Heggen, 2008; Choi, et al., 2008; Chuang and Abbey, 2009). Previous evidence indicates that people with better social relationships and support have a higher self-efficacy (Lang et al. 1997; Gurung et al. 2003). This is due to the positive reinforcement or feedback received from social interaction (Meeks and Looney, 2010). Thus, it is hypothesize that the self-efficacy amongst institutionalised elderly people is low as a result of poor social relationships and social support.

d. Other sources of self-efficacy are verbal persuasion and positive reinforcement (Bandura, 1997). Positive persuasion and reinforcement can be obtained through social supports (Winningham and Pike, 2007; Murrock and Madigan, 2008). This includes persuasion and reinforcement to engage in occupations that will contribute to health and well-being. However, literature also indicates that institutionalised elderly people have a limited social network as a result of the sensory impairment (Cook, 2006; Cook et al. 2006); institutional regulations, decreased visits from family and friends (Barry and Miller, 1980; Pott et al. 2001; Yamamoto-Mitani et al. 2002; Gueldner et al. 1992; Cheng et al. 2010) and the lack of meaningful socialisation with staff (Abbot et al. 2000; Berglund and Kirvold, 2007; Wilson and Davies, 2009). Subsequently, elderly people are lacking in encouragement, positive reinforcement and support to participate in occupations. Positive reinforcement from the social environment is a key deficit in depressed institutionalised elderly people (Lewinsohn et al. 1979; Blazer, 1993; Manthorpe, 2005). Participation in occupation with positive reinforcement produces a sense of success which contributes to enhancement in self-esteem and self-efficacy (Lewinsohn et al. 1979; Abbot et al. 2000; Allison and Keller, 2004; Manthorpe, 2005; Carolyn and Madigan, 2008; Mountain et al. 2008). Thus, it is
postulated that institutionalised elderly people have a low perceived general self-efficacy as a result of the lack of attainment in the sources of self-efficacy.

e. Living in the institution is perceived by elderly people to be surrounded by sick or dying people (Tse, 2007; Brooker, 2008) or elderly people who have similar reasons for admission such as old age, low education status, low income, not having their own house and having diseases related to ageing (Luppa et al. 2010). They do not have a good model of a healthy elderly person. Bandura (1997) stated that one of the factors that contribute to self-efficacy in an individual is self-appraisal of their capacities in comparison to others. Due to the similarities of the health conditions amongst institutionalised elderly people, it is postulated that institutionalised elderly people have a low level of perceived general self-efficacy.

f. Some elderly institutions are unable to provide opportunities and challenges through engagement in occupations to maximise the elderly people’s potentials due to lack of resources, financial and health care facilities or for safety reasons or social expectations (Fiatarone et al. 1996). Subsequently, there is lack of challenges in life amongst elderly people. Lack of challenges and occupational opportunities will encourage elderly people to live a sedentary lifestyle (Hancock et al. 2006; Harmer and Orrel, 2008). Furthermore, a randomised controlled trial study conducted by Elavsky et al. (2005) indicated that occupation, such as leisure and household activities contribute to a high sense of perceived self-efficacy, self-esteem and quality of life. Lack of engagement in occupation, exposure to challenges in life, and not having a sense of successful attainment is postulated to lowered sense of self-efficacy.

2.6.5 Conclusion.

Issues in elderly institutions such as negative living environment, lack of autonomy and psychological issues, such as depression have a negative influence on general self-efficacy amongst institutionalised elderly people. It is postulated that the
negative issues lower the level of perceived general self-efficacy as shown in the literature. However, there is a possibility that the issues have no effect on self-efficacy.

2.7 QUALITY OF LIFE (QoL)

Institutions for elderly people are often linked to poor QoL (Skevington et al. 2004; Lai et al. 2005; Tu et al. 2006; Chan and Pang, 2007; Bodur and Cingil, 2009). Understanding the antecedent to poor QoL can assist health care professionals to provide a health care programme that will facilitate a meaningful and enriched private life amongst institutionalised elderly people. The aim of the review here is to provide a summary regarding the definitions of QoL, methods to evaluate the QoL and the factors influencing QoL. Furthermore, this section will discuss the QoL amongst elderly people both in the community and those who live in institutions.

2.7.1 Introduction

QoL is highly individualistic, multidimensional and subjective, thus making it difficult to measure and to define (Lawton, 1997; Bowling et al. 2002; Walker, 2005). Although there is no general consensus regarding the definition, there are some authors who have tried to define it according to its dimension, constructs and context (Farquhar, 1995; Niv and Kreitler, 2001; Bowling et al. 2002; Bond and Corner, 2004; Holvorsrud and Kalfoss, 2007). For example, QoL can be defined from a single construct, such as health related QoL or from a global construct in which the people perceived overall QoL within their own cultural context, value system and environment. Moreover, the definition can be based on either a layman’s definition or the definition by health experts (Bowling et al. 2002; Bond and Corner, 2004). The layman’s definition of QoL comes from the people themselves and is based on personal expectations and judgement in their lives context, standards in life, grounded in their experience in different aspects of life and in comparison with other
people such as friends and peers (Farquhar, 1995; Niv and Kreitler, 2001; Bond and Corner, 2004; Gabriel and Bowing, 2004).

The health expert definition is divided into three types, (1) a general or global definition such as general satisfaction or dissatisfaction towards QoL, (2) components or dimensions of QoL such as functional status and subjective life satisfaction, and (3) a definition that may be used to measure functional health status (Bond and Corner, 2004). The lay-man’s definition is preferable in this context because it is an individual global definition which can capture the complexity of the QoL. This individual definition was adapted by the WHO to delineate what QoL is:

\[\text{an individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept that is affected in complex ways by a person’s physical health, psychological state, level of independence, social relationships and their relationships to salient features within the environment.}\]

(World Health Organization Quality of Life (WHOQOL) Group, 1995, p. 1405)

The definition as above provides a structure to the review. This review will include studies that investigate QoL as a broad ranging concept and are globally constructed to indicate how elderly people perceive their overall QoL within their own cultural context, value system and environment (for example an institution). This review will exclude any study that (1) investigates QoL amongst elderly people as a single construct such as life satisfaction, satisfaction with care in the institution (e.g. care related QoL), residents self-esteem, independency in activities of daily life, physical health (e.g. health related quality of life – HRQOL), (2) elderly people who live in the community, (3) using a proxy to identify QoL, such as relatives or staff (4) using objective approaches in measuring QoL.
2.7.2 Evaluating QoL

Literature indicates that there are two approaches in measuring QoL; through an objective approach or a subjective approach (Diener and Suh, 1997). The objective approach is often synonymous with the single construct of QoL and a social indicator, for example, physical and mental health, independence in activity of daily life can be quantified through Barthel Index or Katz Index. Objective approach is based on quantitative statistics which perceive that health can be quantified objectively.

The subjective approach to measuring QoL takes all accounts which include individual judgement or evaluation of their life circumstances (which can include the pleasant and unpleasant effects) and how it affects overall evaluation of their QoL (Diener and Suh, 1997; Bowling et al. 2002). Subsequently, various outcome measures are used to evaluate the subjective evaluation towards QoL for example, the Brief Version of World Health Organisation QoL (WHOQOL-Bref) inventory. This inventory is one of the subjective measurements of quality of life which is useful and is as reliable as other instruments (The WHOQOL group, 1995; The WHOQOL Group, 1998; Von Steinbuchel et al. 2006; Kullmann et al. 2007). The inventory takes account of various individual perceptions towards elements or factors that contribute to QoL in those who live in an institution.

2.7.3 Factors influencing QoL

Literature indicates that that are several significant factors that contribute to QoL amongst institutionalised elderly people. However, the three most frequent factors discussed are:

a. Perceived autonomy (decisional and executional autonomy) and independence in behaviour (physical), emotional (psychological autonomy) and cognitive aspects of life and freedom to make a decision without extreme validation from the society where elderly people live (Gause and Masesar, 1999; Duncan-Myers and
Other factors contributing to QoL are:

a. Good physical and mental health status, for example, mobility, independence in activities of daily life; functional competence (Gause and Masesar, 1999; Mitchell and Kemp, 2000; Tseng and Wang, 2001; Kane et al, 2003; Tu et al. 2006; Cook and Stanley, 2009; Cooney et al. 2009; Justine, 2010)

b. Opportunity to help other residents; altruistic activities (Aller and Coeling, 1995; Dause and Masesar, 1999; Yuen, 2003; Ciapriani et al. 2006; Howel and Kimberly, 2007; Yuen et al. 2008; Cook and Stanley, 2009)

c. The physical infrastructure and environment e.g. size of room, privacy, comfort, absence of conflict, sense of safety and security (Gause and Masesar, 1999; Mitchell and Kemp, 2000; Kane et al, 2003; Halvorsrud, et. al., 2010)

The factors above can be divided into two main categories that occur at different but inter-related levels; the institutional level and the individual level (Cooney et al. 2009).

Literature indicates that the perceived level of autonomy and independence obtained at the institutional level was the most frequently mentioned by institutionalised elderly people as a factor that contributed to QoL (Duncan-Myers and Huebner, 2000; Barkay and Tabak, 2002; Kane et al, 2003; Boyle, 2004; Hwang et al. 2006; Tu et al. 2006; Murphy et al. 2007; Cooney et al., 2009; Cook and Sanley, 2009; Lee et al. 2009).

b. Good relationships with other residents, staff, family and former friends (Gause and Masesar, 1999; Mitchell and Kemp, 2000; Tseng and Wang, 2001; Kane et al, 2003; Tu et al. 2006; Cook and Stanley, 2009; Cooney et al. 2009; Lee et al. 2009).

c. Engagement in meaningful occupation (Gause and Masesar, 1999; Mitchell and Kemp, 2000; Tseng and Wang, 2001; Tu et al. 2006; Cook and Stanley, 2009; Cooney et al. 2009; Murphy et al. 2007; Kane et al, 2003; Higgins and Mansell, 2009; Lee et al. 2009)
Autonomy is often associated with three main inter-related domains; behaviour (physical) autonomy, emotional (psychological autonomy) and cognitive autonomy (Brocklehurst and Dickinson, 1996; Barkay and Tabak, 2002; Spear and Kulbok, 2004; Andersen et al. 2009). In addition, autonomy is closely related to the concept of independence (Anderson et al. 2009; Welford et al. 2010).

Perceived physical autonomy is described in studies by Kane, et al. (2003), Duncan-Myers and Huebner (2000) and Cooney, Murphy and O'Shea, (2009). Their studies indicate that it involves the ability to make independent decisions to engage in activities in occupational performance areas, such as autonomy in conducting ADL and leisure activities, choices of activities and the time and types of activities that they want to perform. However, the findings cannot be generalised to a larger population as the sample sizes were small and were obtained using convenience sampling.

Another study that stresses the important of autonomy as a factor in QoL was a concurrent triangulation mixed-method research (Murphy et al. 2007). The convergence of the data indicated that there are four main factors that contribute to quality of life, including (1) the care environment that provided autonomy and choice and promoted independence, (2) the ability to preserve personal identity and self-integrity, (3) maintaining connections with family and community, (4) engagement in occupation.

Literature from Western countries indicates that the main factor that contributes to the QoL is having autonomy and independence as describe above. However, literature from Eastern country, like Hong Kong indicates that autonomy is not an important factor contributing to QoL (Low et al. 2007; Lee, 1997; 1999; 2010). A qualitative study to explore the experiences of 10 Chinese elderly people who were newly admitted in a residential care home in Hong Kong indicated that following rules and regulations such as specific times to sleep and times to eat were necessary in order to live in a harmonious environment (Lee, 1999). However, the study had
some limitations which were outlined by the authors such as the need to establish the psychometric properties of the empowerment scale, the convenience sampling strategy and the sample selection that excluded residents with moderate or serious cognitive disability. Consequently, this study cannot be generalised to a wider population.

A second important factor that was frequently described as important to QoL is social relationships and this factor emerged as an important factor especially in literature from Eastern countries such as Hong Kong and Taiwan (Tseng and Wang, 2001; Lee, 1997; Lee, 1999; Tu et al. 2006; Lee, 2010). Social relationships contribute to quality of life and life satisfaction amongst people in elderly institutions (Commerford and Reznikoff, 1996; Tsutsui et al. 2001; Mosher-Ashley and Lemay, 2001; Chou, et al., 2002; Achterberg et al. 2003; Drageset, 2004; Lee, et al., 2005; Cheng et al, 2010). For example, Tseng and Wang (2001) investigated factors that influence QoL for elderly people in 10 elderly institutions in Taiwan. Social support from the staff and maintaining social relationships with family members and former friends were identified as important predictors of QoL in addition to other factors such as physical health condition and ability to be independent in performing the activities of daily life. Their findings may reflect a bias towards the cultural influence and Confucianism beliefs that put a strong emphasis on social relationship among the Chinese elderly people. However, the importance of social relationships as factors that contribute to QoL were also presented in Western literature (Gause and Masesar, 1999; Mitchell and Kemp, 2000; Kane et al, 2003; Tu et al. 2006; Murphy et al. 2007; Cook and Stanley, 2009; Cooney et al. 2009).

Cooney, Murphy and O'Shea, (2009) found factors other than autonomy that contribute to QoL; having a good social relationship and connection with family, former friends, with the community and engagement in meaningful occupations. This finding has similarity to the previous findings that highlight the importance of social relationships to QoL (Aller and Coeling, 1995; Gause and Masesar, 1999; Kane et al, 2003; Tu et al. 2006; Murphy et al. 2007; Cook and Stanley, 2009).
The third important factor that contributes to QoL which is often discussed in the literature is engagement in occupation. Cook and Sanley (2009) investigated the QoL experience amongst eight elderly people living in nursing homes in North East England through in-depth interviews. Their findings show that the most influential factor to QoL is engagement in meaningful occupations that enrich private life. The authors further stress that residents value their future life where they can have a ‘life experience supported by care’ (p. 405), such as engaging in meaningful occupations that provide enjoyment in life, and not just a ‘care experience’ (p. 405), i.e. life that revolves around provision of health care. This factor was found in both Western and Eastern literature (Gause and Masesar, 1999; Tseng and Wang, 2001; Kane et al, 2003; Tu et al. 2006; Murphy et al. 2007; Cook and Stanley, 2009; Cooney et al. 2009; Higgins and Mansell, 2009). This is also important for institutionalised elderly people who have intellectual disabilities (Higgins and Mansell, 2009).

Another factor that was identified as contributing to QoL amongst institutionalised elderly people is altruism (Aller and Coeling, 1995; Bower and Greene, 1995; Guse and Masesar, 1999; Cottrell and Gallant, 2003; Yuen, 2003; Cipriani et al. 2006; Yuen et al. 2008; Cook and Stanley, 2009). Altruism is a factor that contributes to QoL amongst elderly people in the community and in institutions (Abu-Bader, Rogers, and Barusch, 2002; Dulin and Hill, 2003; Morrow-Howel et al. 2003; Howel and Kimberly, 2007). Altruism can serve as a way of compensating for lost roles in life (Yuen et al. 2008).

In conclusion, this review has identified three main factors that contribute to QoL amongst institutionalised elderly people; maintaining autonomy and identity, maintaining social connections and engagement in occupations. In addition, there are several related factors such as physical health condition that enable the elderly to be independent in activities of daily life, a sense of altruism and the physical infrastructure of the institute that provides privacy, and a sense of safety and comfort. Although there is no major difference in the factors affecting the QoL between institutionalised elderly people in Western and Eastern countries, there is difference in the priority of the factors. Issues regarding autonomy and privacy are
less significant factors in contributing to QoL as much as the issues regarding maintaining the social relationships. These differences were also noted in aspects of QoL from the perspective of European elderly people (Walker, 2005).

However, the factors identified cannot be generalised to all elderly people who live in institutions, not only because the methodological issues of the studies such as type of study conducted, but also the fact that the factors that contribute to QoL are highly individualised and depend on several characteristics such as the availability of the resources, size of the institution and the demographic characteristics of the elderly people. These could influence the factors and priorities in individual QoL. In another words, the factors identified are determined by the level of fulfilment of individual needs, such as basic needs, need for control and autonomy in one’s life, need for self-realisation of potential and need for pleasure (Hyde et al. 2003; Cook and Stanley, 2009). So, it is hypothesised that once the needs are fulfilled, QoL will follow. An example is the need for health services. It was found that QoL amongst institutionalised elderly people who had a stroke is higher than in community dwelling elderly people who had a stroke (Brajkovic, 2009). The author stressed that the status of QoL may be related to better care. Similarly, community dwelling elderly people who live in an impoverished environment and have no financial resources to meet important daily needs such as food, may choose to live in a public institution which will provide them with basic needs such as meals. Issues regarding autonomy, sense of individuality and privacy may no longer become a primary concern and priority in this situation. The fulfilment of basic needs (which is more important than what they gain by living in the community) is postulated to contribute to the QoL in spite of the constraints and lack of autonomy associated with living in the institute.

If autonomy is perceived to be less significant than fulfilment of basic needs such as food, shelter, the elderly could successfully adjust, adapt and accept the situation and achieve QoL within the environment. They become more flexible towards what is important in life so facilitating their QoL. Moreover, people still can have a perceived high QoL in an adverse and in impoverished environment or in disability,
a situation known as ‘disability paradox’ (Albrecht and Devlieger, 1999; Brajkovic et al. 2009).

These issues show that there are multi layered concepts in relation to QoL and individual perceptions regarding QoL is the best method to capture the QoL.

2.7.4 QoL amongst institutionalised elderly people

On examining the factors contributing to QoL amongst institutionalised elderly people it is postulated that the level of QoL amongst institutionalised elderly people is poorer than the community dwelling elderly, based on the assumptions below.

a. Re-location to an elderly institution is often due to the deterioration of the physical and mental health conditions that affect ability to be independent in daily activities (Kwok, et al, 1998; Liu and Tinker, 2001; Shyu and Lee, 2002; Wu et al. 2009; Chang and Schneider, 2010; Luppa et al. 2010). Physical health conditions and ability to engage in occupational areas are the factors that contribute to QoL (Gause and Masesar, 1999; Kane, 2001; Bond and Corner, 2004; Luleci et al. 2008; Lee et al. 2008)

b. Personal characteristics of institutionalised elderly people such as lack of financial security have indirect impacts on QoL (Bond and Corner, 2004). Elderly people in the institution are often people who lived alone prior to re-location to institutions, have low income and lack a social support system (Boggatz et al. 2009; Wu et al. 2009; Luppa et al. 2010). They are thus unable to purchase sufficient nutritious food or to obtain supplemental nutrition from family members. Although public elderly institutions provide basic needs such as food and shelter, this is often insufficient. Subsequently, elderly people are exposed to under nutrition and dehydration (Sabariah and Hanafiah, 1997; Furman, 2006; Mentes, 2006; Chin, 2007; Farah Wahidah and Mohd Nasir, 2008; Amer et al. 2009; Bodur and Cingil, 2009). It is stated that 35% to 85% of nursing home residents in United States are undernourished (Kyser-Jones, 2000). Lack of fulfilment of this basic physiological need could affect the quality of life.
c. The review indicates that autonomy is one of the significant factors that contribute to QoL (Gause and Masesar, 1999; Duncan-Myers and Huebner, 2000; Barkay and Tabak, 2002; Kane et al. 2003; Bond and Corner, 2004; Tu et al. 2006; Howel and Kimbely, 2007; Murphy et al. 2007; Lobo et al. 2008; Cooney et al. 2009). The institutional environment is inclined towards an authoritarian structure and has an adverse effect on personal autonomy and individuality. Lack of autonomy is associated with a feeling of helplessness and lack of internal locus of control (Cox et al. 1991). Furthermore, living in a communal environment affects the sense of privacy. Thus it is postulated that the QoL amongst institutionalised elderly people is lower.

d. Engagement in meaningful occupation can contribute to QoL (Clark and Bowling, 1990; Kayser-Jones, 1990; Paunonen and Haggman-Laitila, 1991; Cox et al. 1991; MacGuinn and Mosher-Ashely, 2000; Atwal et al. 2003; Kane et al. 2003; Bond and Corner, 2004; Elavsky et al. 2005; Tu et al. 2006; Howel and Kimbely, 2007; Murphy et al. 2007; Cook and Sanley, 2009; Cooney et al. 2009). Literature shows that there is a lack of occupation in elderly institutions (Nolan et al. 1995; Ice, 2002; Wenborn, 2005; Harmer and Orrell, 2008; Chuang and Abby, 2009; Cook and Stanley, 2009). The occupations conducted are perceived as only to occupy time, not meaningful and valued occupations and not a part of daily life (Van’T Leven and Jonsson, 2002; Kolanowski and Litaker, 2006). Therefore, lack of occupation is postulated to have an impact to QoL.

e. Social relationships in the institutional elderly are often limited to relationship between residents and staff and a lack of social relationships with the people in the community. The relationship between residents is needed for adjustment to communal living rather than for ‘real’ friendship (Abbot et al. 2000; Choi, et al., 2008). Moreover, contact with family members and friends although perceived as important often decreases after re-location; this can lead to social isolation and loneliness (Nolan et al. 1995; McKee et al. 1999; Pott et al. 2001; Yamamoto-Mitani et al. 2002; Brooke, 2008; Choi et al. 2008). Moreover, the staff often
establishes task-centre types of relationships (de Veer and Kerkstra, 2000; Wilson and Davies, 2009). In addition the rules and regulations determine the movement of elderly people. For example, a specific time to go out of the institution may cause the residents to have a difficulty to socialise or to establish meaningful relationship with other people in the surrounding community.

Having a good social relationship with other residents, the staff and a feeling of being connected to the institution through socialisation and relationships are important factors that contribute to QoL (Clark and Bowling, 1990; Kayser-Jones, 1990; Paunonen and Haggman-Laitila, 1991; Cox et al. 1991; Aller and Coeling, 1995; Kane et al. 2003; Bond and Corner, 2004; Tu et al. 2006; Howel and Kimbely, 2007; Murphy et al. 2007; Cook and Sanley, 2009; Cooney et al. 2009). Thus it is postulated that elderly people will have a low level of QoL as a result of the lack of socialisation and meaningful relationships with other residents, the staff and people in the community outside the institute.

f. For some elderly people, re-location to elderly institution has meant that they are losing everything; they feel devalued, without a future, hopes and sense of purpose in life, so creating a negative perception towards the institution. Having a sense of hope and purpose in life is directly contributed to QoL (Bluval and Ford-Gilboe, 2004; Low and Molzahn, 2007; Pipe et al. 2008). In addition, institutions lack elements that foster hopes, such as opportunity to engage in meaningful occupation and meaningful social relationships. Thus, it is predicted that the QoL amongst institutionalised elderly people is lower.

The assumptions above are supported from previous findings. Literature indicates that the level of perceived QoL amongst elderly people who live in an institution is poorer that community dwelling elderly people (Hwang et al. 2003; Skevington et al. 2004; Lai et al. 2005; Tu et al. 2006; Chan and Pang, 2007; Lin et al. 2008; Bodur and Cingil, 2009; Chang et al. 2010). Lai, et al. (2005) explored the health-related QoL and health utility amongst 428 institutionalised elderly people in 68 long-term institutions in Taiwan using the Short version of World Health Organisation QoL
(WHOQol-BREF). The results show that the overall QoL is 3.38 (0.73), physical and psychological domains are the lowest amongst the four domains in WHOQoL-BREF; 11.69 (2.20) and 11.20 (2.50) respectively. This result is lower than international elderly people (>61 year old), which are 14.20 (3.0) in physical domain and 14.1 (2.8) in psychological domain (Skevington, et al, 2004). Furthermore, it was found that the QoL scores for institutionalised elderly people in Taiwan in all four domains of the WHOQoL-BREF are lower than elderly people who live alone in the same country (Lin et al. 2008). However, in a recent study, Chang, et al. (2010) shows that the level of QoL is much higher amongst institutionalised elderly people in different elderly institutions. Table 2.1 provides a summary of the differences in level of QoL amongst elderly people on studies which look at all four domains of WHOQoL-Bref. This indicates that the concept of QoL is a multi-layered concept influenced by various factors such as health status and the physical environment in which elderly people live.

<table>
<thead>
<tr>
<th>WHOQoL Domains</th>
<th>Study 1 Mean (SD)</th>
<th>Study 2 Mean (SD)</th>
<th>Study 3 Mean (SD)</th>
<th>Study 4 Mean (SD)</th>
<th>Study 5 Mean (SD)</th>
<th>Study 6 Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Health</td>
<td>14.2 (3.0)</td>
<td>11.7 (2.2)</td>
<td>13 (2)*</td>
<td>13.7 (3.2)</td>
<td>13.7 (2.4)</td>
<td>13.98 (2.16)</td>
</tr>
<tr>
<td>Psychological Social</td>
<td>14.1 (3.0)</td>
<td>11.2 (2.5)</td>
<td>13 (2)</td>
<td>12.8 (2.9)</td>
<td>14.6 (2.6)</td>
<td>13.10 (2.40)</td>
</tr>
<tr>
<td>Social relationship</td>
<td>14.2 (3.2)</td>
<td>12.7 (2.1)</td>
<td>13 (2)</td>
<td>13.9 (2.4)</td>
<td>13.6 (2.7)</td>
<td>13.53 (2.54)</td>
</tr>
<tr>
<td>Environment</td>
<td>13.8 (2.6)</td>
<td>12.4 (1.7)</td>
<td>13 (2)</td>
<td>14.9 (2.2)</td>
<td>13.3 (2.4)</td>
<td>14.11 (1.70)</td>
</tr>
<tr>
<td>Total scores</td>
<td>56.3 **</td>
<td>48.0</td>
<td>52.0</td>
<td>55.3</td>
<td>55.2</td>
<td>54.72</td>
</tr>
</tbody>
</table>

* Decimal points not available, SD = standard deviation, ** SD value not available.

Study 1 - International adults > 65 (Skevington et al. 2004)
Study 2 - Institutionalised elderly people in Taiwan (Lai et al. 2005)
Study 3 - Community dwelling elderly people in Taiwan (Hwang et al. 2003)
Study 4 - Elderly people in Taiwan who live alone (Lin et al. 2008)
Study 5 - Healthy elderly people in Indonesia. (Kusumaratna, 2008)
Study 6 - Elderly people in veterans’ home (long term care) in Taiwan (Chang et al. 2010)

Table 2.1: Comparison of WHOQoL mean scores (SD) amongst elderly people.
The assumptions that the level of QoL amongst elderly people is lower than elderly people in the community was determined by the studies above. Although it is postulated and stressed from previous studies that the QoL amongst institutionalised elderly people is lower than community dwelling elderly, there is the possibility that institutionalised elderly people may have a high sense of QoL in spite of lack of the factors identified as contributing to QoL. This is because the QoL concept is highly individualised and there is a possibility that the concept of disability paradox exists in an elderly institution (Cole, 2007; Drageset et al. 2008). This is possible when elderly people have a high sense of coherence between mind, body and spirit with the physical and social environment (Cole, 2007; Eriksson and Lindstrom, 2007; Becker et al, 2010).

2.7.5 Conclusion

Issues regarding QoL amongst institutionalised elderly people are multi-complex and multi-layered issues that are shaped and established by various factors. Moreover the factors are influence by various inter-cultural factors that shown in the comparisons between Eastern and Western literature.

This review has identified the important factors that influence the level of QoL amongst institutionalised elderly people and include maintaining autonomy and identity, maintaining social connections and engagement in occupations, maintaining health status and independence in activities of daily living. However, the factors are highly individualised, based on individual need and priorities in life and ability to adapt to the challenges in life. Further empirical evidence based on a stringent systematic method of obtaining information such as through randomised controlled trials is needed to ensure that the findings are valid and can be generalised to a wider population. In addition, cross-cultural studies should be conducted to determine whether cultural factors influence perceptions towards QoL.
SECTION 3: THE NEED OF INSTITUTIONALISED ELDERLY PEOPLE

2.8 Introduction

Section 1 and 2 discussed the issues regarding living in elderly institutions that have an impact on the three domains in elderly life; ERA, GSE and QoL. Understanding the issues and their impacts allows the researcher to identify some of the needs of elderly people. Understanding the needs and their fulfilment is postulated to counteract the devastating impact of the institution on elderly people.

Elderly people in institutions are often provided with only the basic physiological needs such as food and shelter (Umoren, 1992). However, literature shows that institutionalised elderly people have various implicit and explicit needs that require to be fulfilled, aligned with the higher human needs as indicated in Maslow’s hierarchy of need, such as need to engage in meaningful occupation (Geiger and Miko, 1995; Nolan et al. 1995; Guse and Masesar, 1999; de Veer and Kerkstra, 2001; Kane, 2001; Ice (2002); Berglund, 2007; Chung, 2007; Choi et al. 2008; Brooker, 2008; Marshall and Mackenzie, 2008; Chen, 2010; Kane, 2010), establishing meaningful relationship, love, respect and sense of belonging (Kane, 2010) the need to maintain integrity, autonomy and individuality (Nystrom and Segesten, 1994; Barkey and Tabak, 2002; Spear and Kulbok, 2004; Brooker, 2008; Choi et al. 2008; Lee, 2010). In addition, they also need professional care, such as nursing care, treatment and medication (Chuang, 2007).

However, the needs that can be fulfilled within the occupational therapy practice framework are the main focus of this research. Occupational therapy is a health profession that believes engagement in occupation has a therapeutic effect, thus contributing to health and well-being (Punwar and Peloquin, 2000). Occupational therapists use occupation as a tool of practice to achieve aims of rehabilitation. Therefore, the needs of institutionalised elderly people that can be provided directly within an occupational therapy practice framework are:
i. The need to engage in occupation.

ii. The need for meaningful social relationships.

Occupational therapy often supports the engagement in occupation by providing opportunities for autonomy and individuality whilst engaging in the occupation (Hocking, 1996). In this way, the needs for autonomy and individuality in elderly people can be met.

2.9 Need to engage in occupations

2.9.1 Introduction

Occupation is described as ‘units of activity which are classified and named by culture according to the purposes they serve in enabling people to meet environment challenges successfully’ (Yerxa, 1993, p. 5). Literature shows that transition from community to institutional setting has an impact on participation in meaningful and valued occupation (Blair, 2000). Subsequently, there are differences in types and patterns of participation in occupation between elderly people in the community and elderly people who live in institutions (French, 2002; Hearle et al. 2005; Haslam, 2008). One of the important reasons for the differences in the pattern of participation is because the occupations in the elderly institution are incidental types of occupation, infrequent, inappropriate, insignificant and unnecessary (Van’T Leven and Jonsson, 2002; Hancock et al. 2006; Harmer and Orrell, 2008). The occupations are often conducted by non-professionals and simply to occupy time (College of Occupational Therapy, 1998; Van’T Leven and Jonsson, 2002; Kolanowski and Litaker, 2006). These occupations lead to low motivation for elderly people to participate and low occupational satisfaction (Stanley, 1995; Geiger and Miko, 1995; Hasseskus, 2002; Van’T Leven and Jonsson, 2002; Atwal et al. 2003; Vernooij-Dassen, 2007; Chaudhury and O’Connor, 2007; Pereira and Stagnitti, 2008). Furthermore, some institutional environments lack opportunity to engage in occupation as a result of the rules and regulations which influence occupational behaviour (de Veer and Kerkstra, 2001; French, 2002).
Lack of opportunity to engage in meaningful occupation especially during the day is often expressed by institutionalised elderly people (Nolan et al. 1995; Raynes, 1998; Abbot et al. 2000; Green and Cooper, 2000; Ice, 2002; Hancock et al. 2006; Harmer and Orrell, 2008; Haslam, 2008; Chuang and Abbey, 2009; Cook and Stanley, 2009). For example, a study by Mozley, et al. (2007) found 80% of 30 care homes in north-west England provide less than six minutes of activity staff time for each resident. Subsequently, occupational deprivation occurs amongst institutionalised elderly people (Perrin, 1997; French, 2002; Atwal et al. 2003; Wenborn, 2005; Hancock et al. 2006; O’Sullivan and Hocking, 2006; Haslam, 2008). Occupational deprivation leads elderly people to feel miserable and depressed (Raynes, 1998; de Veer and Kerkstra, 2000; Mozley, 2001; Brooker, 2008; Choi et al. 2008; Chen, 2010) inactive, alone or immobile (Nolan, et al; 1995; Abbot et al. 2000; Ice, 2002). This indicates that elderly people need to engage in occupation.

Engaging in occupation is a part of being a human regardless of the geographical location (Hasselkus, 2002; 2006; Wilcock, 2006; Crepeau et al. 2009) and the need to engage in occupation amongst elderly people in institutes is often described in Western and Eastern literature (Jirovec and Kasno, 1990; Bowling and Fromby, 1992; Aller and Coeling, 1995; Geiger and Miko, 1995; Nolan et al. 1995; Zimmerer-Branum and Nelson, 1995; Perrin, 1997; Guse and Masesar, 1999; de Veer and Kerkstra, 2001; Kane, 2001 ; French, 2002; Ice, 2002; Van’T Leven and Jonsson, 2002; Bergland and Kirkevold, 2006; O’Sullivan and Hocking, 2006; Wadensten, 2006; Berglund, 2007; Brooker, 2008; Marshall and Mackenzie, 2008; Chen, 2010). Examples of occupations that are often described in literature regarding institutionalised elderly people are self-care and recreational activities (Bowling and Fromby, 1992; Aller and Coeling, 1995; Raynes, 1998; French, 2002; Wadensten, 2006; Chang et al. 2007; Marshall and Mackenzie, 2008; Chen, 2010) and social related occupations (Bowling and Fromby, 1992; Guse and Masesar, 1999; Rynes, 1998; Wadensten, 2006).
Based on *Occupational Therapy Practice Framework; Domain and Process* (2nd ed.) by the American Occupational Therapy Association, (AOTA, 2008), occupations can be divided into eight areas. However, these can be summarised into three main areas:

i) ADL, instrumental activities of daily living (IADL), rest and sleep which include personal care, meal preparation, shopping, home management etc.

ii) Work and education, such as formal or informal education, paid or unpaid employment.

iii) Play, leisure and social related occupations for participation or exploration, such as participation in recreational activities or maintaining social relationships.

Several factors have been associated with active engagement in occupations in elderly institutions. The factors are physical and cognitive function, personality traits, motivation, perceived control and quality of activities (Green and Cooper, 2000; Van’T Leven and Jonsson, 2002; Zimmerman et al. 2003; Wadensten, 2007; Kolanowski and Buettner, 2008; Hill et al. 2010; Tietelman et al. 2010). The physical, cognitive and personality factors must match the activities’ demands and personal interest (Kolanowski et al. 2001, Van’T Leven and Jonsson, 2002; Kolanowski and Buettner, 2008; Chen, 2010; Hill, 2010). In another words, the occupations should be tailored to meet the individual needs and demands (Haastregt et al. 2000; Steultjens et al. 2004).

The social environment such as social supports, networks and social cohesion also contribute to active engagement (McNeil et al., 2006; Stahl et al. 2001). Social environment provides positive reinforcement and feedback that will facilitate engagement (McNeil, et al., 2006; Tietelman et al. 2010).

A sense of motivation and self-determination will initiate the engagement with tasks and facilitates higher levels of participation (Yerxa et al. 1989; Green and Cooper, 2000; Hasseskus, 2002; Ball et al. 2007). Motivation can be facilitated through
reinforcement and engaging elderly people in occupations that provide a sense of enjoyment, sense of control over the activity and meaningful types of activity (Green and Cooper, 2000; Muse, 2005; Dacey, Baltzell and Zaichkowsky, 2008; Hill et al. 2010; Tietelman et al. 2010).

Meaningful occupations for institutionalised elderly people who have dementia are individual or group activities that provide a sense of enjoyment and pleasure, involvement, social connection with other people, a sense of belonging, self-identity and autonomy, and the occupations are often related to past roles in life, personal interest and daily routine (Aubin et al. 2002; Legarth et al. 2005; Phinney et al. 2007; Vernooij-Dassen, 2007; Harmer and Orrell, 2008). In addition, meaningful occupations require physical, mental and social involvement and address issues pertaining to physical and psycho-social needs (Kitwood, 1997; Phinney et al. 2007; Harmer and Orrell, 2008). Examples of meaningful occupations that are often engaged in by institutionalised elderly people are: reminiscence activities, family and social related occupations, individual occupations, such as reading, knitting, and musical activities (Legarth et al. 2005; Vernooij-Dassen, 2007; Harmer and Orrell, 2008).

Literature indicates that meaningful occupations for ‘healthy’ institutionalised elderly people are occupations that provide a sense of continuity, familiarity, personal interest, self-determination, autonomy and provide opportunities to have social contact with relatives, friends and family (Green and Cooper, 2000; Van’T Leven and Jonsson, 2002). In recent quantitative studies, Eakman, et al. (2010) and Scott and Debrew (2009) found that engagement in meaningful occupation facilitated a sense of purpose in life.

There are differences in what constitutes meaningful occupation. For example, a study indicates that there are significant differences between genders in relation to type, site of engagement, social relationship and reason for engagement amongst elderly people in Denmark (Legarth et al. 2005). The majority of elderly men mentioned gardening as their most important activity, whilst, needlework was the
most important activity for women (Legarth et al. 2005). Thus, it is assumed that there are differences in what is defined as meaningful occupations as a result of differences in social characteristics and geographical location. Additionally, Hasselkus (2000) and Law (2002) consider that participation in meaningful occupations is related to life cycle, personal interest, culture and social and physical environment. Eastern and Western elderly people are different in terms of culture, social and physical environment.

For this review, meaningful activity for institutionalised elderly people is defined as structured or un-structured activity that has some personal value and sense of personal meaning. The selection of meaningful occupations involves personal value judgement regarding the benefits, motivation and willingness to engage. It could be past occupations, occupations that relate to previous life roles, or a new activity that elderly people want to engage in.

Participation in occupations that produce health is the main focus in occupational therapy literature and the philosophical basis of the occupational therapy profession is related to the knowledge that health and well-being can be obtained through engagement in occupation (Pierce, 1998; Willcox, 2001; Kielhofner, 2007; Law, 2007; Lee, et al, 2008). However, there is limited evidence to support this fundamental belief. According to Laliberte et al (1997) and Yerxa (1989) the connection and contribution link between occupation and health is not well understood. Furthermore, Laliberte, et al. (1997) stated that there is lack of clarity and evidence regarding the contribution of engagement in occupation in relation to elderly people. Nevertheless, several studies as discuss below seek to establish the connection between the benefits of engagement in occupation with health and well-being.

2.9.2 Benefits of engagement in occupations amongst elderly people

The uniqueness of occupation lies in the fact that there is a relationship between occupation and health (Yerxa, 1989; Willcock, 2001; Law, 2002; Christiansen, 2007;
Law, 2007; Lee et al, 2008). Many theorists describe engagement in occupation as providing maintenance of physical health, a positive psychological effect, adaptation and development (Edwards, 2005; Kielhofner, 2007; Schultz and Schkade, 1997). Furthermore, the WHO has recognised the contribution of engaging in occupation towards health (WHO, 2001).

It is a widely accepted view that by engaging in daily occupation happiness, life satisfaction and perceived health and well-being will improve (Wilcock, 2005; Wilcock, 2006; Law et al. 1998; Law, 2002; Christiansen and Baum, 1997; Christiansen, 2007, Justine et al. 2010). Christiansen et al (1998) provide assumptions about the benefits of engagement in occupation such as:

- Engagement in meaningful occupations contributes to health and well-being
- Occupations can be used as a means of self-expression, therefore occupations contribute to the formation and maintenance of self identity
- There is a relationship between occupations and environmental factors, which can hinder or facilitate engagement and attainment of goals for engaging in occupation.
- Self-efficacy is important in engaging in new challenging tasks and successes in engagements contribute to health and well-being.

However, these assumptions need to be tested and validated or explored in empirical studies. Knowledge of the physiological mechanism of occupation that enables or contributes to the health and well-being needs to be systematically tested and valid scientific evidence produced. With the advancement of health technology, evidence that investigates links between engagement in occupation and health should be systematically explored, for example, the links between engagement in occupations and changes in the nervous system (Gutman and Schindler, 2007). However, Wilcock (2007) points out that verification of the benefits of engagement in occupation can be seen in historical evidence and evidence from modern health research in various disciplinary fields that include occupational therapy, occupational
science, sociology and medicine. She asserts that the evidence emerges from human experience, intuition, religion and philosophy. She further argues that the real evidence of occupation towards health can be found “... everywhere, all around us, ... drawn from observation over time, ...a hidden or central aspect of other disciplines ...” (p. 5). In addition, Turner (2007) contends that the interest in occupation and health is influenced by policy makers and politicians alike and science is not the only way to explore the contribution of occupation towards health. Some studies have provided evidence regarding the benefits of engagement in occupation. The evidence below is presented according to the year obtained and level of evidence. High level evidence such as that from a systematic review, meta-analysis studies, randomised controlled trial studies and longitudinal studies will be presented first, followed by qualitative and quantitative descriptive studies.

2.9.3 Benefits of engaging in occupations from meta-analysis, systematic review and longitudinal study

An early meta-analysis was conducted by Carlson, et al. (1996) to address the question of the effectiveness of occupational therapy intervention in improving psychosocial well-being, physical health and daily functions amongst elderly people. Fourteen studies from 52 published papers from 1979 to 1994 met the inclusion criteria. With the average effect size (.51 uncorrected), the authors concluded that occupational therapy interventions for older people produce positive results in improving performance of daily functions, psychological well being and physical health.

Other authors provide evidence through a systematic review. Law, Steinwender and Leclair (1998) conducted a systematic review of twenty-three studies relating to daily occupation, and concluded that from the physiological and functional outcomes that occupation has ‘important influences’ (p. 90) on health and well-being and changes in occupation have ‘significant impact’ (p. 89) on self-perceived health and wellbeing. However, they cannot specify the direction of the relationship or show that occupation causes the actual health and wellbeing. In addition, they did not
clarify the exact meaning of ‘significant impact’ and ‘important influence’. Steultjens, et al. (2004) established the benefits of engaging in occupation such as ADL and social related occupations for elderly people in the community. The finding from a systematic review of 17 articles indicates that tailored occupation was effective in maintaining functional ability and avoiding falls, participation in social related occupations and quality of life.

Other evidence regarding the benefits of engagement in occupation comes from Cochrane’s systematic review (e.g. Livingstone et al. 2005; Peel et al. 2005; Ayalon, Gum, Feliciano et al. 2006). Furthermore, the evidence regarding benefit of engaging in occupation as presented in Cochrane’s review indicates that the occupations were integrated in a form of therapy such as validation and reminiscence therapy (Neal and Barton Wright, 2003; Woods, Spector, Jones et al. 2005), reality orientation therapy (Spector et al. 2000), dance therapy (Xia and Grant, 2009), music therapy (Bradt et al. 2010), art therapy (Ruddy and Milness, 2005); specific training, e.g. cognitive re-training and physical activities (Foster et al. 2005; Gorczynski and Faulkner, 2010); in a specific location or circumstance, e.g. home based programmes or specific diagnoses such as stroke that required engagement in occupation (Hoffman, Bennet, Koh et al. 2010).

Another systematic review was conducted by Peel et al. (2005) on the elderly behaviour that determines healthy ageing in physical and mental wellbeing. The review covers published articles from 1985 to 2003 and a total of 341 articles met the inclusion criteria. Analysis of the review indicates that there are benefits from engagement in physical activities with effect size range from 1.27 to 3.09. Although the authors did not include occupation as one of the determinants of health aging, they found a strong relationship between engagement in occupation such as household activities, leisure or exercise type of activities such as walking and gardening with healthy aging.

Recreational activities have been used to reduce symptoms related to dementia, reduced passivity and to prevent deterioration in functional abilities, but the
Cochrane systematic review indicates that modest effect size or no evidence was found in most of the activities (Neal and Barton Wright, 2003; Livingstone et al. 2005; Peel et al. 2005; Woods, Spector, Jones et al. 2005; Ayalon, Gum, Feliciano et al. 2006). Furthermore, the authors stress that there is insufficient evidence as a result of methodological issues such as small randomised studies to allow strong conclusions, small sample size, and lack of power, high drop-out rate and variation of the occupations provided. Thus, they suggest high quality future research is needed to confirm the findings and increase the quality of evidence.

There is evidence regarding the benefit of engaging in occupation that comes from longitudinal studies, for example prospective studies by Iwarsson, et al. (1998), Glass, et al. (2000) and Hsu (2007). Iwarsson et al (1997) conducted a longitudinal retrospective study from 1970 to 1995 to investigate the relationship between occupation and the survival of elderly people in Sweden. The study indicated that there is a difference in survival rate between less active and more active elderly people. This retrospective study demonstrated the benefit of engagement in daily occupation by long term survival amongst elderly women. This result implies a positive relationship (not a causal relationship) between survival and engagement in occupation and supports the assumption that there is a relationship between engagement in occupation and health.

Structured occupations also have an impact on rate of survival and cognitive impairment. Glass et al. (2000) conducted 13 years of a prospective cohort study amongst elderly people age 65 and above to investigate the impact of social and productive occupations such as gardening on mortality as a result of seven chronic health conditions including heart disease and cancer, whilst Hsu (2007) conducted 10 years of a prospective study in Taiwan on social participation which includes continuing paid work, unpaid work and social clubs/groups amongst elderly people in the community on mortality and cognitive function. They concluded that the social and productive occupations are as effective as fitness activities in lowering the risk of mortality, enhance the quality life, foster longevity and reduce cognitive impairment. Although the term occupation was never used in Glass et al’s (2000)
study, it may be concluded that the information helped occupational therapy to better understand the relationship between occupation and health.

Studies as above provide high evidentiary information regarding the benefits from continuing engagement in occupation. In addition, there is body of evidence developing regarding the benefits from re-engaging in occupation through redesigning lifestyle.

2.9.4 Benefits of engagement in occupation from lifestyle redesign programmes

Lifestyle redesign programmes that encourage active participation and re-engagement in occupation have been successful in promoting physical and mental health (Clark et al. 1997; Matuska et al. 2003; Horowitz and Chang, 2004; Mountain et al. 2008), increasing self-confidence and self-efficacy (Mountain et al. 2008) and facilitating enhancement in quality of life (Clark et al. 1997; Matuska et al. 2003; Horowitz and Chang, 2004; Mountain et al. 2008) amongst healthy and frail individuals.

The earliest lifestyle redesign programme that promotes engagement in occupation was conducted in the United States between 1994 and 1996. This randomised controlled trial study of the lifestyle redesign programme know as the Well-Elderly Study was completed by Clark, et al. (1997) on urban, multi-ethnic, independent living older adults. The programme’s aim was to evaluate the effectiveness of an occupational therapy programme that was delivered through individual and group approaches over 9 months. Each elderly participant in the experimental group received 2 hours/week of group sessions and one hour of individual sessions each month. The participants in the control group received no intervention or received only a social programme. The occupation designed for the experimental group was highly individualised with tailored adaptive strategies (Clark et al, 1996; Jackson, et al, 1998). The outcome from this well known and largest lifestyle redesign study indicated that the programme for the experimental group had significant benefits on
various health outcome measurements such as functional outcomes, health status and quality of life amongst the elderly as compared to the control group; and to the social group conducted by non-professionals. Furthermore, the programme was found not only to be effective but also cost effective in comparison to the control groups (Hay et al. 2002).

Other evidence regarding the benefits of re-engagement in occupation comes from a small qualitative study. This study was conducted by Lipschutz (2002) to identify the experience of six well and independent elderly women who engaged in a lifestyle redesign programme. The programme was conducted for two hours per week and of eight weeks duration. The programme incorporated didactic sessions, peer exchange and self-reflection and direct engagement in occupational lifestyle redesign. The results indicated that the participants gained self-awareness regarding the benefits of engagement in occupation such as that the engagement facilitated a sense of connection, providing a new perspective on life and had positive impact on health and wellbeing. This study contributed to the evidence that engagement in occupation influences health and wellbeing.

A pilot quasi-experimental study known as The Life of Wellness Programme to encourage participation in meaningful social and community activities was conducted by Matuska, et al. (2003) on 65 older adults who lived in urban and suburban areas. This programme mirrored the Well Elderly study by Clark et al. (1997). The programme included community outings once a month and 1-1 1/2 hours weekly group discussions, addressing issues regarding the importance of social occupation, transportation, safety, fall prevention and practical strategies in removing barriers to engagement in the occupations. It was found that the programme significantly increased three domains of SF-36; vitality (p<.05), mental health (p<.05) and social functioning (p<.01). It was also found that the programme facilitated engagement in social activities. It was concluded that the education programme and engagement in social occupation facilitated enhancement of quality of life. However, this is a quasi-experimental study which lacked a control group,
thus the results should be treated with caution. Furthermore, the authors stress that 
the study lack blinding of the raters of the programme.

Lifestyle redesign and engagement in occupation also benefits cognitively intact 
elderly people in the community but who are frail and have a range of chronic 
illnesses such as depression, chronic respiratory disorder, diabetes and spinal 
disorder. Horowitz and Chang (2004) conducted such a programme over four 
months (16 weeks) by engaging participants in various meaningful occupations. 
This pre-test post-test with control-group experimental study mirrored the Well 
Elderly Study by Clark et al.(1997). There were 28 participants in the study and the 
participants in the control group (n=16) participated in the individual and group 
sessions which were facilitated by an occupational therapist. The result showed that 
there was no significant change between pre and post experiment results in health 
status measured by SF-36, functional status measured by Functional Status 
Questionnaires (FSQ), depression and life satisfaction measured by Life satisfaction 
Index-Z. However, the authors stressed that there were ‘favourable results’ (p. 54) 
in the general health domain of SF-36, social activities in FSQ and decreased 
depression as the experimental group demonstrated a marked magnitude of change 
and a marked positive direction of change. Furthermore, the authors stress that the 
result could have been affected by the small sample size that hindered the treatment 
effect and the low health and wellbeing of the participants.

More significant evidence regarding the benefits of lifestyle re-design comes from a 
study by Mountain, et al. (2008). She and her colleagues conducted a mixed-method 
study that aimed to promote healthy ageing amongst 27 elderly people in the 
community through engagement in meaningful occupation. This Lifestyle Matters 
programme was conducted for 8 consecutive months and each participant received 2 
hour of group sessions and a one hour individual session per month. The result 
shows that engagement in occupation improved the overall physical and mental 
health as measured with SF-36 (Mountain et al. 2008). Furthermore, the qualitative 
data indicated that the participants received individual benefits of increased self- 
confidence and increase in self-efficacy through interaction with the group and the
environment. However, there was no change between pre and post intervention in levels of depression and engagement in activities of daily living.

All of the lifestyle redesign programmes that incorporate engagement in meaningful occupation were conducted in Western countries and mostly for healthy elderly people who live in the community. To date, there are no lifestyle redesign programmes conducted for elderly people who live in an institutional setting or for Eastern elderly people.

2.9.5 Benefits of engagement in occupations from descriptive studies

Evidence from descriptive and qualitative studies indicates that engagement in occupation will:

- facilitate adjustment, acceptance of life, maintain familiarity, maintain daily routine, sense of coherence and self identify (Geifer and Miko, 1995; Abbot, 2000; MacGuinn and Mosher-Ashely, 2000; Van’T Leven and Jonsson, 2002; Lowis, et.al., 2005; Harmer and Orrell, 2008; Marshall and Mackenzie, 2008; Brooker, 2008),

- as a means of developing social interaction and establishing meaningful relationships with other residents and so avoid loneliness and depression (Geifer and Miko, 1995; Mckee, 1999; Kane, 2001; Brown et al. 2004; Winningham and Pike, 2007; Meeks and Looney, 2010),

- improved quality of life and life satisfaction (Raynes, 1998; Gause and Masesar, 1999; Duncan-Myers and Huebner, 2000; Kane et al. 2003; Bond and Corner, 2004; Elavsky et al. 2005; Tu et al. 2006; Ball, et al, 2007; Howel and Kimbely, 2007; Murphy et al. 2007; Nimroad, 2007; Lobo et al. 2008; Cooney et al. 2009; Justine et al. 2010; Tse, 2010 ),

- increased self-esteem and specific self-efficacy (Geifer and Miko, 1995; Abbot, 2000; Elavsky et al. 2005; Murrock and Madigan, 2006; McAuley et al. 2005; Cipriani et al. 2006; Gary, 2006; McAuley et al. 2007; Shin et al. 2009),
improving positive affect such as happiness (Elavsky et al. 2005; Schreiner, et al., 2005; Meeks, Young and Looney, 2007)

fostering a sense of hope and purpose in life (Herth, 1993; Borell et al. 2001; Elavsky et al. 2005; Duggleby and Wright, 2005; la Cour, Josephsson and Lubrosky, 2005; Low and Molzahn, 2007; Mozley et al. 2007; Eakman et al. 2010),

reduced depression (Marcolina, 2007; Mozley et al. 2007; Cripps, 2008; Resnick et al. 2008; Tsang, Chan, and Cheung, 2008; Shin et al. 2009),

improved sleeping pattern (Richard et al. 2001; Montgomery, 2004; Richard, et al, 2005; Alessi et al. 2005; Beghe, 2005; Koch et al. 2005; Ouslander et al. 2006) and to

assist thriving in the institutional environment (Bergland and Kirkevold, 2006).

provide feelings of happiness, contentment, fun, drive, mental stimulation and contentment with life (Geifer and Miko, 1995; Harmer and Orrell, 2008; Pereira and Stagnitti, 2008).

physical activities have been demonstrated to protect against several diseases such as hypertension, type II diabetes, cardiovascular diseases and decrease functional impairment such as ADL (McMurdo and Rennie, 1993; Calfas et al. 1996; Rees et al. 2004; Thelander, et.al., 2008; Littbrand et al. 2009; Davies et al. 2010),

increased physical function and fitness (Bo et al. 2006; Brown et al. 2004; Littbrand et al. 2009; Shin et al. 2009)

It is perceived that the effects of engagement in occupations are not exclusive but interrelated and interwoven with each other, in which one benefit will facilitates emergence of other benefits. However, providing a variety of un-structured occupations does not ensure fulfilment of the residents needs. The occupations have to be meaningful and valued (Haastregt et al. 2000; Bundgaard, 2005; Ikiugu, 2005; Wicks, 2005; Harmer and Orrell, 2008; Hill, et al, 2010; Kane, 2010), and belong to a regular individual life pattern (Van’T Leven and Jonsson, 2002). Such occupations will motivate engagement (Yerxa et al. 1989; Muse, 2005), responsiveness amongst
elderly people in institutions (Kolanowski and Buettner, 2008; Cohen-Mansfield et al. 2010), increased adherence (Findoff, Wyman and Gross, 2009), reduced anxiety in relation to participation (Sung et al. 2010) and develop superior occupation outcomes (Clark et al. 1997; Jackson et al. 1998; Dorrestein, 2006). Systematic reviews indicate that individualised and tailor-made interventions produce superior outcomes and efficacy to control groups or standard interventions (Ayalon et al. 2006; Richards et al. 2007; Suhonen et al. 2008). For example, Richard and his colleagues found 49 of 63 individualised studies (78%) had outcomes superior to the control group and Suhonen and his colleagues found that 81% (of 31 studies) indicated that tailored interventions showed outcomes superior to the usual programme. Furthermore, elderly people who have successfully engaged in the occupation before will have a high sense of perceived self-efficacy (Bandura, 1997).

Failure to provide a range of meaningful occupation in institutions can be perceived as abuse and unacceptable (Nolan et al. 1995; O’Sullivan and Hocking, 2006). Furthermore, it has been stressed that occupations in elderly institutions should be the key indicator of the quality of a nursing home (Perkins and Nolan, 1993).

2.10 Need to maintain meaningful social relationship

2.10.1 Introduction

Elderly people who live in an institution face various constraints in the environment in maintaining social relationships and connections with the outside world, such as children, family and former friends. When facing these constraints elderly people may respond by limiting their involvement and participation (McGuire, 1984; Kelly, et al. 1986; Lang et al. 2002) which is associated with disengagement theory (Cummings and Henry (1961). Subsequently, this limitation could expose them to social isolation, increased dependency, depression and deterioration of health and wellbeing (Ostir et al. 2000, van Beek et al. 2011). This indicates the need to maintain social relationships. This section describes relationships between residents
and institution staff, residents with other residents and residents with family members.

Meaningful relationships with staff and other residents are more important for elderly people’s wellbeing than support from family members (Jonas-Simpson, 2006; Cheng et al. 2010). This is due to the nature of the contact which provides more that social support. Unlike the family members that provide social support, staff provides constant functional assistance in various matters that include personal, social supports and nursing care. The staffs are perceived as ‘... second family...’ (Jonas-Sympson, 2006: p. 49). In Eastern countries, there is a saying of ‘distant water cannot put out a nearby fire’, which emphasises the need to have a good relationship between neighbours (or other residents’ in the institution) rather than distant family members (Tsai and Tsai, 2007). However, several studies show that there is no correlation between the needs of elderly people and the staff of the institute which affect the relationship (De Veer and Kerkstra, 2000; Holthe et al. 2007; Nathan, 2008). The staff often concerned with the ward environment, health needs and safety issues for the residents, whilst the residents’ needs are to establish relationships with new friends and re-connect with former family and friends, engage in occupation and to live in a homely environment (Depaola and Ebersole, 1995; Nathan, 2008).

2.10.2 Relationship in elderly institution

The relationships between staff and residents are often based on a clinical orientated contacts that incline towards care routine, thus preventing a deeper level of relationship and a greater level of emotional involvement (Shattell, 2004; Berglund and Kirkvold, 2007; Sormunen et al. 2007; Wilson and Davies, 2009). Furthermore, the relationship between staff and family members or relatives of the residents is often infrequent and lack involvement (Gladstone and Wexler, 2000). In Eastern countries, staff often are perceived as ‘rulers of the country’ (Lee et al., 2002: p. 671). Data from a systematic observation indicates that institutional staff primarily engage in dependence-supporting responses but seldom engage in social engagement-supportive responses to residents such as initiating interaction with
residents during meal times (Pearson and Fitzgerald, 2003; Stabell et al. 2004; Kolanowski and Litaker, 2006). Social interaction during meal time was perceived by the nurses as not an important part of the nurses’ duties (Pearson and Fitzgerald, 2003). In addition, there are staff in the elderly institution that provide inappropriate treatment and meaningless relationship with the resident such as abuse, infantilization, disregard and intimidation (Hirst, 2000; Sormunen et al. 2007; Griffore et al. 2009), seldom addressing the relationship needs of residents with sensory impairment (Cook, 2006; Cook et al. 2006).

It was found that the staff developed two approaches to relationships with the residents; a task-centred relationship and a resident-centred relationship (de Veer and Kerkstra, 2000; Wilson and Davies, 2009). The resident-centred type of relationship and care has a client centred philosophy of care that enables the participants to feel close, connected to the staff and the relationship inspires the residents to feel a democratic type of relationship, a desire to be involved in managing the institute which assists the process of thriving in the institute (Abbott et al. 2000; de Veer and Kerkstra, 2000; Kane, 2001; Berglund and Kirkevold, 2007; Wilson and Davies, 2009).

The importance of this type of relationship is further supported by Cook and Brown-Wilson (2010) and Berglund and Kirkevold (2007) who assert that this type of relationship will provide opportunity for the residents to have a sense of companionship and reciprocity. Jackson (1997) describes this type of care relationship as ‘emotional care’ (p. 197). Emotional care involves the staff providing emotional support and ‘treating them like a friend’ (Jackson, 1997: p. 169). Furthermore, qualitative studies indicate that the resident-centred relationship provides an opportunity for elderly people to be listened to which provides feelings of being valued, intimacy, sense of involvement, provides genuine connection and nurtures a sense of contentment with institution (Nichols, 1995; Koch et al. 1995; Jonas-Simpson et al. 2006).
However, many staff in institutions for elderly people institution engage in task-centred relationships that are clinically orientated (Shattell, 2004; Pearson and Fitzgerald, 2003; Stabell et al. 2004; Berglund and Kirkvold, 2007; Wilson and Davies, 2009).

Task-centred relationships make the residents feel compelled to abide with the rules and regulations, maintaining ‘good manners’, not to cause problems, reluctance to criticise to avoid ‘rocking the boat’ (Abbot et al. 2000; Holthe et al. 2007) and being labelled as ‘fussy and demanding’ (Abbot et al. 2000: p. 336). This was described as ‘follow the culture wherein you live’ which makes it easy for elderly people to adjust and accept the environment situations (Lee, 1997).

Berglund (2007) and Brooker (2008) stress that care homes need to ensure that the daily life of the residents is person centred and not institution centred, allowing the philosophy of care to be based around the needs of the residents and not on the convenience of the institute. This will provide opportunities for the residents to fulfil their needs and their views to be taken into consideration when planning treatment.

However, there are limitations to the evidence regarding the relationship between staff and the residents. The institutional setting, rules and regulations and resources available are different from one institution to another. Furthermore, most of the studies provide only a small amount of data, thus the results regarding relationships between the staff and the residents should be viewed with caution and not generalised to all institution. For example, there are studies that show good cooperation and interaction between staff and the residents which improves life satisfaction for elderly people (Gladstone and Wexler, 2000; Iwasiw et al. 2003).

Close relationships between residents is important for psychological wellbeing and for facilitating engagement in occupation (Teitelman et al. 2010). However, relationships amongst residents are often infrequent and of a non-intimate type (McKee, 1999; Kolanowski and Litaker, 2006). Although they are surrounded by other residents, this does not mean that they are less isolated and lonely. There are
internal and external difficulties, such as visual and hearing difficulties, lack or opportunity and suitable venues to socialise which limit development of meaningful relationships (Cook, 2006; Cook et al. 2006). Subsequently, they often keep each other at a distance or keep to themselves reflecting on the past as illustrated by Erikson’s Development theory; integrity versus despair (McKee, Harrison and Lee, 1999; Johansson, 2002). Although, there are indications of relationships amongst residents, the nature of the relationship is for adjustment, rather than development of a meaningful relationship (Abbot et al. 2000; Chuang and Abbey, 2009). Literature from Eastern countries indicates that the relationship is often a compromise relationship to ensure harmony especially in a communal living environment (Chao, 1995; Lee, 2010).

2.10.3 Relationship with family members

Good social support especially from family members through visits has been shown to be associated with good physical and mental wellbeing amongst elderly people, both in Western and Eastern countries (Potts, 1997; Potts et al. 2001; Logue, 2003; Cheng et al. 2010). However, the social support obtained through visits are often reduced or seldom occur after relocation of elderly people to the institution (Barry and Miller, 1980; Pott et al. 2001; Yamamoto-Mitani et al. 2002; Gueldner et al. 1992; Cheng et al. 2010). For example, the visits decreased from 3.41 average number of visits per week in year one of re-locating to 2.44 visits in year two (Yamamoto-Mitani, et al, 2002) or decreased by half after one year relocation (Pott et al. 2001). Recent studies indicated that the resident received a total of 3.6 visit per month (SD = 5.6, range = 0.4 – 30.4) from family members, 2.8 visits per month from other relatives (SD= 5.8, range = 0.0 – 30.4) (Cheng et al. 2010).

Furthermore, literature indicates there are differences in the pattern of visits to institutionalised elderly people in Eastern and Western countries. A synthesis and critical review regarding visits in the United States revealed that there is continuous connection between the residents and their family after the re-location, thus refuting the notion the family dumping the old person in an institution (Gaugler, 2005).
Although the amount of visits decreased, it was found that the contact still existed (Yamamoto-Mitani et al. 2002; Gaugler, et al, 2003; Gaugler, 2005). However, this is not the case in Eastern countries, like Hong Kong and Taiwan. According to the family tradition of filial piety, the children are responsible for the care of their parents as a sign of respect and to repay their parents, thus, re-location to elderly institution is perceived as disrespect, failure of care giving, shameful and abandonment (Dai and Dimond, 1998; Cheng and Chan, 2006; Cheng, 2009). Subsequently, the Eastern institutionalised elderly people may decide to sever links with their children or emotionally detach themselves from their children, which leads to a lack of desire to visit or a decrease in frequency of visits from both parties (Lee et al. 2002; Cheng, 2009).

Decrease in frequency of visits is due to the changes in lifestyle brought by modernisation that causes lack of free time, geographic distance of the institute and conflict between the residents and family members (Naleppa, 1996; Yamamoto-Mitani et al. 2002; Gaugler, et al, 2003; Gaugler, 2005) or issues with the institution, such as ineffective communication between family and staff or misconceptions about the institution (Logue, 2003).

These cause depression, social isolation and a feeling of neglect amongst elderly people who subsequently have decreased health and well-being. Thus, it is important to re-establish the connection to ensure that elderly people feel included in the life of the family (Cook and Clarke, 2010). The re-connection can be established through visits or through the use of technologies to facilitate interaction, such as email, mobile phones and videoconferencing (Cook and Clarke, 2010; Tsai and Tsai, 2010).

Positive relationships with former friends and family members which include intergeneration relationships provide social support, a sense of meaning in life, life enrichment, a sense of integrity, a sense of inclusion all of which assist in the process of adjustment and acceptance of life in the institute (Porter and Kruzich, 1999; Mosher-Ashley and Lemay, 2001; Depaola and Ebersole, 1995; Bergland and Kirkevold, 2006; Teeri et al. 2007; Cook and Clarke, 2010; Teitelman, 2010), and
facilitate engagement in occupation (Teitelman et al. 2010). Furthermore, intergeneration social supports; i.e. emotional, reciprocal and appraisal supports from grandchildren provide life satisfaction, a sense of kinship that relates to hopes, energy and a new dimension in life (Strom et al. 1999; Chow, 2004; Lou et al. 2008; Lou and Chi, 2008; Lou, 2010). Good interactions and intimate ties with staff and relatives can elevate depression (Meeks and Looney, 2010) and facilitate a sense of purpose in life (Low and Molzahn, 2007).

This shows that elderly people desire meaningful relationships rather than wide relationships. Increased numbers of relationships do not have an effect on health and well-being (Cheng et al. 2010). Close interaction with family, contact and support from staff are more strongly related to wellbeing variables such as reduced depression, life satisfaction and loneliness (McKee et al. 1999; Cheng et al. 2010). Cheng et al’s findings confirm Carstensen’s socio-emotional selective theory (Carstensen, 1992) which states that as people become older, they tend to reduce the size of their social networks and social preferences but increase the quality of relationships through the selective process of pruning and emphasis on people that provide more personal emotional significance (Lockenhoff and Carstensen, 2004).

2.10.4 Conclusion

Like other people, elderly people in institutions have various needs. These needs become more intensified as a result of the issues in the institutional environment which affect various aspects of life as discussed in Sections 1 and 2. Although physiological needs such as provision of meals and shelter are generally met in elderly institutions other needs may not be satisfied. The need to engage in meaningful occupations, establishing or re-establishing relationships with staff, other residents, family members and former friends are identified as the important needs amongst institutionalised elderly people. The need for autonomy was also identified as one of the important needs. A sense of autonomy can be integrated during re-engagement in occupation.
There is evidence that there is occupational deprivation and lack of meaningful social relationships in the Western and Eastern elderly institutions. Various factors that contribute to occupational deprivation and barriers to engagement have been identified. The barriers to engagement are more commonly experienced by institutionalised elderly people due to the impact of the institutional environment. The barriers affect occupational engagement, which subsequently affect their health and wellbeing.

Providing occupation is the centre of the Occupational Therapy profession. Various studies in the occupational therapy field and related professions have shown the advantages of engagement or re-engagement in occupation, such as the attainment of personal and social benefits and the maintenance of health and well-being. The benefits can also be brought about by health promotional activities or changes in individual lifestyle. Most of the evidence comes from descriptive studies which have a number of limitations or from qualitative studies. Findings from descriptive studies, such as cross-sectional studies are perceived as low level evidence (Melnyak and Fineout-Overholt, 2005; Taylor, 2007). Conclusive evidence regarding the benefits of engaging in meaningful occupation is still inadequate (Dirette et al. 2009). There is still a lack of studies that provide strong and conclusive evidence such as that emerging from systematic review, meta-analysis or clinical trials. However, Brooker et al. (2007) observe that

“... from a practice perspective, seeing someone light up with delight when engaged in an activity that has meaning for them, indicates that it is a worthwhile endeavour.”

(p.375)

2.11 Overall conclusion for literature review

The ethos of elderly institutions is often associated with various negative connotations. Literature from Western and Eastern countries are often discuss four interrelated negative issues, such as issues regarding occupations and social deprivation, issues regarding autonomy and psychological issues such as depression
resulting from living in the institution. These issues have shaped the behaviour and lifestyle amongst institutionalised elderly people. However, the issues experienced by elderly people is highly individualised and influenced by various environment factors in the institution, such as organisational structure, facilities offered, living arrangements and the type of institution. For example, elderly people who lived in private institutions have a different experience from elderly people who lived in public institutions.

Positive experiences can also be obtained as well as negative issues as a result of personality, social characteristics and reason for admission. There are elderly people who passively accept the situation and ‘making the best out of it’. Furthermore, literature indicates that people can live in an impoverished environment and yet have positive experiences as a result of acceptance, contentment and high sense of coherence. This suggested that ‘disability paradox’ exists in elderly institution.

The negative issues affect various aspects of elderly life, such as expectation towards aging, self-efficacy and quality of life. There is insufficient evidence regarding how the issues affect the expectation towards aging and self-efficacy. Thus, several assumptions were made based on current knowledge, such as factors that influence the aspects, to determine the current state of these two aspects in life. Literature has demonstrated how the issues affect the quality of life of institutionalised elderly people.

Literature from Western and Eastern developed countries has identified three important and inter-related needs of institutionalised elderly people. The needs are, i.e. need to engage in meaningful occupation, need for meaningful relationships and need for autonomy. It was found that there are more similarities that the differences in needs. Institutionalised elderly people in Western and Eastern countries have similar needs, but there are some differences in terms of the intensity of the needs. For example, autonomy was perceived as an important need in Western societies, which is different from Eastern elderly people. Eastern elderly people put more emphasis on meaningful relationships than autonomy.
There are evidence regarding the benefits of engagement in occupations from systematic review, longitudinal studies and randomised controlled trial studies. In addition, evidence is also available from descriptive and qualitative studies. Systematic review indicates that the benefits from engagement in occupation are ‘promising’ or are moderate, but this is insufficient to allow conclusions to be made because of lack of large scale trials. Further research work is needed to increase the quality of the evidence. Lack of evidence does not mean lack of efficacy. Several longitudinal studies, clinical trials studies, descriptive and qualitative studies indicate that engagement in occupation is important in maintaining health and wellbeing amongst institutionalised elderly people. Furthermore, re-engagement in occupation through re-designing lifestyle has positive benefits on health and wellbeing, for example the Lifestyle Redesign Programme (Clark et al. 1997) and the Lifestyle Matters (Mountain, et al., 2008).

Institutionalised elderly people are prone to adopt a sedentary lifestyle as a result of the social expectation and issues discussed earlier. Thus, it is imperative to design a programme that will facilitate changes in lifestyle and to maintain health and wellbeing through a health promotional programme that includes engaging elderly people in meaningful occupations.

2.12 Conceptual framework of the study

The inter-related issues and the effect of the issues on several domains in life such as low expectations regarding ageing, general self-efficacy and quality of life were identified. In addition, the need of elderly people in institution was also identified. These needs can be fulfilled through a specifically design occupational therapy programme which is aligned with the core believe in occupational therapy profession. Occupational therapy believes that there is a relationship between engagement in occupation with health and well-being. Literature review has help to provide a conceptual framework for the study. Thus, based on the issues, effect and
needs amongst institutionalised elderly people that was identified in the review, the framework of the study was developed as shown in Figure 2.3.

Figure 2.2: Conceptual framework of the study
2.13 **Summary points for Chapter 2.**

- Institutionalised elderly people are defined as elderly people aged 60 and above who live in private or public long term institutions such as care homes (nursing homes or residential homes), sheltered housing or sheltered accommodation where the main objectives of the institution are to provide nursing care or shelter.

- There are mixed perceptions amongst elderly people towards elderly institutions. However, negative perceptions are frequently discussed in the literature and have pre-eminence compared to positive perceptions. The elderly institution is often described as a ‘dumping place’, place to idle away the hours whilst awaiting the time to die, a place where old people will lose everything including their freedom, be surrounded by sick people and a place that has no future.

Positive experiences amongst institutionalised elderly are often associated with the physical infrastructure of the institution, the facilities provided and the desires of elderly people who want to be re-located because of personal characteristics such as living alone, lack of social support, low income or medical problems.

- Literature indicates that there are three inter-related issues in elderly institutions; the living environment (pattern of daily life and social relationships), issues regarding autonomy and psychological issues. Institutionalised elderly people are often inactive; spend many hours in bed or take a nap during the day, are deprived in meaningful occupations and becoming dependent on staff. Although there are occupations conducted by the staff, the occupations are infrequent, incidental types of occupations and for occupying time. There are indications that the occupations conducted have no meaning to the elderly people.
• Social relationships between staff and residents are often formal and task-orientated and lack meaning, whilst relationship with other residents are often purely for adjustment, infrequent and of a compromising type to ensure harmony. In addition, visits from family members and friends often decline over time. These issues subsequently cause psychological reactions such as depression and social isolation in institutionalised elderly people.

• The imposed rules and regulations, policies and routine in the institutions have an effect on the sense of autonomy, privacy and individuality of the residents. The elderly people become powerless and show a lack of internal locus of control. However, literature from Eastern countries indicates that perceived autonomy, individuality and privacy are not important aspects in life and residents perceive imposed rules and regulations as necessary to maintain a harmonious environment in the institution and this helps them to adjust well to the institutional environment.

• Literature shows that there are many psychological issues associated with institutionalised elderly people such as depression, social isolation and loneliness. These psychological issues are related to lack of engagement in occupation and lack of meaningful relationships.

• The three inter-related issues have a negative effect on three main components in the life of the elderly, such as their expectations towards ageing, general self efficacy and quality of life.

• Literature indicates that there are several contributing factors (or sources) that influence the level (high or low) of the components, that is; the environment (physical and social), health status and abilities (physical, mental, psychological), perceived autonomy and engagement in occupation. However, literature also shows that institutionalised elderly
people are often at a disadvantage in obtaining the positive factors (or the sources). For example:

a) Occupational deprivation and disfranchisement often occurs in elderly institution residents. Engagement in meaningful occupations provide a positive future outlook on self, facilitate enhancement in specific self-efficacy and quality of life.

b) Lack of autonomy as a result of institutional policies is associated with lack of internal locus of control. People with low internal locus of control tend to have reduced future expectations in life.

c) Lack of meaningful social relationships amongst elderly people. Meaningful social relationships provide a source of support, facilitate sources of self-efficacy and reduce the risk of depression.

- It is suggested that because of these negative issues the level of expectations towards ageing, general self-efficacy and quality of life, are low.

- Results and findings from various sources in the literature provide evidence regarding the benefits of engagement in occupations. Engagement in occupations will facilitate enhancement of the components (i.e. expectations towards ageing, general self-efficacy and quality of life) adversely affected by the issues in elderly institutions. However, the evidence is inconclusive and is often derived from descriptive results and findings.

- This review provides a framework for the design of an occupations based intervention programme that will facilitate enhancement of the components in the life of the elderly affected by issues in the institutions. The programme will bring about changes in lifestyle through re-engagement in meaningful occupations.
CHAPTER 3:

METHODOLOGY AND
DESIGN OF THE STUDY
3.0 Introduction

“The goal of social science research is to understand the complexity of human behaviour and experience”

(Morse, 2003: p. 189)

“What is most fundamental is the research question – research methods should follow research questions in a way that offers the best chance to obtain useful answer”

(Johnson and Onwuegbuzie, 2004)

This chapter will discuss the methodology of the study and is divided into six sections as shown in Figure 3.1 below.

Figure 3.1: The methodology framework
SECTION 1: Study design and method

3.1 Introduction

This study uses a mixed method as the methodology of the study. Creswell and Plano Clark (2007) emphasise that the choice of research design in mixed methods study is determined by the research purpose and the question. This study has two main types of questions that can be answered utilizing two research paradigms that involve quantitative and qualitative data collection. These types of questions reflect both positivist and constructivist (seeking for inference and elaboration of meaning). In line with this, the rationale and the purpose of choosing a mixed methodology are as follow:

- There is a duality of direction in this study, i.e. deductive and inductive. The main theoretical drive for the study is inductive in nature (i.e. to test hypothesis and to confirm result of the new intervention) and to explore and describe experience of living in the institute which is inductive in nature and within a qualitative framework. This duality is aligned with the principles of mixed methodology in which the method is able to answer the dual direction of the research question (Morse, 2003; Tashakkori and Teddlie, 2003).

- The data obtained will reside with and complement other findings (qualitative findings supporting quantitative results) and will provide an overall picture of the study and so gain a broader perspective (Creswell et al. 2003; Creswell and Plano Clark, 2007). The qualitative study will elaborate the phenomena under study. Whilst, the quantitative results will be useful in discovering the causal relationship, clinical reasoning and mechanism of the inference (Axin and Pearce, 2006). This is the main justification for conducting mixed method research in the UK – That is, the need to address the research question and to understand and obtain a broader understanding about the complexity of the phenomena under study (O’Cathain et al. 2007). Furthermore, Kroll and Morris (2009) state that the strength the mixed method will “enhance context sensitivity” (p. 11)
• The complementary design that applies to this study will help to interpret results that are poorly understood and to help in explaining any outlier existing in the quantitative results (Morgan, 1998). This is aligned with one of five main purposes of mixed methods, i.e. complementary (Takashori and Teddlie, 2003; Bryman, 2006; Creswell, 2009). Complementary mixed method design which has quantitative dominance is the most frequent mixed methods design used in health service research in England (Cathain et al. 2007).

• Choosing mixed methods will provide an opportunity to counterbalance the weakness of one method with the strength of another method, thus provide a balance, (Creswell et al. 2003; Axin and Pearce, 2006; Creswell and Plano Clark, 2007)

• Mixed methods require a heavy involvement of the researcher to increase familiarity with the study (unlike survey) (Axin and Pearce, 2006; Kroll and Morris, 2009).

• Mixed methods is considered as a new area in rehabilitation research and the full potential is yet to be explored. (Kroll and Morris, 2009). This study will be able to enlighten the potential of using mixed methods in rehabilitation studies. Motenson and Oliffe (2009) state that mixed methods provide two advantages for occupational therapy; the method enables occupational therapy to generate and verify theory within a single study and to understand various phenomena underpinning practice. In addition, O’Cathain (2009) state that there is growing acknowledgement in health services that intervention cannot be evaluated by monomethods and mixed methods is gaining its place in health service studies. She perceived this as ‘…quiet revolution’ (p. 3)

There are two primary purposes for adopting mixed methods for this study; i.e. for complementation and for expansion.
For the purpose of complementation, quantitative results from this study will determine the effectiveness of the intervention whilst the qualitative findings will compliment the quantitative result by providing ideographic explanations and experiences with regards to the quantitative study measures and domains investigated, i.e. the ERA, GSE and QoL.

In addition, the qualitative findings will supplement the quantitative finding by providing explanation on how the new intervention that is based on engagement in occupations would alter the experience of living in the institute and will subsequently alter the result of study. This type of design has led to the belief that qualitative research is inferior to quantitative research (Dalington and Scott, 2002). This is not the case in this study as the qualitative data will compliment and expand understanding of the phenomena under study.

Qualitative findings will be able to provide a broader scope and wider understanding with regards to the situations under study. In addition, this method will provide information that may not be quantified (Creswell, 2009). The reason that the qualitative method is “nested” (embedded) in quantitative method (QUANT + qual) is because the aim of this research is to understand the ideographic experiences of the elderly people who lived in the institute in relation to quantitative study measures. In other words, the quantitative study measures determine the questions asked in the focus groups. Thus the concurrent embedded mixed method design was used for the study.

There are many variations of embedded design. However, embedded experimental design is commonly used to evaluate outcomes of an intervention that require the researcher to conduct an experimental study (Creswell and Plano Clark, 2007). The rationale for choosing embedded design for this study is that the design is logistically feasible to be conducted by a researcher within limited time frame, for example both data sets can be collected at the same time, and the availability of the resources, for example, number of participants and expenses to conduct the study are shared.
Furthermore, this design is “…appealing to funding agencies because the primary focus of the design is quantitative…” (Creswell and Plano Clark, 2007: p. 70).

In relation to the rationale of using mixed methodology for this study and the purpose of choosing mixed methods of investigation, a typology of the study was developed. This typology consists of the purpose of using mixed methods, the mixing elements, time dimension in mixing and the emphasis dimension of the study, the typology, the symbolic representation and the model as shown in Figure 3.2.

Figure 3.2: Typology of the study (adapted from Creswell and Plano Clark, 2007; Leech and Onwuegbuzie, 2009)
3.2 Purpose of the study

This mixed methods study will explore the effect and experience of people who live in a Malaysian institution for the elderly people relating to a new intervention identified as Lively Later Life Programme (3LP) in the domain of ERA, GSE and QoL.

The primary purpose of this study will use quantitative instruments to test the theory of occupational engagement, which predicts that the proposed new intervention (3LP) will positively influence the ERA, GSE and QoL for elderly people who lived in an institutional setting.

A secondary purpose of the study is to gather qualitative data that will explore ideographic experience of the elderly people who lived in an institutional setting in relation to their expectation towards ageing, general self-efficacy and quality of life before and after the proposed intervention. The secondary data sets will provide elaboration, enhancement and illustration, thus complementing and expending the result of the primary data sets.

Thus the study involves quantitative and qualitative data collection before and after the intervention phase of the study.

3.3 Objectives of the study

In line with the pragmatic epistemological position of the study, there are two main objectives of the study, relating to quantitative and qualitative objectives.

Quantitative research objective:

- To determine the effect of an occupational therapy based intervention programme (3LP) on ERA, GSE and QoL for institutionalised elderly people in Malaysia.
Qualitative research objective:

- To explore and understand the ideographic experience of the elderly people in relation to ERA, GSE and QoL before and after the implementation of 3LP.

3.4 Questions of the study

Primary question
- What is the effect of 3LP on ERA, GSE and QoL in elderly people who live in an institutional setting?

Secondary questions
- Is the 3LP that was conducted for the institutionalised elderly in Malaysia more effective than the normal intervention provided by the institute in enhancing the ERA, GSE and QoL?
- What is the experience and meaning of living in the institute and how do residents make sense of living in the institute in relation to their ERA, GSE and QoL before and after the implementation of 3LP?

3.5 Hypothesis of the study

Three null hypotheses will be tested as follow:

- Null hypothesis 1: Participants in 3LP have no significant improvement in overall expectation towards ageing when compared to the participants in normal programme conducted by the institute, as measured by the ERA scale.

- Null hypothesis 2: Participants in 3LP have no significant improvement in self-efficacy when compared to the participants in normal programme conducted by the institute, as measured by the GSE scale.
Null hypothesis 3: Participants in 3LP have no significant improvement in the quality of life when compared to the participants in normal programme conducted by the institute, as measured by the WHOQoL.

SECTION 2: Theoretical perspective of the study

3.6 Introduction

There are many strengths and limitations in a monomethod (either quantitative method or qualitative method). Each monomethod has different paradigmatic orientations and epistemological positions. The limitations of the monomethod and its restricted properties in understanding the complexity of human behaviour puts researchers in a position to combine or to build a bridge between the qualitative and quantitative research paradigms in order to complement strengths, to avoid overlapping weaknesses and to fully understand the complexity of human behaviour (Onwuegbuzie and Leech, 2006). Johanson and Onwuegbuzie (2004) state that

“...its logic of inquiry includes the use of induction (or discovery of patterns), deductive (testing of theories and hypotheses) and abduction (uncovering and relaying on the best of a set of explanations to understand one’s results)”

(p. 17)

The logic of inquiry and the advantages of combining strengths from qualitative and quantitative paradigms cause a growing number of researchers to take a non-purist position or fixed position and utilize mixed methods research to undertake their studies. For example, mixed methods study has increased from 17% in mid-1990 to 30% in the early of 2000s (O’Cathain, 2009).

Mixed methods can be defined as

“A mixed methods study involves the collection or analysis of both quantitative and/or qualitative data in a single study in which the data are collected concurrently or sequentially, are given priority, and involve the integration of the data at one or more stages in the process of research”

(Tashakkori and Teddlie, 2003: p. 212)
Mixed methods originated in 1959 when Campbell and Fisks used a combination of qualitative and quantitative methods to examine the validity of psychological traits and the idea of combining both methods has expanded since then. Johanson and Onwuegbuzie (2004) state that mixed methods is a “third wave” or third research movement” (p.17) and consider that mixed methods is a “research paradigm whose time has come” (p. 14). They further stress that the mixed methods movement passed the paradigm wars and differences in epistemological position and offered a sound workable solution to understand the complexity of human behaviour.

The epistemological position of a mixed methods study reflects both positivist and constructivist positions (seeking for inference and elaboration of meaning). Thus, the mode of inquiry in mixed methods is the use of induction (to identify themes, discovering patterns, exploring relationships and theory emergence), deduction (confirmation, testing knowledge and theory through hypothesis testing) and abduction (seeking best explanation to explain results) (Johanson and Onwuegbuzie, 2004). Tashakori and Teddlie (2003) stated the pragmatism is the best paradigm for mixed methods and they stressed that the pragmatists embrace both epistemological positions and reject the assumptions as stated in the post-positivism and constructivism dichotomy. This pragmatic epistemological assumption is based on the principle that the researcher should use difference strategies and method in collecting multiple data to answer the research question in a way which will offset the limitations of a monomethod (Johnson and Onwuegbuzie, 2004; Gray, 2009). According to Hanson et al. (2005) pragmatism is

“... a set of ideas articulated by many people, from historical figures such as Dewey, James, and Piece to cotemporaries such as Murphy, Rorty and West. It draws on many ideas including using “p for mixed method research (p. 226)

Thus, pragmatism emphasises the core ideas that knowledge should be obtained and applied in a practical way, the test of knowledge or quest for new knowledge should be tested through empirical methods but there is no single best method to acquire definite knowledge (Descombe, 2007).
The pragmatists embrace holism and continuity in searching for answers in research questions (Tashakkori and Teddlie, 2003; Creswell, 2009). Tashakkori and Teddlie, (2003) and Johanson and Onwuegbuzie (2004) stressed that the fundamental in research is the research question, thus it should be given priority rather than the research method, the theoretical lenses or the paradigm that underlying the research method. Furthermore, Descombe (2007) stressed that mixed methods put a strong emphasis on ‘what works’ or practical approaches in answering research question. Johanson and Onwuegbuzie (2004) stated that

“What is most fundamental is the research question – research method should follow research question in a way that offers the best chance to obtain useful answer. Most research questions and combinations of questions are best and most fully answered through mixed research solutions.”

(p. 17 – 18)

This statement was further supported by Gray (2009) who stated that

“Research methods are not determined dogmatically according to a set of assumptions that flows from one paradigm or another but flow from the nature of research question being asked in a way that offers the best chance to obtaining useful and workable answer.”

(p. 204).

Furthermore, in line with the development of evidence based practice, Harden and Thomas (2005) state that systematic review research in clinical settings in the “real world” does not fit into quantitative or qualitative categories and indicate that systematic review should not be “too concerned” (p. 265) with the epistemological position of the research. O’Cathain et al. (2007) also state that

“Mixed method approaches are justified on pragmatic rather than ideological grounds, to help researchers to engage with the complexity of health, health care, and the environment in which the study takes place”

(p. 4)

In another words, the pragmatists put a strong emphasis on methods to answer the research question and to understand the complexity of the research problem rather
than a ‘paradigm war’ (Johanson and Onwuegbuzie, 2004: p. 14) between two philosophical positions.

The philosophical positions of the pragmatist are as follow:

- Pragmatists are not committed to specific philosophical foundations. They draw freely from both quantitative and qualitative assumptions and what is considered the best and workable method to understand the situations and answer the research question (Tashakkori and Teddlie, 2003; Johanson and Onwuegbuzie, 2004; Crewell and Plano Clark, 2007; Creswell, 2009).
- Researchers have the freedom to choose procedures, method and techniques that are suited to their needs and the research question and the best way to understand the research problem.
- The research questions determine the choice of the selected method of inquiry and the question should be the most important aspect that guides the research process (Jackson and Onwuegbuzie, 2004).
- Knowledge is acquired through construction (as advocated in constructivism paradigm) and based on reality of the world that people experience and live (as advocated in positivism paradigm) (Creswell and Plano Clark, 2009).
- Pragmatists perceive that there are various meanings and complexity of experiences from historical and social perspectives attached to the participants’ experiences which require in-depth investigation. Subsequently, pragmatists did not see the world as singular unit which requires a single method of data collection.
3.7 Types and classification design in mixed methods

There are various classifications of mixed method designs in the literature that show the evolving nature of mixed methods since 1989, and the classification represents the various disciplines in social science, thus different terminology is used; such as in evaluation research, nursing, education research, health research, primary health care and social behaviour research (Tashakkori and Teddlie, 2003; Creswell and Plano Clark, 2006). However, there are more similarities than differences between the classifications, and the design can be classified into four main types, i.e. Triangulation, embedded, explanatory and exploratory designs (Hanson et al. 2003; Creswell and Plano Clark, 2006).

The primary purpose of the triangulation design is to obtain different types of data which can complement each other, thus seeking convergence or to validate findings. For example, a researcher compares quantitative statistical analysis with qualitative findings or validating quantitative results with qualitative findings; the aim is to achieve conclusion regarding single phenomena (Creswell and Plano Clark, 2006).

Embedded mixed method design is a design that adopts a secondary method of data collection (quantitative or qualitative data) to provide support to the primary data sets when the primary data cannot provide answers to the research questions. This design is frequently used in experimental study, where the qualitative data is used to examine the process or mechanism of the intervention. This has been identified as concurrent nested mixed method strategy or concurrent embedded strategy. Creswell (2009) defines this strategy as:

“...a primary method that guides the project and a secondary database that provides a supporting role in the procedures. Given less priority, the secondary method is embedded, or nested within the predominant method ... means that the secondary method addresses a different question than the primary method”.

(Creswell, 2009: p. 214)
An explanatory mixed method design consists of a two-phase approach in which the result of the first method helps to explain, inform or to develop the second method. The exploratory mixed method design also has a two phase approach which frequently starts with collection of qualitative data to explore phenomena under study. The results of the qualitative study help in construction of research instruments to test the emergence theory.

These mixed method designs are closely related to the five general purposes or rationale of using mixed methods in a study (Onwuegbuzie and Leech, 2006; Denscombe, 2007, Collins and O’Cathain, 2009; Gray, 2009; Mortenson and Oliffe, 2009). Most of the mixed methods can be categorised as having more than one purpose in their study (Greece et al. 1989; Onwuegbuzie and Leech, 2006).

The five main purposes, benefits or rationale of using mixed methods in study are as in the box below:

**Box: 3.1:** General purpose of mixed methods.

- **Triangulation.** Triangulation aims to seek collaboration and convergence between two methods (methodological triangulation between methods or within methods), data sets (data triangulation) or an investigator triangulation (use of different researcher in the same topic). Combining the methods will allows weakness of one method to compensate or compare with another method, but the methods remains as what it.

- **Complementary –** which aims to seek elaboration and enhancement from other study method to explain or clarify the result from different methods.

- **Initiation.** Initiation aims to explore the contradictions between results of two methods and the contradiction will provide insights to re-framing the questions. Thus the questions can be re-framed.

- **Development.** The result obtained from one method is used to develop another question for another method.

- **Expansion.** This type of mixed method is aimed to acquire an extensive data through the use of different method to investigate different study components.
CHAPTER 3

The decision to choose a mixed method design depends on various key factors, such as the research problem, one’s own expertise, constraints such as funding resources and time and expectations of stakeholders. Furthermore, the decision depends on time of data collection (whether both data are concurrently collected or sequentially), the weighting or the dominancy given to each method (equal or unequal status) and the method of connecting or mixing the two data sets (either primary data is merged with the secondary data sets, the secondary data sets are embedded in the primary data sets or the data sets connect to each other).

3.8 Steps in mixed methods

Designing a mixed method involves various steps which are similar to a monomethod (Handson et al. 2005). However, there are at least three additional steps, such as deciding the mixing dimension of the study, deciding on how the data will be collected (either sequentially or concurrently) and setting the priority or dominancy of the method (either quantitative or qualitative – equal or unequal emphasis), thirdly, deciding the mixing dimension, either it is in objectives, data operation, data analysis or integrated inference (Handson et al. 2005). The steps are as shown in Figure 3.3.
Figure 3.3: Steps in a mixed method
(Adapted from Johanson and Onwuegbuzie, 2004; Onwuegbuzie and Leech, 2006)
3.9 Data collection and sampling strategy in mixed methods

The method of data collection in mixed methods depends on the types of methods and the time dimension of the collection; whether it is sequential or concurrent data collection (Bergman, 2007; Creswell and Plano Clark, 2007; Collins et al. 2007; Teddlie and Yu, 2007; Creswell, 2009).

In concurrent data collection, qualitative and quantitative data are collected at the same time and the data are interdependent, especially in triangulation and embedded designs. In a sequential design, one data set (either qualitative or quantitative) is collected at first to inform the second data collection, for example in exploratory and explanatory design. Data collections in mixed method also depend on issues pertaining to sampling and sampling strategies.

In general, sampling strategy in behavioural and social sciences are divided into probability and non-probability (purposive sampling). Probability sampling techniques are often used in quantitative orientated research, whilst purposive sampling is often associated with qualitative studies. Sampling in mixed methods involves:

“... the selection of units or cases for a research study using both probability sampling (to increase external validity) and purposive sampling strategy (to increase transferability)”

(Teddlie and Yu, 2007: p.78)

Thus, sampling strategy in mixed methods involves creatively combining both methods of data collection (probability and purposive methods) in order to answer the research questions and to generate data that is rich in breadth and depth regarding the phenomena under study (Creswell and Plano Clark, 2007; Teddlie and Yu, 2007: Creswell, 2009)

Probability sampling is a sampling strategy in which every member of the population under study has an equal chance of being selected as a participant in the study and aims to achieve an adequate number of samples that will provide accuracy in
representing the entire population under study. Thus, this sampling strategy seeks generalisation and samples that provide representation to provide ensure external validity (Teddlie and Yu, 2007). Whilst non-probability (purposive or purposeful sampling) involves selecting units (individuals, groups or institutions) that possess certain characteristics or information needed to answer the research questions. The characteristics or the information are obtained by the study participants through experiencing or in possession of the specific characteristics. It aims to achieve uniqueness of experience and sometime seeks for generalisation through the ability of the data to be transfer to other participants (transferability) (Teddlie and Yu, 2007). Both sampling strategies require adequate sample size.

Sample size in mixed methods depends on the research design. In the embedded design, the issues regarding sample size in secondary data is irrelevant as the secondary data will supplement the primary data sets (Creswell and Plano Clark, 2007). In addition, the secondary data is asking a different set of question. For example; what did the participant experience in relation to the study measures?. However, in a triangulation design, the sample size in both designs should be comparable to ensure that the data can be triangulated (Creswell and Plano Clark, 2007). When conditions do not allow a mixed method study to obtain samples that provide representation (the objective in quantitative study) and saturation (the objective in qualitative study), a compromise must be achieved. This compromise in mixed method study is known as “representation/saturation trade-off” (Teddlie and Yu, 2007: p. 87). According to Teddlie and Yu (2007):

“trade-off means that the more emphasis that is placed on representativeness in the quantitative sample, the less emphasis there is that can be placed on the saturation of the qualitative sample, and vice versa” (p. 87)

3.10 Data analysis process and interpretation in mixed methods

Tashakkori and Teddlie (2003) presented a model of data analysis in mixed methods. This descriptive model consists of seven stages; i.e. data reduction, display,
transformation, correlation, consolidation, comparison and data integration. Furthermore, the model includes description on how to compare and integrate quantitative and qualitative data sets. However, the process in the model is not linear and the steps depend on the design (Tashakkori and Teddlie, 2003; Creswell and Plano Clark, 2007). For example, this study which employs a concurrent embedded mixed method design requires only four stages of data analysis, i.e. Stage 1 - data reduction, Stage 2 – Data display, Stage 6 – data comparison and Stage 7 – data integration

SECTION 3: The study context

3.11 Introduction to the institution and residents

The elderly institution chosen for this project is a non-profit institution established and managed by the Ministry of Social Welfare, Malaysia. It is one of the oldest, well established and largest public funded institutions for elderly people in Malaysia. The institute is formally known as “Old folks home” and was established in 1948. The institute occupies an area of four hectares and consist of nine buildings which include seven main wards, an administration building, dining halls, staff quarters, recreational areas, a small mosque and a morgue. The layout of the institute is in Appendix 3.1

Most of the elderly people who live in the institute come from rural areas and were referred to the institute for one or more of the following reasons.

- Self-admission due to financial difficulties or health related problems.
- Admitted by others e.g. by family members, relatives or neighbours due to inability to care for the elderly people.
- Admitted by officers from the Department of Social Welfare
- Admitted by enforcement agency e.g. police
The aim of the home is to provide care and support in the form of medical and rehabilitative services and counselling to older people who lack family and financial support. The institution houses independent elderly people, 60 years old and above, who do not have any relatives and do not have any contagious or chronic diseases (Jabatan Kebajikan Masyarakat, 2008).

There are 225 residents in the institution, consisting of 143 females (64 %) and 82 (36 %) males. 41% (n= 95) are Malay, 28% (n=65) are Chinese, 22.4% (n=52) are Indian and 9 % (n=20) are other races such as Eurasian and indigenous people. There are seven hostel types of house which are occupied by 30 – 40 residents per house. The residents live in an open area (communal living) which has common lavatory and bathrooms as shown in picture 1 – 3.

Picture 1 : Communal living environment
CHAPTER 3

Picture 2: Healthy Ward

Picture 3: Common living area.
Residents are provided with daily basic needs such as food, clothing, shelter, medical and rehabilitation services and recreation activities. Various rules and regulations are imposed on the residents, such as the residents are not allowed to go outside the institution compound unaccompanied and they are not allowed to abuse other residents. The rules and regulation are aimed at ensuring the safety of the elderly people in the institute (Department of Social and Welfare, 2009).

Occupations for the healthy elderly people, for example meal times and daily activities are structured and organised by the staff, however, the elderly people can decline the activity programme planned for them. Nursing and rehabilitation is provided for them, and the elderly who require medical attention are referred to the nearby hospital.
3.12 Participants recruitment and inclusion criteria

The participants of the study were recruited as below:

- Following ethical approval and permission from the Department of Social Welfare in Malaysia (under the administration of the Ministry of Women, Family and Community Development), a formal meeting was conducted with the director of the institute (Ms. E). The aim of the meeting was to explain to the management the proposed intervention and to identify rules and regulations pertaining to living in the institute. Subsequently, the management provided recommendations that allowed the researcher to recruit participants from “healthy wards” and avoid taking participants who are in the secure wards e.g. participants in the “mental ward” and “jail ward”. Elderly people in both wards are not allowed to go outside their designated ward and the ward is surrounded by wire fences.

- Informal individual interview and observation was conducted with the elderly people during the participant recruitment phase (Phase 1: Stage 2 of the study) as shown in picture 5 and 6. The aims of the informal interview were to identify their communication language, and age. In addition, observation was conducted to determine their level of independence in basic self-care. The interview and the observation were conducted in various wards in the institute in 6 – 13 October 2008 (2 weeks).
Participant recruitment

Picture 5: Participants recruitment

Picture 6: Participant recruitment
In addition, the researcher also reviewed the participant’s personal file to identify the personal, social, family and medical history such as the demographic characteristics - age, marital status, reason for admission, education level, and physical and mental health conditions. Participants who were diagnosed as having chronic respiratory diseases or having a history of cardiac related diagnosis were excluded. Advice regarding health status of identified elderly people was sought from two staff nurses’ in-charge. This is because of the occupations in 3LP requires the participants to engage in physical activities.

Small and informal group meetings were conducted in the ward or in the recreational areas to identify possible participants and to disseminate information about the programme.

A “testers” session was conducted to explain the programme and to stimulate interest amongst the elderly people. The components of the session are in Appendix 3.2. After the session, the participants were invited to participate in the programme.

The sample inclusion criteria for this study are:

- elderly people who are independent in basic self-care skills,
- aged 60 and above,
- able to speak in either in Bahasa or English
- Scores of 22 and above Mini Mental State Examination (MMSE) and scores below seven in Geriatric Depression Scale (GDS).

The exclusion criteria for this study are:

- elderly people aged below 60 yrs old,
- dependent in activities of daily living
- have severe sensory deficit e.g. vision and hearing
• have medical conditions that contraindicated physical activities e.g. myocardial infarction, chronic obstructive pulmonary diseases that induce severe shortness of breath whilst walking.
• elderly people who did not speak or understand Bahasa or English
• refusal to participate in the study
• MMSE scores > 22, GDS above 7.

Ninety one (44.4%) residents in the institute were excluded from the study due to deterioration in health conditions and living arrangement. 134 (59.6%) residents were approached and were invited to participate in the programme. The residents were screened further using Mini Mental State Examination (MMSE; Folstein et al. 1975) and General Depression Scale (Yesavage et al. 1983). There were 98 (73.1%) residents who conformed to the inclusion criteria and scored above 22 in MMSE and above seven in GDS. However, 16 (16.3%) residents who conformed to the inclusion criteria refused to participate; therefore the total number of residents who consented to the study was 82. The research process, screening and selection of the participants in the study is shown in Figure 3.4
Total residents in the institution (n= 225 elderly people)

Not included due to:
- Live in the secure ward (n=41)
- Dependent in ADL (due to musculoskeletal problems, severely weak, others) (n=18)
- Chronic sensory deficit (vision and hearing) (n=16)
- Chronic medical conditions (CR) (n=5)
- Others e.g. language (n=11)
  TOTAL = 91 elderly people.

Not meeting the inclusion criteria:
- MMSE < 22 = 15 elderly people.
- GDS below 7 = 12 elderly people.
- Both = 9 elderly people.
  TOTAL = 36 elderly people
- Declined to participate (n = 16 elderly people)

3LP Group (n = 46)
In-house programme (n = 36)

82 participants
20 participate in pre-experiment focus groups

Pre experimental - Quantitative study measures (WHOQoL, ERA, GSES)

Randomisation (n = 82)

3LP Group (n = 46)
In-house programme (n = 36)

6 months Intervention

Analysed (n=42)
Excluded in the study (died) = 4

Analysed (n=32)
Excluded in the study (died) = 2

Post experimental - Quantitative outcome measures (WHOQoL, ERA, GSES)

23 participated in post-experiment focus groups

n=number of participant, ADL= activities of daily living, MMSE = Mini Mental State Examination, GDS = General depression scale, WHOQoL = World Health Organisation Quality of Life, ERA = Expectations Regarding Ageing, GSES = General Self Efficacy Scale.

Figure 3.4: The research process, screening and selection of the participants
3.13 Screening process and tools

Two screening tools were chosen as a part of the inclusion criteria. The decision to use the Geriatric Depression Scale (GDS) and Mini Mental State Examination (MMSE; Folstein et al. 1975) was due to the following justification:

1. GDS was chosen as the screening tool as there is a relationship between depression and motivation to pursue therapy and exercise (Sabin, 2005). This relationship would affect the intervention proposed; thus by excluding such participants the extraneous variables that may affect the proposed intervention are eliminated.

2. MMSE is a simple and well established tool commonly used to assess cognitive status in elderly people in clinical settings. It is commonly used as a screening tool for dementia and a useful tool for detecting cognitive impairment (Folstein et al. 1975) Dementia is associated with the deterioration of cognitive processes including memory impairment, thinking, orientation, learning ability, language and judgement which subsequently affect occupational function (Creek, 2002) Thus, it is postulated that the impairments will affect the process and outcome of the proposed intervention. MMSE has been used for elderly people in Malaysia in clinical and community settings (Mimi et al. 2006; Ng et al. 2006, Norlinah, 2009). Scores of below 21 was taken as the cut-off point based on education and age as suggested in a previous study (Crum et al. 1993).

3. The proposed intervention requires the participant to participate in occupation. Perlmutter et al. (2010) stated that participation in occupation changes with age, as well as psychological and cognitive function. Depression and cognitive impairment negatively affect participation. Thus, the two screening tools above were used to exclude the depressed and cognitive impaired residents from participating in the programme.

4. Previous intervention that has similar characteristics with the proposed intervention such as Mandel et al. 1999; Horowitz and Chang, 2004;
Mountain, et al., 2008) have had use the same tool in the process of screening the participants.

5. Both screening tools were translated to Bahasa and the psychometric property of the tools was validated within the Malaysian context.

Ten third year Nursing students from a private nursing college who were at the institute for their attachment were employed to assist in applying the screening tools to 134 residents. In addition, they were also assisting in taking the baseline study measures from 82 participants. The students were provided with two hours of training sessions by the researcher on how to deliver the screening tools (MMSE and GDS), baseline study measures and obtaining informed consent from the participants as shown in picture 5. The component of training is in Appendix 3.3.

Picture 5: Briefing to the nursing students
Prior to conducting the screening the students were instructed to obtain the informed consents for the participants. Protocol for gaining informed consent is in Appendix 3.4. An example of the informed consent is in Appendix 3.5 (i) and (ii). In addition, the students were given the protocol for using the screening tools. The protocol for conducting the MMSE and GDS is in Appendix 3.6.

The description of the screening tools, i.e. the MMSE and GDS, including the validity and reliability of the translated version is in Appendix 3.7. Copy of the translated version is in Appendix 3.7 (i) and (ii).
3.14 Phases and stages of the study

This study is divided into three phases aligned with the concurrent embedded experimental study design (Creswell and Plano Clark, 2007). Phase 1 (pre experimental phase) consist of four stages. Phase 2 (experimental stage) consist of one stage and Phase 3 (Post experimental stage) which consist of two stages as shown in Table 3.1. The phases and stages in the study are described below.

<table>
<thead>
<tr>
<th>PHASES</th>
<th>STAGES</th>
<th>TIME</th>
<th>MAIN ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHASE 1: Pre-experimental phase</td>
<td>Stage 1</td>
<td>1 month</td>
<td>• Seeking ethical approval</td>
</tr>
<tr>
<td></td>
<td>Stage 2</td>
<td></td>
<td>• Observation, orientation, recruitment and screening</td>
</tr>
<tr>
<td></td>
<td>Stage 3</td>
<td>2 months</td>
<td>• Focus groups and pre experimental evaluation (study measures)</td>
</tr>
<tr>
<td></td>
<td>Stage 4</td>
<td></td>
<td>• Randomisation and concealment</td>
</tr>
<tr>
<td>PHASE 2: Experimental phase</td>
<td>Stage 5</td>
<td>6 months</td>
<td>• Conducting the intervention (3LP)</td>
</tr>
<tr>
<td>PHASE 3 : Post-Experimental phase</td>
<td>Stage 6</td>
<td>2 months</td>
<td>• Post experimental evaluation (study measures)</td>
</tr>
<tr>
<td></td>
<td>Stage 7</td>
<td></td>
<td>• Focus groups</td>
</tr>
</tbody>
</table>

Table 3.1: Phases and stages of the study


3.14.1 Phase 1: Pre experimental phase

There are four stages in this phase.

*Stage 1: Seeking ethical approval*

At this stage, the researcher accessed the gatekeepers and gained approval from ethical committees, in Queen Margaret University (QMU) and from Department of Social Welfare (DOSW) in Malaysia. The approval from QMU was obtained on 19 March 2008 (Appendix 3.8 (i)) and approval from the DOSW Malaysia was obtained on 16 September 2008 (Appendix 3.8 (ii)).

*Stage 2: Orientation, Sample recruitment and screening.*

The objectives at this stage was to observe and assess the living situations of the participants, observe the staff and participants dynamics and morale, identify the availability and location of resources, identify the prospective participants and participants recruitment. The recruitment process is explained in detail in section 3.3.2. In addition, the participants were screened using the Mini Mental State Examination (MMSE) (Folstein et al. 1975) and Geriatric Depression Scale (GDS) (Yesavage et al. 1983). Detail regarding the screening process and the screening tools is in section 3.3.3. Informed consent from the participants was obtained at this stage.

*Stage 3: Pre experimental evaluation (quantitative study measures and focus groups)*

At this stage, the participants who fit into the inclusion criteria were assessed using four validated and reliable study measures. The detail of the study measures is in section 3.4.1.2
Pre experimental focus groups were conducted at this stage. The procedure of conducting the focus groups is in section 3.4.2.1 – 3.4.2.3 and information about the focus groups questions was described in Table 3.4 and section 3.3.2.4.

The duration of this stage was two months with tasks overlapping with tasks in stage 4.

**Stage 4 – Randomisation and group assignment**

At this stage, the participants who fitted into the inclusion criteria were randomised and were allocated to either the experimental group or control group. The randomisation procedures and concealment are discussed further in section 3.4.1.5.

**3.14.2 Phase 2: Experimental Phase**

**Stage 5: Experimental stage of the L3P**

At this stage, the participants in the experimental group participated in the proposed intervention known as Lively Later Life Programme (3LP) for six months. Details of the 3LP are in Chapter 4. In addition, the participants in the experimental group also participated in the ‘in-house programme’ conducted by the institute, whilst the participants in the control group only participated in the ‘in-house programme’. It was decided that any overlapping programme that cannot be changed or delayed (i.e. programme in 3LP and ‘in-house programme’ are conducted at the same time), the participants were allowed to participate in the programme conducted by the institute and the 3LP were conducted over the weekend.

**3.14.3 Phase 3: Post-experimental phase**

There are two stages in this phase, i.e. post experimental evaluation for quantitative outcome measures and post experimental focus groups.
Stage 6: Post experimental evaluation (quantitative outcome measures)

The aim of this stage was to determine the outcome of the programme after six months using quantitative study measurement as in the pre experimental stage. Participants who completed the programme (in the experimental and control group) were asked to complete the same sets of questions as in stage 2. The data collection procedures is in section 3.4

Stage 7: Post experimental evaluation (focus groups)

The aim of this stage was to identify the experience of the participants in the experimental group in relation to their ERA, GSE and QoL. Details of the procedures of the focus groups are in section 3.4.2.1

The phases and stages of the study are aligned with the process of the study, drawing on the concurrent embedded experimental design as shown in Figure 3.5. The process of the study shows the link between primary and secondary data that was inferred at the end of the data analysis.
Figure 3.5: The process of the concurrent embedded experimental design.
(Adapted from Tashakkori and Teddlie, 2003; Creswell and Plano Clark, 2007; Schulenberg, 2007)
SECTION 4: Method of data collection and integrations

Aligned with the epistemological stand of the study and the research question, this study was conducted using two designs, i.e. Quantitative research design and qualitative research design.

3.15 Quantitative research design

This section will describe part of the quantitative research design in the mixed methods. The first section will described the quantitative design chosen for the study; the second section will explore the method of data collection during pre and post experimental stages, the study measures used to evaluate the programme and translation of the study measures. The third section will describe the sampling issues; including sampling strategy, sample size, power and randomization procedure. The final section will describe the method of data analysis in the quantitative element of the study.

A classic experimental design was chosen to determine the effect of the 3LP. A Pre-Test-Post-Test parallel experimental study with control group design was chosen (Gray, 2009). The design was chosen as it allows the researcher to draw a scientific decision and explanation regarding the causal inference or causal relation of the intervention and whether the independent variables (3LP) caused the changes in the dependent variables (the study measures) specified by the theory underpinning the theoretical framework of the study (Frankfort-Nachmias and Nachmias, 2003; Creswell, 2009). In addition, this type of design has a good internal validity and allows the researcher to control other compounding variables (Frankfort-Nachmias and Nachmias, 2003).

In this study, the participants were randomly assigned to the experimental group and the control group. The experimental group received the proposed intervention (3LP) that was conducted by the researcher for six months. Further information about the intervention is in Chapter 4. In addition, participants in the experimental group also
participated in the “normal” programme that was conducted by the institute. Further information about the “normal” intervention is in Chapter 4. However, the participants in the control group only participated in the “normal” programme that was conducted by the institute. Pre and post tests were conducted on both groups.

This study design was chosen as it is strongest and is perceived as a superior experimental design that could provide a logical model to determine causal inference, thus determining the effect of the 3LP in comparison to other experimental study designs such as the pre-experimental and quasi experimental designs.

### 3.15.1 Method of data collection

The data collection in the quantitative element of the study is divided into two phases; pre and post experimental.

#### 3.15.1.1 Pre experimental stage

Data collection at this stage was collected by ten third year nursing students at the institute for their attachment. In addition, they also conducted the screening tools prior to collection of the pre experimental study measures. The students were provided with two hours of training session by the researcher on how to deliver the screening tools (MMSE and GDS), demographic questionnaires, and the study measures, i.e. Interest checklist (IC), Expectation regarding aging (ERA-12), General Self-efficacy scale (GSE), World Health Organisation Quality of Life (WHOQOL) The component of training is in Appendix 3.3.

The students were given the names of participants assigned to them and a protocol for conducting the study measures as is in Appendix 3.9. The stages of the data collection were structured according to the “difficulty level” and the length of the study measure to facilitate understanding and to obtain precise responses (Blaxter, Hughes and Tight, 2006). The stage of data collection is as shown in Table 3.2. The information about the students is in Appendix 3.10. Each student was instructed to
interview the eight to nine participants assigned to them using translated study measures that were given earlier. The interview was conducted in two stages according to the difficulty level of the questions and on two separate times (in the morning and in the afternoon). Each stage lasted about 30 to 45 minutes. The students were required to communicate in *Bahasa* with the participants throughout the interviewing process.

<table>
<thead>
<tr>
<th>Stages</th>
<th>Study measures / data collected</th>
</tr>
</thead>
</table>
| Stage 1 / Time 1 | 1. Demographic questionnaires – gender, age, ethnicity, marital status, medical condition, education level, length of residency, number of friends and family.  
                     2. Interest checklist (IC) - was conducted in pre experiment stage only.  
                     3. Expectation regarding aging (ERA-12) |
| Stage 2 / Time 2 | 1. General Self-efficacy scale (GSES)  
                     2. World Health Organisation Quality of Life (WHOQOL- Bref) |

Table 3.2: Stage of data collection and List of Outcome measures.

### 3.15.1.2 Post experimental stage

Data collection at this stage was collected by two psychologists who were employed to conduct the post experimental outcome measures and focus groups. Details of the psychologists are in Appendix 3.11. The objectives of the study and the nature (philosophy, theoretical framework, components, structure, content of the programme and activities) of the intervention were not explained to them in order to address issues pertaining to blinding and participants’ experimental/control group assignment.

The psychologists were given two hours of training session by the researcher on how to deliver the study measures, i.e. ERA-12, GSE and WHOQOL- BREF and on how to conduct the focus groups on 14 May 2009. The psychologists are familiar with the WHOQOL-BREF scale and how to conduct a focus group. The component of training is in Appendix 3.12.
Each psychologist was asked to interview 38 participants using the quantitative study measures as above with the aid of a protocol in conducting the study measures as in Appendix 3.13. The name of the participants were randomly selected from 76 participants (46 participants from the experimental group, 36 from the control group) who had completed the study through simple random sampling strategy using Random Allocation Software (Saghaei, 2004\textsuperscript{1}, 2004\textsuperscript{2}), thus they did not know which participants belong to the experimental group or the control group. Furthermore, the psychologists were required not to ask the participants which group they belonged to or the nature of the intervention. The process was conducted in two stages and in two separate occasions as in pre experimental stage and it was required that they communicated in Bahasa with the participants throughout the process.

### 3.15.2 Study measures

There are three main investigation domains that are given priority in this study in relation to the elderly people in the institution, i.e. ERA, GSE and QoL. The rationale for studying these three main domains is as below:

Literature indicated that engagement in occupation will facilitate enhancement in QoL (Raynes, 1998; Gause and Masesar, 1999; Duncan-Myers and Huebner, 2000; Kane et al. 2003; Bond and Corner, 2004; Elavsky et al. 2005; Tu et al. 2006; Ball, et al, 2007; Howel and Kimbely, 2007; Murphy et al. 2007; Nimroad, 2007; Lobo et al. 2008; Cooney et al. 2009; Justine et al. 2010; Tse, 2010), thus contributing to decreased mortality rate and increase in general health and wellbeing (Peel et al. 2005; Iwarsson et al. 1997; Law et al. 1998; Glass et al. 1999; Clark et al. 1997; Lipschutz, 2002).

In Malaysia, information regarding the QoL amongst elderly people who live in institute is unknown. However, literature regarding institutionalised elderly people in Malaysia indicates that there is a decline in physical health status and function (Sabariah, 1997; Al-Jawad et al. 2007; Mohd Aznan and Samsul, 2007; Latipah and
Henaachi, 2008), cognitive abilities (Visvanathan, 2005; Zaiton, Sazlina and Renuka, 2009) and general health (Visvanathan (2005; Mohd Aznan and Samsul, 2007; Ang and Zaiton 2008; Latipah and Henachi, 2008; Teo et al. 2011) thus it is postulated that elderly people who live in institutions in Malaysia have low QoL. Furthermore, lack of physical activities and sedentary lifestyle in the institutions expose the elderly to the development of many chronic diseases, decreased muscular function and dependency (Pichard et al. 2004; Rolland et al. 2004; Justine, 2010). Thus, it is imperative to investigate the QoL of the elderly people in the institution. Furthermore, the proposed new intervention (3LP) will provide evidence with regard to the value of occupation in enhancing QoL amongst the institutionalised elderly.

Changes in functional status may influence perceived QoL (Gause and Masesar, 1999; Mitchell and Kemp, 2000; Tseng and Wang, 2001; Kane et al, 2003; Tu et al. 2006; Cook and Stanley, 2009; Cooney et al. 2009; Justine, 2010). In relation to this study, it is postulated that the intervention (3LP) will change the functional status of the elderly people who lived in the institution with subsequent changes to their QoL.

One of the factors associated with quality of life is self-efficacy (Robinson-Smith, Johnston and Allen, 2000; Kohler et al. 2002; Broome, 2003; Azar et al. 2006; Middleton et al. 2007) Perceived self-efficacy is the belief in one’s competence or capability with respect to any specific task and it makes a difference to how people think, feel and respond (Bandura, 1997). Therefore, it is postulated that elderly people who have a high self-efficacy have a high expectation regarding ageing, thus self-efficacy facilitates successful ageing. Moreover, self-efficacy is related to an internal locus of control and belief in one’s own ability, to motivation, cognitive reasoning and taking a course of action in a challenging situation (Bandura, 1997). In another words, people who have a high self-efficacy will be highly motivated, have cognitive reasoning ability with a positive expectation towards later life.

However, erosion of personal autonomy and an external locus of control are often associated with the institutional settings and result from institutional policy, inflexibility of general routine and the hierarchical structure of the institution.
(Bowling and Fromby, 1992; Brown, 1995). Thus it is postulated that the elderly people in institutions will tend to have low self-efficacy and a negative perception towards the future which will subsequently decrease the quality of life.

The rationale above provides justification for the investigation of the domains. The study measures Quality of Life (WHOQoL- Bref), General Self- Efficacy Scale (GSES) and Expectation Regarding Ageing (ERA) were chosen for a number of reasons;

**WHOQol-Bref**

a) The suitability of WHOQoL-Bref was tested in Asian populations such as in Taiwanese (Hwang, et al, 2003; Lai et al. 2005; Lin, Yen and Fetzer, 2008; Chang et al. 2010), in Malaysia (Hasanah and Razali, 2002; Hasanah et al. 2003), in Indonesia (Kusumaratna, 2008) and in Singapore (Wong, 2003).

b) The scale was recognised as suitable to be used for institutionalised elderly people because of its sound psychometric properties, its concise but multi-dimensional nature (Courtney, et al. 2003).

c) The measure is accompanied by the interviewer-assisted or interviewer administered form and is thus suitable for the participants in this research setting.

d) The study measures was used in institutionalised setting, for example studies to identified the quality of life amongst institutionalised elderly people (Lai et al. 2005; Courtney et al. 2009; Chang et al. 2010); to identify the muscle endurance and quality of life (Bautmans, et al, 2008), in a cross-validation study (Low and Molzahn, 2007), quality of life in elderly Taiwanese (Yen et al. 2008) and the relationship between spirituality with quality of life (Molzahn, 2007).

e) The WHOQoL is often used to evaluate quality of life amongst elderly people (Hwang et al. 2003; Naumann and Byrne, 2004; Lin, Yen and Fetzer, 2008; Arslantas et al. 2009; Ikin et al. 2009). It is the most widely used quality of life measure measuring tool in the world (Skevington et al. 2004).
f) The WHOQoL takes the individual’s perception and evaluation (lay-man evaluation) towards personal quality of life which relates directly to the participant’s cultural and value systems and to his/her social and environmental context (Diener and Suh, 1997; Bowling et al. 2002). It is not evaluated by health professionals.

g) It measures four important areas of life quality; physical health, psychological, social health, environmental aspects. These are separately measured within overall quality of life. Furthermore, it is suitable for clinical trials. (Diener and Suh, 1997; Bowling et al. 2002)

h) The scale was translated and tested on Malaysian elderly populations in various settings (rural and urban areas). It has good internal consistency, test-retest reliability and constructs validity (Hasanah et al. 2003; Hasanah and Razali, 2002).

i) The aim of the measures is to capture both global and specific constructs of the quality of life and not solely specific construct as in other specific quality of life measures such as the Health Related Quality of Life (HRQOL) and Quality of Life Index – Nursing Home Version (Ferrans and Powers, 1985). The result of specific Quality of Life Index – Nursing Home Version cannot be compare with the community. Furthermore, HRQOL has a limited utility in assessing institutionalised elderly people who have higher cognitive function (the ceiling effect) and it was suggested that modifications should be made for use on elderly people who live in institutions (Andresen et al. 1999).

j) The translated version uses simple Malay language. Literature indicates that literacy influences ability to answer questionnaires (Kim, 2008). Other instruments to evaluate health status and quality of life, such as RAND SF-36, HRQOL was found to be difficult to answer and to interpret by elderly participants (Barnes, 2008; Drageset et al. 2008).

k) Limitations of this measures is that there is no justification for the choice of the domain and some issues are omitted such as the importance of material well-being, employment, spiritual, religion and personal belief and issues regarding cultural, semantic and linguistic differences (Skevington, 2002). Subsequently, other facets were added to the scale such as the need for
respect and food to the Taiwanese version of WHOQOL-Bref (Lai et al. 2005; Tu, Wang and Yeh, 2006).

l) Another limitation is there are only three facets for social relationships. It was acknowledge later by the authors as unstable. (The WHOQOL Group, 1998; The WHOQOL group, 1995).

ERA

a) The ERA scale was the first study measure to be designed to evaluate the expectations and future orientations towards life. To date, this study measure has not been used in institutions for the elderly and there is no occupational therapy literature that deals with the impact of ERA on later life or towards occupational therapy programme.

b) Pragmatic justification – the ERA scale consists of 12 questions involving four main constructs, i.e. physical, mental, cognitive and total expectations regarding ageing. Short question sessions are preferable to long questionnaires for elderly people in institutions (Courtney et al. 2003).

c) It has a suitable scale for identifying future expectations; especially for elderly people

d) There are no cut off points, thus marks obtained do not categorised subjects into have low or high expectation (positive or negative)

e) It has been tested in a middle-age community of Singaporeans (who have a culture and characteristics similar to elderly people in Malaysia (Joshi et al. 2010).

GSES

a) The scale was used for elderly people in Asian countries such as Indonesia, Korean and Hong Kong which possess similar cultural and personal characteristics to elderly people in Malaysia (Scholz et al. 2002; Chiu and Tsang, 2004; Wu et al. 2004; Luszczynska et al. 2005)
b) The GSE was translated and validated in the Indonesian language which is similar to the Malay language (Scholz et al. 2002)

c) It measures general constructs of self-efficacy rather than specific constructs of self-efficacy (e.g. tasks specific or domain specific of self-efficacy) and the scale is suitable for evaluating perceived self-efficacy and ability to cope with various issues in the institution and events that are perceived as stressful.

d) Studies show that the constructs have no relationship with individualism-collective culture, which indicates that the scale can be use within a nation and between nations, thus making it a universally constructed scale (Scholz et al. 2002; Wu, 2009).

a) Pragmatically, it has 10 short questions. Shorter questions are often chosen for use with elderly people (Kim, 2008).

e) The use of GSE was suggested in a previous related study by Mountain et al (2008)

The description of the study measures that include the information about the translated version is in Table 3.3
### Table 3.3: Description of the quantitative outcome measures

<table>
<thead>
<tr>
<th>No</th>
<th>Outcome measures</th>
<th>Description</th>
<th>Psychometric properties</th>
<th>Other information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Short form of the World Health Organisation Quality of Life (WHOQOL-BREF)</strong>&lt;br&gt;a. Developed by WHOQOL group&lt;br&gt;b. Cross-culturally accepted and was translated into 19 different languages.&lt;br&gt;c. Covers 4 main domains and contains 24 facets of QoL, i.e. physical health (7 facets), psychological (6 facets), social relationship (3 facets) and environment (8 facets) (The WHOQOL Group, 1998; The WHOQOL group, 1995).&lt;br&gt;d. Five point Likert scale. Range of scores is 25 to 125 with high scores indicated greater QoL.&lt;br&gt;e. Measures broader concepts of life such as impact of diseases, impairment on daily activity and behaviour.&lt;br&gt;f. Standardised method to analyse data obtained.</td>
<td>a. Internal consistency (Cronbach’s alpha range from 0.73 to 0.81) and intra-observer reliability were equal to or higher than 0.58 for Taiwanese elderly study.&lt;br&gt;b. Valid and reliable measure of the quality of life of older people (Kullmann et al. 2007; von Steinbuchel et al. 2006) as it has psychometric property of Cronbach’s alpha at 0.935, and the correlation between facets is significant at p&lt;0.01 (Kullmann et al. (2007).&lt;br&gt;c. Translated version will be used for this study, it has internal consistency in the four domains, ranging from 0.64 – 0.84, whilst the test-retest reliability indicates that the intra-class correlation coefficient ranges from 0.49 to 0.88 (mean = .78) (Hasanah et al. 2003).&lt;br&gt;d. Tested on a wide range of people, including the patients with psychiatric illness in the community (Hasanah and Razali, 2002).&lt;br&gt;e. A copy of Malay and English version is in Appendix 3.14 (i).</td>
<td>a. Translated version will be used for this study, it has internal consistency in the four domains, ranging from 0.64 – 0.84, whilst the test-retest reliability indicates that the intra-class correlation coefficient ranges from 0.49 to 0.88 (mean = .78) (Hasanah et al. 2003).&lt;br&gt;b. Tested on a wide range of people, including the patients with psychiatric illness in the community (Hasanah and Razali, 2002).&lt;br&gt;c. A copy of Malay and English version is in Appendix 3.14 (i).</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td><strong>General self-efficacy scale (GSES)</strong>&lt;br&gt;a. Developed by Jurusalem and Schwarzer in 1979. Self-administered.&lt;br&gt;b. The scale was shortened from 20 items to 10 items and adapted in 28</td>
<td>a. The Cronbach’s alpha for the scale range from 0.76 to 0.90 with average of 0.8. The scale is a universally constructed in terms of</td>
<td>a. Permission to use and translate the GSE was obtained from the authors on 20 March 2008.</td>
<td></td>
</tr>
</tbody>
</table>
languages (Schwarzer and Jerusalem, 1995).
c. Tested at three different continents – developed, post-communist develop
country and developing country.
d. The range of scores is from 10 to 40, the sores are compute to obtain the
mean scores.

<table>
<thead>
<tr>
<th>CHAPTER 3</th>
</tr>
</thead>
</table>
| a. Tested at three different continents – developed, post-communist develop
country and developing country. |
| b. The range of scores is from 10 to 40, the sores are compute to obtain the
mean scores. |

4 Expectation Regarding Aging (ERA)

a. Elderly expectation will influence their health in the future (Goodwin et al.
1999; Levy et al. 2002) and determines successful aging (Bowling and Dieppe,
2005).

b. Consist of four domains. i.e. Physical, mental, cognitive and the overall
expectation.

c. Possible scores is 0 to 100 (in 12 item questionnaires).

d. 10 to 12 minutes for the 38
questionnaires, whilst 5 minutes is
needed to complete the 12 items
questionnaires.

e. Does not label the expectation to
positive or negative, however, the scale
provides higher or lower areas without
a cut-off point for what is optimum
(Sarkisian et al. 2005).

<table>
<thead>
<tr>
<th>4 Expectation Regarding Aging (ERA)</th>
</tr>
</thead>
</table>
| a. Elderly expectation will influence their health in the future (Goodwin et al.
1999; Levy et al. 2002) and determines successful aging (Bowling and Dieppe,
2005). |
| b. Consist of four domains. i.e. Physical, mental, cognitive and the overall
expectation. |
| c. Possible scores is 0 to 100 (in 12 item questionnaires). |
| d. 10 to 12 minutes for the 38
questionnaires, whilst 5 minutes is
needed to complete the 12 items
questionnaires. |
| e. Does not label the expectation to
positive or negative, however, the scale
provides higher or lower areas without
a cut-off point for what is optimum
(Sarkisian et al. 2005). |

| a. The Cronbach’s alpha is exceeding
0.75 (for each domain) and the
overall scale had 0.88 and the
correlate the same direction and
magnitude as ERA-38. |
| b. The means score range from 30.6
(physical domains) to 53.3 (mental
domains) |
| c. The correlation of the physical
health with age in ERA-12 is r = -.23, p<0.01; depressive symptoms to
mental health domains (r = -.35, p<0.05). |
| d. The test-retest interclass correlation
coefficient is 0.78 for physical
health, 0.83 for mental health scale
and 0.81 for regarding cognitive
scale |
| e. ERA-12 is able to capture 88% of
the variation in the ERA-38. |

a. The Cronbach’s alpha is exceeding
0.75 (for each domain) and the
overall scale had 0.88 and the
correlate the same direction and
magnitude as ERA-38.

b. The means score range from 30.6
(physical domains) to 53.3 (mental
domains) |

c. The correlation of the physical
health with age in ERA-12 is r = -.23, p<0.01; depressive symptoms to
mental health domains (r = -.35, p<0.05). |

d. The test-retest interclass correlation
coefficient is 0.78 for physical
health, 0.83 for mental health scale
and 0.81 for regarding cognitive
scale

e. ERA-12 is able to capture 88% of
the variation in the ERA-38. |

a. Permission to translate was
granted by the author (Dr.
Catherine A Skarisian) on

b. A copy of Malay and
English version is in
Appendix 3.14 (iii).
| 5 | **Interest Checklist v6.1 (IC)** | a. To determine the type of leisure occupations that the participants performed in the past and the occupations that they want to perform in the future.  
   b. The checklist will be able to determine the degree of interest in the occupations.  
   c. The checklist will only be used at the beginning of the programme and will not be part of the main outcome measures  
   d. The UK modified version of IC V6.1 by Heasman and Brewer (2008) consisting of nine types of activities will be used. | a. The checklist consists of 9 categories of activities / interest.  
   b. The checklist will be used to match the participants’ personality with the interests.  
   a. The IC will be further modified to ensure that the choices of the activity will be culturally sensitive and appropriate.  
   b. The permission to translate and modify was obtained from the authors and MOHO Clearinghouse on 1st April 2008.  
   c. A copy of Malay and English version is in Appendix 3.14 (vi). |
3.15.3 Translation of study measures

The seven step process of cross-cultural translation and validation as used by Vallerand (1989) is proven to be valuable (Hsien et al. 2004; Banville et al. 2000). However, these processes were fully adopted for this project due to the time constraints and resources available. Nevertheless, three of the steps were used. Steps one to three, i.e. the translation stages involved back translation and confirmation from an expert committee to adjust the context and grammar are followed, whilst steps four to seven that involved field and reliability testing and establishing the norms was not conducted. In addition, the translation process was compared with four steps of the cross-cultural translation method as recommended and applied by Colon and Haertlain (2002); Cordiero et al. (2007); Falcao et al. (2003). The flow of the translation process is shown in Figure 3.6 below.
STAGE 1
Translate the outcome measures to Bahasa

STAGE 2
Translate back from Bahasa to English

STAGE 3
Committee discussed to ensure uniformity across the translated version

STAGE 4
Field testing of the translated version to determine the clarity of the Bahasa version

STAGE 5
Modify the Bahasa version based on the field testing

STAGE 6
Establish the validity and reliability of the translated version with the original version. Testing to bi-lingual respondents. The differences were examined using Wilconx Signed Rank, paired t-test and correlation.

STAGE 7
Validation of the translated version. Concurrent validation and content validation. Test-retest reliability and internal consistency (correlation coefficient above 0.6 and above is accepted)

STAGE 8
Establishing norms by comparing with the reference group. This was not conducted as the purpose of the translation is to establish equivalence of the English and Bahasa, not to establish norms.

Figure 3.6 : Translation process of the study measures (adapted from Vallerand (1989) and Banville et al. (2000)
3.15.4 Sample size and power

Sample size is important in experimental studies as suggested by the Consolidate Standards of Reporting Trials (CONSORT) (Moher et al. 2001; Devane, et al., 2004). An undersized study population may not produce useful results and may not be scientifically significant, whilst an excessive sample size may raise ethical concerns as it may expose the participants to potential harm (Lenth, 2001; Devane, et al., 2004; McCrum-Gardner, 2010). Thus, this study will present the number of participants required for the study depending on the following interrelated factors.

- The anticipated differences between the 3LP group and control group which also known as the effect size.
- Level of appropriate significance, i.e. the p value or alpha level.
- Chances of detecting correctly the differences between these two groups, i.e. the power of the test (Pallant, 2007).

Power refers to “how likely it is to detect an effect (of an intervention) for a given sample size, effect size and level of significance” (Florrey, 1993: p.1182). In addition, Macrum-Gardner (2010) emphasise that “… [power] is the ability to reject the null hypothesis when it should be rejected” (p. 11). Power is related closely with adequate sample size and alpha level. In principle, sample size has an influence on power (and vice versa); the power can be increased by adding samples to the study. The more samples obtained, the more power to reject the null hypothesis, thus accepting the research hypothesis. In health sciences, a minimum power of 0.80 or 80% is the accepted level, although 0.90 or 90% is not uncommon (Machin et al. 1997; McCrum-Gardner, 2009). This mean that there is eight to nine out of ten chances in detecting differences in the given effect size. In another words, the researcher is willing to accept the chances of one or two in ten that there is no differences between the groups under study.
For this study, the $G^*\text{Power}$ calculation programme (Buchner et al. 1997; Buchner et al., 2001) was used to determine the sample size and power. $G^*\text{Power}$ is a statistical power analysis programme which can compute power value for given sample sizes through post hoc power analysis, $a$ priori power analysis and compromise power analysis (used to determine power and alpha when the researcher is facing sample constraint that prohibits them from following recommendation in $a$ priori power analysis) (Buchner et al. 1996; Buchner et al., 2001). $G^*\text{Power}$ was used in many studies in various field (e.g. Jill et al., 2009; Cornwell et al., 2010; Park et al., 2010; Song et al., 2010).

There is a long history of frequent use of alpha ($\alpha$) levels at .05 or .01 and the use of effect sizes of “small”, “medium” and “large” as defined by Cohen’s use of Beta ($\beta$) as .20 as the standard level (Buchner et al. 1996). Thus, for this study, prior to the implementation of the intervention, an $a$ priori method was used to obtain sample size and to control type I-error probability $\alpha$ (the probability of rejecting the null hypothesis when it is true) and probability of type II-error $\beta$ (the probability of retaining the null hypothesis when in fact it is false). Thus, the $\alpha$ level in this study based on the $a$ priori method was determined as .05, with a power level (1 - $\beta$) of 80% (or .8, that is a 20% chance of making a type-II error) and a medium effect size of .03. This is aligned with the suggestion recommended for mixed methods study by Collins et al. 2007).

Based on the $a$ priori method of $G^*\text{Power}$ calculation analysis a sample size of 368 is needed to test hypothesis at 0.05 level (2-tailed) which will give a power equivalent of 80% in detecting a population effect size of 0.3 or greater. The protocol to determine the sample size using $G^*\text{Power}$ is in Appendix 3.15.

After the process of recruitment, it was found that the there are 82 elderly people who fitted the inclusion criteria and were willing to participate in the study. Lack of sample size will cause the study to have lack of precision in answering the research question. However, it was impossible to have the number of participants as required
and stated in power calculation analysis by $G^*\text{Power}$ due to the time constraints and number of researchers in the study.

Subsequently, the power calculation was modified based on the sample available (for experimental and control group). A Compromise power analysis (Buchner et al. 1996) was conducted and provided a pragmatic solution to this sample size problem in relation to the constraints that exist. A decision was made on how serious the $\alpha$ and $\beta$ probability or error was and it was decided that the error probability ratio is equal. (Error probability ratio $q$ is $\alpha = \beta$). This is aligned with the suggestion by Buchner et al. (1997) and Faul et al. (2007). The result of the compromise power analysis indicated that base on the effect size of medium (.5), beta/alpha ratio is 1, the significant value p is increased to .295 with power of 0.65 (65%).

Thus there is a 6.5 out of ten chance of detecting differences in the specified effect size (.5) and there is a 29% chance of accidentally rejecting the null hypothesis when it is in fact is true.

### 3.15.5 Randomisation, concealment and blinding

The primary purpose of randomisation and concealment is to prevent researchers, clinicians, and study participants from predicting and influencing which participants will receive which intervention (Altman and Bland, 1999; Doig and Simpson, 2005).

In relation to this study, the researcher and the participants did not know which group (either control or experimental group) they will belong to in the future. All of the participants who were willing to participate in the programme and fit into the inclusion criteria were listed and the list consisted of a mixture of gender and age. Each of the participants was given a random numerical identification or unique identifier from number 01 to number 82 and their names were erased from the lists. This will provide concealment, thus avoiding selection bias (Shultz and Grimes, 2002; Morrow, 2008). The researcher and participants did not know which group participants will belong to in the future. Concealment is a term that describes the
process and procedures to ensure that the study participants, the investigator or the people that conduct the study measures do not know who will be selected to be in the experimental or control group and who will be receiving proposed treatment/intervention or who will be receiving a placebo treatment/intervention (Folder et al. 2005; Fin, 2006; Wood et al. 2008).

The unique identifier was computed by random allocation software (Saghaei, 2004\(^1\), \(^2\)) to generate numbers for two groups (experimental groups and control groups). In this way, every participant will have equal opportunity to be selected or not to be select in either group, thus avoiding a selection bias (Folder, 2005; Johnson and Case Smith, 2009). The random allocation software was created by Mahmood Saghaei and the programme was created in Microsoft Visual Basic 6 which provides block randomisation up to 16 groups for parallel randomisation studies. Using unique identifiers in random order will further add to the validity of the study as it prevents anyone from predicting which participants will receive which treatment (Doig and Simpson, 2005). The protocol for using the software is in Appendix 3.16.

In addition to the concealment process of randomisation to avoid bias as explained above, blinding was integrated into the study. Blinding refers to the procedures to withhold information about the intervention to the person involved with the study such as the participants (either in control group or in the experimental group), the researcher or the assessors of the study measures (Shultz and Grimes, 2002; Wood et al. 2008). In another words, no one knows which treatment is allocated to whom. There are five types of blinding, i.e. single blind, double blind, open label blind, triple blind and un-blinding (Folder et al. 2005). These types of blinding depend on the level of awareness amongst the study participants, for example, double blind refers to the feature that the participants and the investigator are unaware the treatment allocation, whilst open label blinding refers to all of the people involved in the study are aware about the receiver of the treatment. Knowledge about the treatment may influence responses to the treatment and management for participants and investigator alike especially if the study measures are patient rated outcomes such as quality of life (Folder, 2005).
Although a double blind is desirable in the experimental study it is not feasible as a result of the nature of the intervention. Double-blinding is considered “difficult” and almost impossible in occupational therapy trials (Nelson and Mathiowetz, 2004; Case-Smith, 2008; Johnson and Case-Smith, 2009). The characteristics of the intervention in this study and the institutional environment which bar the double blind option are as follows:

- Both groups were able to perceive the occupation conducted. Thus providing them with knowledge of which group they belonged. This could cause information and observer bias.
- All of the participants are living in the same environment thus free flow of communication and socialisation occurs which allows the participants to share information.
- The product from engaging in the intervention, i.e. occupations could be perceived by other participants which will cause observer bias.
- The investigator is the person who will be conducting the intervention.
- Educational characteristics of the elderly people, such as inability to read and write require the assessor of the study measures to read the questions to them and may influence the result as the participants feel obliged to give an expected answer.

However, an attempt was made to ensure blinding and minimised bias by the following strategies:

- The participants in the experimental group were asked not to discuss or share any ideas with other participants. This will assist in the prevention of a “contamination” process occurring in the participants in the control group which facilitate internal validity of the study.
- The quantitative study measures and post experimental focus groups were delivered and conducted by independent persons not related to the intervention. In this way, the study will be protected from the interpretation bias.
• As recommended by Johnston and Case-Smith (2009), the allocation of the participants, the aim of the intervention, the theoretical framework, and the nature of the intervention were not explain to the independent assessor.

• The use of non-occupational therapists to conduct the focus group is perceived as a method of assisting in binding, as occupational therapists are aware of the benefits of occupational engagement and thus may induce expectation bias with regards to the result of the study.

• Unbiased questions in the focus groups were constructed. Particularly for the questions subject to social desirability bias, as suggested by Johnston and Case-Smith (2009)

Although both methods of concealment is important to reduce bias, Folder et al. (2005) state that allocation concealment (allocating participants of the study into groups prior intervention) has a stronger effect on bias reduction than blinding (after randomisation). Thus, this study provides a stronger emphasis on randomisation than blinding of the study.

3.15.6 Data analysis

Data analysis for the quantitative methodology will be analysed using the SPSS statistical software package (SPSS Inc., Chicago, IL). Two types of analysis were conducted; descriptive and numerical analysis. Two types of statistical analysis were conducted on the data obtained in the pre and post interventions, i.e. descriptive and inferential analysis.

Descriptive analysis was conducted in order to explain the demographic variables of the study through frequency distributions, measures of central tendency and variability. The descriptions of the descriptive statistics for the demographic variables and the study measures are in Appendix 3.17.

To see whether both groups are comparable (i.e. no significant differences between groups at baseline), a Mann-Whitney test was conducted between the demographic
variables such as age, duration of living in the institute, number of health problems, number of people in touch and friends outside the institute. In addition, the differences between groups with regards to the study measures were presented.

Test for normality using the Shapiro-Wilk test indicated that the dependent variables data pre and post intervention are not normally distributed and violated the normality assumption. Results obtained from the test indicated that $p < 0.05$, which indicated violation to the normality assumption. Thus non-parametric testing, i.e. Mann-Whitney U test, was used and Wilcoxon Signed Rank tests to test the comparability (significant differences between group pre and post ) and Wilcoxon Signed Rank tests were used to determine whether there is any significant difference between pre and post intervention, as suggested by Pallant (2007). Non parametric testing has a less stringent assumption.

An alpha level of 0.5 was used to determine whether there is any significant differences between the pre-test and post-test value. Acceptance or rejection the hypothesis will be based on the 95% CI ($p<0.05$).

In addition, the study also provides a report on the effect size of the intervention that indicates the magnitudes of the differences in the means between groups or the strength of association between groups (Lustig and Strauser, 2004; Vacha-Haase and Thomson; 2004; Pallant, 2007; Connely, 2008). Pallant (2007) argues that providing statistical significance (based on $p$ probability value) is insufficient to determine differences between groups and result importance as the probability value does not clarify the degree of association between groups if there are large sample sizes. Slight differences between groups would influence the statistical probability ($p$ values are influenced by sample size, a high sample size would influence statistical probability of committing a Type I error).

In general, there are three methods to measure an effect size, i.e. standard mean differences, correlation coefficient, and odd ratio (Vacha-Haase and Thomson, 2004; Pallant, 2007; Connely, 2008) Although there is no universal consensus regarding
the definition of effect size (Vacha-Haase and Thomson; 2004), standard mean
differences was used in this study; i.e. Cohen’s $d$ effect size. Cohen’s $d$ was chosen
instead of partial eta square because non parametric testing was used to test the
hypothesis. Cohen’s explains the differences that exist between pre and post
intervention groups in relation to the standard deviation units (Cohen, 1988; Pallant,
2007). Strength of the effect will be based on the effect size stated in Box 3.2.

<table>
<thead>
<tr>
<th>Size</th>
<th>Cohen’s d effect size (standards deviation units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal</td>
<td>$&lt; 0.2$</td>
</tr>
<tr>
<td>Small</td>
<td>$0.2 – 0.49$</td>
</tr>
<tr>
<td>Medium</td>
<td>$0.5 – 0.79$</td>
</tr>
<tr>
<td>Large</td>
<td>$\leq 0.8$</td>
</tr>
</tbody>
</table>

(Cohen, 1988; Pallant, 2007)

**Box 3.2. Strength of association**

The size of the differences between pre and post intervention for study measures that
was analysed using a non-parametric testing was calculated by the following formula

\[
Effect \; size \; for \; intervention \; (d) = \frac{z \; value}{\sqrt{\text{participants}}}
\]

**Keys:**
- $z$ = value of $z$
- $\sqrt{\text{participants}}$ = square root of number of participants

**Formula 3.1: Effect size for non-parametric**

Changes in median in scores (i.e. decreased, increased or no change) before and after
the intervention were explained by observing the median in pre and post intervention
to indicate the effect size of the intervention.
To facilitate the description with regards to the changes between baseline measures and outcome measures, a box plot was presented to illustrate the differences before and after the intervention on each group.

A method to present the quantitative results was adapted from Pallant (2007) which provide the information regarding the test variables, type of test conducted differences between mean and the effect size of the intervention. The process of quantitative data analysis is shown in Figure 3.7.
CHAPTER 3

Data preparation and data entry

- Define variables
- Data entry into PASW
- Data screening and cleaning

Descriptive analysis
- demographic variables
- Baseline study measures

Test for normality (Shapiro-Wilk test)

Test for compatibility (Mann-Whitney test)

Lively Later Life Programme (3LP)

Descriptive analysis
- Outcome study measures

Not normally distributed (Non Parametric testing) - Wilkson sign rank test

Test for normality (Shapiro-Wilk test)

Inferential analysis
- Outcome study measures
- Null hypothesis testing

Significant differences – p value
Effect size – d
Increment from median (Md)

Quantitative results

Figure 3.7: Data analysis process of the quantitative study for pre and post intervention
The other design that was used to answer the research question was qualitative design as described below:

### 3.16 Qualitative research design

Qualitative design in this study will operate as the supporting design to the primary design (the quantitative study) as part of the embedded design. Concurrent embedded design is frequently adopted when a single data set is not sufficient to answer the research questions and the questions require answers from different types of data (Tashakkori and Teddlie, 2003; Johanson and Onwuegbuzie, 2004; Creswell and Plano Clark (2007); Creswell, 2009). Qualitative findings provide valuable and rich data and assist understanding of the complexity underpinning occupational therapy practices (Balinger, 2004).

The following sections will discuss the theoretical perspectives, procedures and processes of the qualitative method embedded in the quantitative study.

Phenomenology was taken as the qualitative theoretical perspective related to the research question in order to understand the experience, and how participants make sense of, living in the institute before and after the intervention.

Langdridge (2007) define phenomenology as “the study of human experience and the way in which things are perceived as they appear in consciousness” (p. 10) and the aim of phenomenological research ‘is to capture as closely as possible the way in which the phenomena are experienced within the context in which the experience takes place” (Giorgi and Giorgi, 2003). In line with the theoretical position of the study Interpretative Phenomenological analysis (IPA) was taken as the method of qualitative data analysis.

The roots of IPA lie in the Husserlian hermeneutic phenomenological and symbolic interactionism framework (Smith et al. 2009) and this provides the theoretical
assumption of the study. Smith, et al. (2009) stressed that IPA can be used to provide further explanation and ‘...make sense of quantitative findings’ (p. 192) by providing perspectives from the participants who received the treatment.

IPA involves interpretation and searching for meaning of an experience. Thus, IPA entails the use of double hermeneutics in which the researcher is making sense of participants’ experience in interacting and experiencing certain phenomena (Smith and Osborn, 2003; Smith et al. 2009).

In this study, the researcher attempts to understand the meaning and experience of participants living in institutions related to ERA, GSE and QoL before and after the intervention. In addition, the experience and meaning of engaging in occupations such as planned in 3LP and their effect on ERA, GSE and QoL will also identified. In so doing the essence of occupation and the effect of occupation towards wellbeing can be explored and captured through interpretations of people’s life experience (Reynolds, 2003; Berinstein and Magalhaes, 2009; Clarke, 2009; Cronin-Davis, 2009; Hitch, 2009).

3.16.1 Method of data collection

The participant’s experience of living in the institute in relation to the study measures, i.e. ERA, GSE and QoL before and after the 3LP was collected through focus groups. Focus group is an appropriate method for data collection as the goal of this research is to identify participant’s ideographic experience (Krueger 1994; Krueger, 1998). A focus group can be defined as a group discussion on a particular topic often directed by a facilitator and aims to seek qualitative data through narratives from the participant’s interaction (Sim, 1998; McLafferty, 2003; Ivanoff and Hultberg, 2006; Plummer-D’Amato, 2008). The aim for the focus groups in this study is to seek theoretical transferability. Theoretical transferability refers to the ability of the data to provide rich, in-depth and transparent data that enables the interpreter to transfer the data to another person in a similar context and having similar characteristics (a homogenous population) (Smith, 2009).
In addition, the focus groups provided the following advantages;

- Focus group allow time for the participants to reflect and remember while other participants speak, thus ideas from members can be perceived and serve as a trigger to reminisce, remember and validate. Therefore the participants were not under pressure to answer the question.

- In addition the focus groups provide opportunity for the participants to open up new dimensions and a chain of responses for discussion, cross checking and clarification thus further enriching the data with regards to the phenomena under study (Plummer-D’Amato, 2008)

- The participants have been living together in an enclosed environment for a period of time. This scenario is postulated to have an impact on group cohesiveness. Ritchie and Lewis (2006) stated that a cohesive relationship amongst focus group members will facilitate greater in-depth discussion. In addition, close relationships amongst the participants in focus groups and good interaction allow the participants to convey personal or intimate experience.

- Bradbury-Jones et al. (2009) found that the use of focus groups in phenomenological research provide enhancement of the quality of the data collected thus indicating that focus groups are a sound means of data collection in this research.

- Focus groups have been frequently used to obtain information amongst the institutionalised elderly people in previous studies (Raynes, 1998; Harmer and Orrell, 2008) and have the ability to identify the impact of lifestyle redesign programmes (Barnes et al. 2008).

Data collection through focus groups is divided into pre and post experimental stages as follows:
3.16.2 Pre experiment focus groups

Participants were invited to participate in focus groups through individual and group meetings. There were 20 participants who consented to the focus groups and they were stratified according to age group and gender. The purpose and confidentiality were explained to the participants prior to the beginning of the session. The groups were conducted by the researcher between 3rd and 8th November 2008 (See Appendix 3.18 for time schedule).

There were four focus groups and each group consisted of between 4 to 5 participants (Figure 3.8). The list of participants attending the focus groups is in Appendix 3.19. The small number is aligned with the guidelines for conducting a focus group (Krueger, 1998; Plummer-D’Amanto, 2008) and in order to maintain the ideographic nature of the experiences (Bradbury-Jones et al. 2009). The duration for each focus group was about 45 minutes to one hour and the groups were conducted using a protocol (Appendix 3.20) as outlined by McLafferty (2004) and Loeb (2006). Bahasa was the language used in the focus group and “layman’s language” or “market language” (bahasa pasar) was used throughout the session rather than formal Bahasa to facilitate understanding and to create an informal structure for the sessions.

The participants were asked semi structured questions pertaining to the four main themes as stated in Table 3.4. Semi structured questions are the most widely advocated method of data collection in IPA (Smith and Osborn, 2008; Smith et al. 2009) as it allows the research question being addressed and allows the researcher to maintain flexibility to explore any new areas of interest that arise during the session.

3.16.2 Post experimental focus groups

At this stage (Phase 3: Stage 6), the participants in the experimental group were invited through personal meeting to participate in focus group session. Participants who consented to take part were stratified according to their age and gender as at the
pre experimental stage. There were 23 participants willing to participate in the post experimental focus groups. The number in each group is in Figure 3.8 and the list of participants is in Appendix 3.19. The purpose of the focus groups and confidentiality were explained to the participants prior to the beginning of the session

These focus groups were moderated by two qualified psychologists (Mr. M and Mr. A) as shown in picture 6. They were blinded in relation to the objectives and the treatment nature of the 3LP, thus removing bias (Folder et al. 2005). In addition, Mr. A and Mr. M are not familiar with the participants and were thus likely to take a neutral position. Taking a neutral position and being emotionally detached from the topics in moderating a focus group is essential to ensure the effectiveness of the focus group session (Krueger, 1998; Plummer-D’Amanto, 2008). Four focus groups were conducted during post intervention focus groups. The same questions as in pre experimental stage were asked of the participants as in Table 3.4.
CHAPTER 3

Picture 8: Focus group conducted by a psychologist

The participants’ responses during the pre-experiment focus groups conducted by the researcher were recorded using digital audio recording equipment (*Olympus WS 321M DVR system*). This digital equipment and analogue recording equipment (*Sony TCM-220DV*) were used during the post experimental focus group. The participants’ responses were stored in a computer and the cassettes tapes were kept along with the participants’ files. Issues regarding apprehensiveness of the participants regarding the tape recorder (Sim, 1998) were dealt with by asking permission and explaining the purpose of the using the voice recorder.
Participants who consented from Control and Experimental Group *(n=20)*

### PRE EXPERIMENTAL FOCUS GROUPS (Stage 3)

**Group 1**
- 60 – 75 years old
- Male: n = 5
- Female: n = 4

**Group 2**
- 76 and above
- Male: n = 6
- Female: n = 5

### POST EXPERIMENTAL FOCUS GROUPS (Stage 6)

**Participants in Experimental Group (n=23)**

**Group 1**
- 60 – 75 years old
- Male: n = 5
- Female: n = 6

**Group 2**
- 76 and above
- Male: n = 6
- Female: n = 6

**Key:**
- n = Number of participants

**Figure 3.8:** Focus group distribution pre and post experimental phases
### Table 3.4: Focus Groups questionnaires for pre-experimental and post experimental phase

<table>
<thead>
<tr>
<th>Theme 1: Daily occupation</th>
<th>Main Questions and prompts</th>
<th>Aims of the questions</th>
<th>Rationale for asking the questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Question 1</strong></td>
<td>Can you tell me your daily activities?</td>
<td>To identify daily occupation and to see the changes after 3LP</td>
<td>Similar to Occupational Performance History Interview (Kielhofner and Henry, 1988; Kielhofner et al. 1998). To identify how participants use their time and differences before and after intervention (Franworth, 2004).</td>
</tr>
<tr>
<td></td>
<td>How do you feel about the activities?</td>
<td>To identify self-efficacy</td>
<td>Similar to previous studies (Ball et al. 2007).</td>
</tr>
<tr>
<td></td>
<td>How do you cope with problems in your daily life?</td>
<td></td>
<td>Meaningful occupation will influence individual LS and will reflect on physical, mental and psychological health status (Mandel et al.1997, Law et al. 1998; Rowe and Kahn, 1998;</td>
</tr>
<tr>
<td><strong>Prompts.</strong></td>
<td>1. Describe your daily activities (your routine).</td>
<td>To identify the changes and coping mechanisms (self-efficacy) in dealing with issues in institution.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Why is the activity important to you?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Do you feel happy and satisfied with your ability to perform the activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. What problems do you have in your daily life?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. How do you cope with the problem?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Theme 2: Perception and expectation towards ageing</th>
<th>Main Questions and prompts</th>
<th>Aims of the questions</th>
<th>Rationale for asking the questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Question 1</strong></td>
<td>In the future, how do you see yourself in terms of you physical health, mental function and your relationships with other people.</td>
<td>To identify the expectations towards ageing</td>
<td>Positive perception regarding ageing to encourage participation and involvement in health related activity (McMurdo, 2002).</td>
</tr>
<tr>
<td><strong>Prompts.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Can you describe your current physical health; your mental function and relationships with other people for example your family members, children etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Can you discuss your future physical health your mental function and relationships with other people</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Theme 3 : QoL</th>
<th><strong>Question 1</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>QoL</td>
<td>Can you tell me about your life in here?</td>
</tr>
<tr>
<td></td>
<td><strong>Prompts.</strong></td>
</tr>
<tr>
<td>1. How would you describe your life in here?</td>
<td></td>
</tr>
<tr>
<td>2. Do you have a good life here?</td>
<td></td>
</tr>
<tr>
<td>3. How do you feel about your life in here?</td>
<td></td>
</tr>
<tr>
<td>4. What makes you happy to live here</td>
<td></td>
</tr>
</tbody>
</table>

| Perception regarding ageing influences future health outcomes (Goodwin et al. 1999; Levy et al. 2002) |
| Need evaluation for older people (Burckhardt et al. 1989; QoL is an important factor in successful ageing (Beckman et al. 1993, Strawbridge et al. 1996; Bowling and Dieppe, 2005; Bowling and Illffe, 2006). The words ‘Good life’ were used instead of QoL as in previous studies (Lau et al. 1998; Lee, 2005) |
3.16.4 Qualitative research question and focus groups questions

The primary aim of this qualitative research is to understand the experience of elderly people who lived in the institute in relation to ERA, GSE and QoL before and after implementation 3LP. This aim reflects the phenomenological and interpretative nature of the study which is an inductive process involving an interpretation of meaning of living in the institution and experiencing the programme. Smith et al. (2009) suggested that questions for IPA study should be “open” semi structured type of questions directed towards understanding on how people make sense of a phenomenon rather than imposing a priori a theoretical construct upon the phenomena. Therefore, two main questions were taken as the qualitative study questions (Table 3.5).

Table 3.5: Qualitative research questions

- How do elderly people living in the institution describe their ERA, GSE and QoL before the intervention
- How do the elderly people living in the institution describe their ERA, GSE and QoL after the intervention

The focus group questions arise from the primary research questions as above and the same set of questions was asked of the participants’ pre and post intervention. The participants were asked questions pertaining to the four main themes of the study through semi-structured questions.

Four main themes of the questions are:

- Theme 1: Daily occupation
- Theme 2: Expectations towards ageing
- Theme 3: Quality of life.
• Theme 4: Self-efficacy

The main themes, the questions and the rationale of asking the questions for pre and post intervention are in Table 3.4. Further details of the questions and their prompts are in Appendix 3.21. The questions were delivered according to the triangular questions structure as suggested by Plummer-D’Amanto (2008). The route of the questioning consists of a broad opening question, followed by a number of transition questions and ending with key questions. The route provided a structure which “unknowingly” guided the participants to the main key questions. The structure and route of the questions is in Appendix 3.22.

The objectives of these broad opening questions were to establish rapport, stimulate conversation and encourage participation from all the members of the group. It is a useful step to start the session with an easy question that is closely related to the participants’ lives which will naturally lead to the transition and key questions. Furthermore, the question will provide an overview with regards to the:

a) Daily occupation pattern before and after the intervention and to identify the changes in occupation after the intervention.

b) Challenges associated with engagement in occupation. Responses will provide evidence in relation to the participant’s self-efficacy before and after the intervention.

c) Psychological responses associated with the occupational engagement. Responses such as feeling of excitement or happiness in engaging with the occupation could provide insight into life satisfaction and QoL.

d) Physical and psychological changes as a result of attending the programme which will provide insight into participants’ QoL.
3.16.5 Sampling

Stratified purposive sampling strategy was used to obtain data regarding the participants’ experience. Teddlie and Yu (2007) in providing guidelines for mixed methods sampling strategy state that

“The stratified nature of this sampling procedure is characteristic of probability sampling, whereas the small number of cases typically generated through it is characteristic of purposive sampling technique”

(p. 90).

Patton (2002) identified this sampling strategy as samples within samples.

In this study, gender and age group were used as the main criteria for the stratification. In research, the purpose of the stratification is to provide illustrations in each group and to facilitate comparison between groups (Creswell, 1998). However, for this study, the aims for stratification for the focus groups are not to compare the differences on experience and perceptions across the groups (as in other qualitative research) but to facilitate maximum expression of experience regarding the topic discussed and phenomena under study. This was considered as being sensitive to the participants’ cultural and moral values and religious belief with regards to gender differences and age group. Furthermore, the stratification will provide homogeneity amongst the participants (Morgan, 1998; Finch and Lewis, 2006).

Thus the participants in the focus groups were divided into:

1. Age groups
   - 60 - 75 years old,
   - 76 years old and above.

2. Gender
   - Male
   - Female
The participants have similar characteristics and there is homogeneity and uniformity in relation to experience, perspective and understanding towards the phenomena under study, i.e. the theoretical factors relevant to the study. These similarities will provide opportunity for theoretical transferability. This is aligned with the ideographic approach in IPA which emphasises detailed and rich understanding of individual perceptions towards phenomena (Smith, 2009).

Smith et al. (2009) evaluate the sampling issues for IPA study. They state:

“There is no right answer to the question of sample size. It partly depends on: the degree of commitment to the case study level of analysis and reporting; the richness of the individual cases; and the organisational constrains one is operating under”

(Smith et al. (2009); p. 51)

However, they recommend that the sample size for Masters Level for IPA study should be between three to six participants whilst there is no specific number of participants in a PhD study and is dependent on the type of study conducted (ibid). Furthermore, Finch and Lewis (2006) stress that optimum group size depends on several issues such as the familiarity and sensitivity of the topic discussed with the participants. In this study the participants are familiar with the topic discussed as it is directly related to their personal experience. Thus the sample size in this study and number of participants in each group is considered a sufficient and credible size to develop theory with regards to the participants’ ERA, GSE and QoL before and after the intervention conducted. Smith et al. (2009) suggest that each group should be between four to five participants to allow greater discussion whilst allowing the researcher to manage the session. Larger numbers of participants in a group will cause uneven participation as there is less opportunity for each participant to take part in the discussion and creates the potential for subgroups to emerge which can be unhelpful to the group dynamic (Morgan, 1998; Finch and Lewis, 2006).
3.16.6 Data analysis

The data were closely analysed using the six steps of Interpretative Phenomenological Analysis (IPA) as outlined by Smith and Osborn (2008) and Smith et al. (2009). However, the steps outlined did not include issues pertaining to the transcription of the narrative into written form. Thus, this study will highlight the issues as described by Bailey (2008) in addition to the method or data analysis. The same method of data analysis was applied to pre and post intervention.

According to Bailey (2008) transcribing is not a straight forward task and it requires the transcribers’ judgement on two main issues:

a) Determining level of transcription analysis. This study has taken account of the features of utterances such as the emphasis and tone, pauses, speed, use of “local” dialect and colloquial languages throughout the transcription process. In relation with this, a transcription convention was designed as indicated in Appendix 3.23.

b) The contextual detail of the interpretation and representation. Issues concerning the context and representation of the data including the issue regarding different accents used, style of speech, use of “local” or colloquial languages with different written representation of the text. Malaysia consists of 12 different states and various ethnicities. Thus, various languages are spoken amongst the people. Although Bahasa Melayu is a national language and is spoken by all of the races there are linguistic variations, intonation and dialect which carry the same meaning. In addition, the use of “bahasa pasar” (market language) is common amongst the Malaysian people. “Bahasa pasar” is a literal Malay language which is often spoken by making the sentences or word in short phrases without adding the adjectives or nuances in the sentences, thus it easy to use in daily life. Literal language is
difficult the read thus risking the possibility of labelling respondents as uneducated and inarticulate (Bailey, 2008). Furthermore, there are many words used by Malaysian people that do not carry any meaning but are spoken as to make the sentences audible and pleasant. Common words used which does not carry any meaning are in Appendix 3.24. In addition, Appendix 3.24 shows common linguistic variations spoken by the participants in the focus groups. The transcribing process will include all of the issues as above.

The stages of the data analysis as outlined by Smith et al. (2009) are as below:

**Stage 1: Immersion in the data.** Initially the first transcript from the first group was read over several times to ensure engagement with the data, thus allowing perception of the overall structure and entry to “the participant’s world” (Smith et al. 2009: p. 82). In addition, the pattern of shifting the general experiences to specific experience was noted. For example, the general experience of living in the institute to elements that provides satisfaction in living in the institute. Audio recordings were played whilst reading the transcripts to assist complete analysis by taking account the tone of voice, flows and rhythm of ideas, interruption from other participants and fluctuation of sentence construction.

In this stage, the life stories of the participants become the centre focus of the analysis thus allowing the researcher to “bracket” ideas.

**Stage 2: Analysis of texts.** The aim for this stage is to provide notes and feedback of participants’ narratives as comprehensively as possible. Smith et al. (2009) refer this stage as “... free textual analysis” (p. 83). The right margin of the transcripts were used to annotate what is interesting and comment on language, linguistic differences, contradictions and what is consider important from the participants narrative. In addition, the left margin of the transcripts was used to identify and underline the important and core comments with regards to the participants’ narratives. This will ensure that the stage is focussed on the phenomenal aspect of
the participant’s meaning. For example, relationship with other residents (key concept) and how the relationship assist in alleviating loneliness (how the key concepts are appear to the participant).

The comments are divided into three areas as recommended by Smith et al. (2009):

- Descriptive comments – comments that describe and reflect the content of the narrative (what the participant said) and elements that have meaning to the participants which include key objects, experiences and circumstances which make up the participant’s world. For example the experience of inability to perform a daily occupation as a result of changes to physical condition which influences expectations towards future life.

- Comments regarding the use of language. For example, the use of dialect, identification, transition to another points, use of nouns, tone, degree of tone and fluency etc. For example the use of “kita” (we) which actually means “saya” (me), the use of race related dialect and arrangement of sentences during the conservation. In addition, the use of specific language, sentences or words that indicate descriptive comments and formation of concepts that describe a metaphor were also explored. For example:

  a) “sakit sendi” (joint pain) is a descriptive note, “minta tolong orang lain” (asking help from others/become dependent) is a concept, “tak ada harapan masa depan” (don’t have hope for the future) is a metaphor.

- Theoretical comments and conceptual development. In this area, the comments are at the conceptual level or the possibility of the narrative to provide a concept which is maybe a common concept amongst the participants. This also assists in developing the themes. Conceptual comments involve the researcher moving away from the participants’ explicit narratives or claims and focusing on participants’ understanding of the matter.
discussed. This area involves reflexion, trial and error responses which eventually lead to the refinement of the main ideas for the themes. For example, moving away from focusing on difficulty in maintaining relationships with children to feelings of loneliness and isolation which could be a common concept amongst the participants.

For the exercise, the comments in left and right margins are coloured using three different colour highlighters and are written in English to facilitate the theme development.

**Step 3: Initial process of theme development.** This step involves working with notes and comments, breaking up, moving away and reducing the volume of the participants’ narratives. Furthermore, this stage involves turning notes into themes and re-organising the data which manifests the hermeneutic process of the data analysis. The themes developed are the themes that can abstracted from the participants’ original words or as a result of an active process of reflexion and descriptive analysis thus allowing an interpretation. Smith et al. (2009) encourages researchers to use their own creativity in developing the themes as long as it is within the hermeneutic process and from the ideographic experience of the study participants.

The themes developed were considered sufficient to provide a reflection and understanding of the participants’ narrative. In this stage, the researcher plays an important role in organizing and interpreting the comments and the notes. However, the process is closely related to the lived experience of the elderly people. For example,

a) The participants describe the deterioration that they felt in terms of muscle strength, endurance, aches and pains that emerged along with an increase in age and this expressed deterioration was distributed throughout the transcripts. This is directly related to content of the
participants’ narrative, their acceptance of the changes and their level of understanding regarding the phenomena under study

b) The second master theme for ERA, i.e. “it is my destiny” was developed as an outcome of analysis and understanding of the perceptions of the participants. It was described by the participants as a feeling of contentment and acceptance with the changes that accompany the ageing process.

In addition, two methods were used to help to identify and develop the theme. Identifying words that are frequently used by the participants across the focus groups helped in building the themes and in identifying similar ideas and associated links between participants. Ryan and Burnard (2007) identify this technique as word repetition recognition.

Another method that was used to assist in themes development is through identifying indigenous words that was expressed by the participants. The idea of this is based on the assumption that individual experiences are often marked by specific and specialised vocabulary or local terms (Ryan and Burnard, 2007) For example, the use of words like “Alhamdullilah” and “syukoor” that indicate contentment and thankfulness which are local terms used by the Malay in Malaysia.

Step 4: Making connections between themes and development of patterns. This stage require the creativity of the researcher to develop links, maps or charts to connect and organise all the themes emerging from stage 3 of data analysis. In addition, making a connection is also determined by the research objectives. Not all themes that emerged were used; some are discarded or collapsed to form a new theme. The method of developing a pattern suggested by Smith et al. (2009) was taken as a guiding principle to connect the themes. These are arrange in chronological order, possible similar themes (name of the theme or having a similar characteristics or understanding) are grouped or clustered together to form a new theme (a super-ordinate theme) incorporating the characteristics, meanings or
understanding of the lesser themes subsumed within it. Thus the super-ordinate theme emerged at a higher level as a result of clustering.

As an example, many themes were developed in regard to expectations relating ageing: deterioration in body function, sensory status, mental and cognitive changes and perceived as destiny by the participants. This can be clustered together under the super-ordinated theme title: *Biasalah* (it is normal).

**Step 5: Analysis of other focus groups.** This step involves analysis of other focus groups. The same process as step 1 to step 4 are repeated. However, in alignment with the ideographic nature of the IPAs the themes developed as a result of analysis of the focus group 1 did not influence the researcher and new themes were developed according to the outcomes of each group.

**Step 6: Searching for similarity of themes across the groups.** This step involved looking at the each theme that emerged from the transcript of each focus group. The themes identified from four focus groups (Groups 1 to 4) were laid out on a table. The researcher looked at each focus group and tried to find any similarity or connection between the groups. In addition, the researcher identified the order of the themes; which theme was the most strongest amongst the themes emerging, which one is unique and which one is shared across the groups and which themes illuminated other themes. The shared themes were clustered into a new theme and formed a higher order of theme.

An outline of the steps of analysis is shown in Figure 3.9 below. Example of the focus groups transcripts is in Appendix 3.25.
Figure 3.9: Data analysis process of the qualitative study for pre and post intervention stages
3.16.7 Translation of the themes emerged and presentation of the quotes

Quotes were used to validate the research findings and to provide clear examples and evidence for the emerged theme. Sandelowski (1994) stated that “quotes can illuminate the subtleties of experience for those reading or listening to them ... getting as close of possible to human experience” (p. 480). In line with this, several quotes were selected to represent the super-ordinate themes that emerged. The quotes and themes developed were translated into English using forward translation (Heij et al. 1996; WHO, 2008). The initial translation of the quotes was conducted with the help of the Oxford Malay-English Dictionary, Google translator (Malay to English) and Webster Online Dictionary (Malay to English version).

To further strengthen the veracity of the translation, a bilingual (Malay and English) PhD student was invited to validate the translation. Mr. S was given the quotes and translated them into English. In addition, the quotes were translated to English by the researcher. Subsequently, Mr. S and researcher met to discuss the uniformity of the translations and it was decided that the translation process should adopt a meaning-based translation rather than a word-based interpretation. In this method, as suggested by Esposito (2010) the moderator conceptualises the meaning of the sentences prior to the translation. This process also aligns with the cross cultural translation and validation work of Vallerand (1998) and as discussed by Hsien et al. (2004) and Banville et al. (2000).

The use of professionally certified translators although recommended by Esposito (2010) was not employed due to the financial constraints of the study.

3.17 Mixed methods data integration

Data integration and interpretation processes depend on the type of strategy chosen for the study. Thus, for this concurrent mixed methodology study, the
"...quantitative and qualitative data collection may be presented in separate sections, but the analysis and interpretation combine the two forms of data to seek convergence among the results."

(Creswell, 2003; p. 222)

The data was analysed and integrated by following closely the seven stages of data analysis framework as outline by Onwuegbuzie and Teddle (2003). However, there are some stages which are not applicable to this study design. For example stage 3 to stage 7 were excluded from data analysis for this study, there is no intention and it is not the aim of the study to transform the data or to correlate or to compare and consolidate the data in order to form new data sets or to seek data convergence as in a triangulation mixed methods design.

In relation to this study, the both data were analysed as below:

- **In Stage 1: Data reduction.** In this stage the data obtained from quantitative study will be reduced by computation of descriptive and inferential analysis and, measure of central tendency and variability. The data obtained from the qualitative study will be reduced through thematic analysis to develop themes and categories by the method of data analysis for qualitative data as outline by the IPA framework.

- **In stage 2: Data display.** In this stage, the quantitative results will be presented and displayed in descriptive and inferential forms such as tables, charts, figures or graphs, whilst themes developed form qualitative findings will be displayed through figures that link the themes and selected quotes that will represent themes.

- **In stage 3: Data integration.** In this stage quantitative and qualitative data will be integrated into a coherent whole and inferences made. In another words, the qualitative findings will complement the results obtained from quantitative study in relation to the study measures. This will provide a broader, in-depth understanding and complete overview of the situations.
under study in alignment with the purpose of the study (i.e. complimentary and expansion processes) and the type of the mixed methods chosen for the study (concurrent nested mixed methodology). Furthermore, it will answer the primary and secondary questions of the study.

Parallel mixed analysis will be carried out (Tashakkori and Teddlie, 1998). The data obtained from both methods will be integrated and will be written concurrently. Thus, the qualitative findings will complement and supplement the quantitative results so providing overall, in-depth understanding and a broader picture of the areas under study (Tashakkori and Teddlie, 1998; Creswell, 2003; Creswell and Plano Clark, 2007; Leech and Onwuegbuzie, 2009)

SECTION 5: Ethical issues

To date, there are no specific safety and health guidelines working with the elderly people in the institution, however, the interests and needs of the elderly people in Malaysia are protected with a number of policies, such as the National Social Welfare Policy (1990), National Policy for the Elderly (1995), Care Centre Act (1993) and Care Centre Regulations (1994) as well as general guidelines for caring for elderly people issued by Ministry of Health Malaysia. The policies provide general guidelines to ensure the health and safety of elderly people in Malaysia.

This study was approved by Queen Margaret University and by the Department of Social Welfare in Malaysia and the researcher is familiar with the Research Code of Practice issued by Queen Margaret University.

The ethical principles as outline by Gray (2009) that include avoiding harm to the participants, getting informed and consent, respecting privacy and confidentiality and avoidance of deception were observed throughout the study. The strategy for obtaining informed consent was adapted from Lingler et al. (2009)
Harm to the participants involve in the study whether it is physical, mental and emotional was avoided at all times. Any possible physical harm was avoided by abiding by the safety protocol during the engagement in group or individual sessions. The safety protocol during group session and individual session is in Appendix 3.26 and 3.27 respectively.

Informed consent was obtained from the participants prior to the commencement of the study. Informed consent is important especially when the participants in the study comprise a “vulnerable group” such as elderly people because they are more open to exploitation, physical and psychological harm (Crow et al. 2006; Grey, 2009). The participants were given full information (in lay man’s language) about the study areas as below:

- The purpose of the study.
- Time scale of the study
- The components of the programme
- The risks of attending the study
- Nature of the participation to the programme i.e. voluntary
- The right of the participant to withdraw from the study at anytime.
- Methods to preserve participant anonymity.

The programme information sheet was read to the participants who are unable to read and the participants was required to acknowledge their agreement by signing the informed consent sheet. For the participants’ who are unable to write, it was decided that any form of writing and verbal agreement from the participants’ was consider as consent. Providing informed consents will help the researcher as the participants will be more open and true to the questions asked or given thus improving participation in the study (Crow et al. 2006). Providing a clear understanding about the aim of the study and remaining truthful throughout the study is also a method of avoiding deception (Gray, 2009).
In order to respect the participants’ privacy, confidentiality and anonymity of the data collected is assured by conformance with the Data Protection Act, 1998. The information collected will only be used for the purpose of the study and the personal information collected is for administrative purposes only. In addition, the questionnaires and focus groups transcripts are inaccessible to anyone except person(s) directly involved with the study. Information was kept in a locked in a secure place and will not form part of the medical record. The personal information were removed from the records and replaced with a coded number and will be destroyed five years after completion of the study.

A numerical system was devised to replace the participant’s name with a number in focus group transcripts.

The study may be published or presented at a conference; however, anonymity of the participants is assured. Personal information will be concealed and not mentioned at all. Any other information pertaining to the location of the participants and their family will be concealed in order to avoid recognition and prevent harm to the individual’s or the institutions’ reputation.

The researcher is also sensitive to privacy in relation to cultural issues in Malaysia such as gender issues aligned with religious affiliation and sensitivity of the participants. Thus, the group activities were conducted in a closed room and the groups were gender based. However, in activities that were conducted in open spaces such as trips to the recreation centre, domestic activities and music sessions, male and female participants were combined to encourage socialisation.

3.18 Validity, reliability and trustworthiness

In the early development of mixed methodology, writers advocated the use of qualitative and quantitative validation procedures independently (Tashakkori and Teddlie, 1998; Creswell, 2003). However, there is an emerging opinion for the development of a validation for mixed methodology different from validation in
qualitative and quantitative studies individually. Subsequently, a bilingual categorization for mixed methods has been developed (validation legitimation) (Onwuegbuzie and Johnson, 2006; Dellinger and Leech, 2007; Creswell, 2009; Leech et al. 2009). The validation is related to the research processes of mixed methods which range from the philosophical stands, sample selection and size, data inference, procedures and research questions (Creswell, 2009). The method to establish validity legitimation in this study is presented in Table 3.6 below. The method was adapted from Onwuegbuzie and Johnson (2006). Curtin and Fossey (2007) and Onwuegbuzie and Leech (2007) who stress that the threat to internal and external validity occurs at three stages in the research process; i.e. research design, data analysis and data integration. They suggested that multiple validities should be used to validate mixed method studies. In relation to this, the method to establish validity of the study is presented in Table 3.6.
Table 3.6 : Method to establish validity of the study

<table>
<thead>
<tr>
<th>No</th>
<th>Process</th>
<th>Areas</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Research design / Data</td>
<td><strong>Quantitative</strong> 1. Method of data collection (study measures and</td>
<td>• Using valid and reliable screening tools (MMSE and GDS). The translated version (English to Malay) of the tools was validated by Malaysian researchers.</td>
</tr>
<tr>
<td></td>
<td>collection</td>
<td>screening tools) – choice and personnel who conduct the collection.</td>
<td>• Using valid and reliable study measures that were cross-culturally and globally accepted (WHOQoL-Bref, ERA, GSES). The translated version (English to Malay) of the study measures; i.e. WHOQoL-Bref and GSES was validated by Malaysian researchers. Same study measures were used for pre and post which increased internal validity of the study.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Using a seven step process of cross-cultural translation method for ERA.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Two hours training was provided regarding the protocol for conducting the screening tools and study measures to ten nursing students who are familiar with the tools and the study measures prior to intervention.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• The same training was also provided to two psychologists who are familiar with the study measures post intervention. To avoid the halo effect, the psychologists were blinded to the objectives of the study and the nature of 3LP.</td>
</tr>
<tr>
<td>2. Participants recruitment – Sampling / inclusion and exclusion criteria.</td>
<td>• Issues on contamination was addressed by asking participants in the experimental group not to discuss anything pertaining to the 3LP and not allowing participants in control group to participate in 3LP. This established internal validity of the study.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• It is a classic true experimental design (Pre-Test-Post-Test experimental study) which provides internal validity. A control group was used for comparison purposes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• G*Power calculation analysis (Buchner et al. 1997) was used to determine the effect size and power based on the availability of the participants in the study.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Participants were randomly divided into control and experimental groups using Random Allocation Software (Saghaei, 2004). Various strategies were applied to ensure blinding, minimise bias and to prevent ‘contamination’.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qualitative</td>
<td>• Use of unbiased questions and using prompts only to facilitate understanding.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Construction of the questions</td>
<td>• Questions developed after consultation and feedback (peer debriefing / member checking) from the experts (supervisors) provides inter rater reliability to the study (Curtin and Fossey, 2007). The questions were also used in previous studies that used the same study measures. Rationales for asking the questions were also provided.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 2. Sample selection | **The same questions were used for pre and post experiment studies.**  
**Use of stratified purposive sampling strategy (aligned with mixed methodology research), i.e. samples within samples (Teddlie and Yu, 2007).**  
**Participants have similar characteristics – homogeneity and uniformity in relation to experience, perspective and understanding of the phenomena. This will provide theoretical transferability.**  
**Participants were divided according to age group and gender to be sensitive to the cultural values, moral and religious beliefs and to facilitate maximum expression to the topic discussed.**  
**Participants are in and represent true phenomena under study. This provides internal and external generalisability (Maxwell (1992).)** |
|---|---|
| 3. Method of data collection. Moderating focus groups. | **Prolonged engagement with the participants (8 months). This provided opportunity to understand the culture, issues, developing and established relationships, thus providing ‘adequate representation of the voice under study (Onwuegbuzie and Leech, 2007).**  
**Pre and post focus groups were moderated according to a protocol and process which included creating ‘informal’ sessions aligned with cultural values, the stages, language used and roles of the moderator.**  
**The focus group sessions were recorded using digital audio recording equipment.** |
This provides ‘referential adequacy’ (Onwuegbuzie and Leech, 2007; p. 243).

- Post experimental focus groups were conducted by independent assessors (psychologists). To avoid the halo effect, the psychologists were blinded to the aims, objectives and nature of the 3LP.

| 2 | Data analysis | Quantitative:  
| | | 1. Method of data analysis. |
| | | Use of latest version data analysis software (*Predictive Analytics Software - PASW*, formally known as *SPSS*) |
| | | Using standardised statistical analysis and protocols: to determine normality of the data obtained, compatibility of the data, to accept or reject hypotheses, provide effect size and strength and differences between groups. |
| | | Provide descriptive and inferential analysis of the results. |
| | | Provide identification to the outliers / extreme values or negative cases. |
| | | Test can easily be replicable. |

| 2 | Data analysis | Qualitative  
| | | 1. Method of data analysis |
| | | The data were closely analysed using six steps of IPA as outlined by Smith and Osborn (2008) and Smith et al. (2009). |
| | | Prolonged engagement with the transcripts (5 months to analyse eight focus group interactions). |
| | | Thick description of data analysis. |
| 2. Development and presentation of themes | • Themes were developed in consultation and discussion (formal and informal) with supervisors (peer debriefing / member checking) who acted as *devil’s advocates* (Onwuegbuzie and Leech 2007: p. 244) to avoid misrepresentation, misinterpretation and to help in ruling out ‘false’ relationships between themes. |
| 3. Translation of themes / quotes | • The quotes were translated into English using forward translation (Heij et al. 1996; WHO, 2008), with the help of the *Oxford Malay-English Dictionary*, *Google translator* (Malay to English) and using *Webster’s Online Dictionary* (Malay to English version)  
• A bilingual (Malay and English) PhD student was given selected quotes and was asked to translate independently. A meeting was conducted to discuss the uniformity of the translations.  
• The translation process used meaning-based translation rather than word-based translation which requires the translator to conceptualise the meaning of the sentences prior to the translation, as suggested by Esposito (2010). |
| 4. Presentation of themes and quotes | • Themes and quotes were selected after weighing the evidence. ‘Stronger’ data that provide ‘strong’ evidence were given priority. This provides descriptive and |
interpretative validity (Maxwell, 1992).

- Themes and quotes come from ‘real’ informers and ‘represent’ the informants who are ‘in the phenomena’ understudy. This provides internal and external generalisability (Maxwell’s (1992).

<table>
<thead>
<tr>
<th>Data interpretation and integration (Inference)</th>
<th>Quantitative and Qualitative. Data interpretation and integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Using the stages of data analysis framework (include data integration) as outlined by Onwuegbuzie and Teddlie (2003).</td>
<td></td>
</tr>
<tr>
<td>- The data was integrated in alignment with the mixed model approach of the study (concurrent embedded experimental model) where qualitative findings support, complement and consolidate the quantitative findings.</td>
<td></td>
</tr>
<tr>
<td>- Triangulation of data sources (methodological triangulation).</td>
<td></td>
</tr>
</tbody>
</table>
3.19 Conclusion

There is a duality of direction in this study; deductive and inductive. The primary theoretical drive for the study is inductive in nature (i.e. to test hypothesis and to determine the effect of a new intervention – 3LP) and the secondary theory is inductive in nature; to explore and described the participants’ experience of living in the institute through focus groups conducted in the pre and post experimental stages of 3LP. This duality and mixing of qualitative and quantitative provides fidelity and integrity to the intervention designed.

Participants for the study were recruited from a public funded elderly institution and the participants underwent a set of stages that were carefully planned and included many activities at every phase and stage of the study.

The study measures, method of data analysis for quantitative results and qualitative findings during pre and post intervention were cautiously chosen and designed to ensure integrity of the findings and included sensitivity to the cultural issues and values of the participants, validated and reliable study measures and adherence to standardised procedures and protocol.
3.20 Summary points of Chapter 3

- Mixed methods provide various advantages as compared with a mono method and the method fits well with the complexity of the research and the need to find answers to the research questions.

- The research question for this study is to determine the effect of the Lively Later Life Programme (3LP) towards expectations regarding ageing (ERA), general self-efficacy (GSE) and quality of life (QoL) amongst elderly people in institutions and to identify the ideographic experiences of the subjects who participate in the intervention.

- This study has followed a concurrent embedded experimental mixed methods design (QUANT + quali) in which the quantitative method will act as the primary method (the dominant status) as the method will confirm the research hypothesis and will guide the qualitative search for identification of themes in relation to the participants’ experiences before and after the intervention.

  The main domain investigated in the focus group questions are questions related to the quantitative study measures, i.e. ERA, GSE and QoL.

- The qualitative design will provide elaboration and enhancement of the domains investigated. Thus, qualitative findings will complement the quantitative results.

- The study has three phases. Phase 1 (pre experimental phase) consist of four stages. Phase 2 (experimental stage) consist of one stage and Phase 3 (Post experimental stage) which consist of two stages was approved by the ethical committee of Queen Margaret
The study was conducted in one of the largest publicly funded elderly institutions in Malaysia. The institution provides free basic requirements and is currently occupied by 225 multi-ethnic elderly people.

Participants were recruited and screened using various methods and criteria. The participants who consented to the study were randomly divided into the experimental group (n=46) and control group (n=36).

Participants in the experimental group participated in 3LP, whilst participants in control group participate in the in-house programme.

Aligned with the epistemological and duality direction of the study, the study was conducted using two design; i.e. quantitative research design and qualitative research design.

In the quantitative research design, a Pre-Test-Post-Test parallel experimental study with control group was chosen to determine the effect of the 3LP towards ERA, GSE and QoL.

Validated, reliable and study measures translated to Bahasa were chosen; i.e. expectations regarding ageing scale (ERAS) to evaluate ERA, general self efficacy scale (GSES) to evaluate GSE, and an abbreviated version of World Health Organisation Quality of life scale (WHOQoL - Bref) to evaluate QoL before and after the 3LP.

Non-parameteric testing was used to determine the effect of 3LP as
the data obtain violated assumptions for parametric testing.

- In the qualitative research design that operates as the supporting design, Interpretative Phenomenological Analysis (IPA) provides the theoretical assumptions to the study aligned with the research question which is to understand the experience and how the participant makes sense of living in the institution in relation to the study measures before and after the intervention.

- Focus groups were taken as method of data collection for pre and post intervention and the questions were related to ERA, GSE and QoL. Stratified purposive sampling strategy was used to obtain data regarding the participants’ experience prior to and after the intervention.

- The pre experimental focus groups were conducted by the researcher, whilst the post experimental focus groups were conducted by psychologists to address issues related to bias. For the psychologists blinding, using specific protocols and moderating processes operated. In order to obtain the themes, the data were closely analysed using six steps of IPA. Themes developed were translated into English using forward translation.

- Data from the quantitative results and qualitative findings were integrated by following closely the seven stages of parallel mixed analysis framework as outlined by Onwuegbuzie and Teddlie (2003). Data obtained from both methods will be integrated and written concurrently. Thus, the findings from both methods will complement each another, to seek convergence and consolidate the result and provide in-depth understanding regarding the domains investigated.
CHAPTER 4:

THE INTERVENTION
“We sit all day long at a great big loom, making God knows what for God knows whom”

(Anon, a girl in Shapiro, 2008: 4)

“And Life, but a good life, is to be chiefly valued”

Socrates

4.0 Introduction

This chapter will provide descriptions of two types of interventions; the ‘in-house programme’ conducted by the staff in the institution, and the proposed intervention (the Lively Later Life Programme (3LP)) conducted by researcher. Also discussed will be the need for a health promotional programme in the institution, theoretical perspectives underpinning 3LP, the components of 3LP, sessions in the 3LP and differences between 3LP and the ‘in house’ programme. The final section will provide a conclusion and summary for this chapter. Detailed information about 3LP is in the manual accompanying this thesis and can also be found in the 3LP website at http://test3lp.wordpress.com/

4.1 In house programme

Since its establishment in 1948, the elderly people living in the institution have the freedom to walk around the institution or to engage in the activities normally initiated by the staff of the institution. There has been no occupational therapist working in the institution since it was established. The institution has recently employed a physiotherapist to help overcome musculoskeletal problems amongst the elderly people. The activities planned by the staff are usually recreational and social types of activities that aim to ‘occupy’ the residents’ time. The activities depend on the staff’s creativity and the time available. It is not a part of their job description; however, it is something that is encouraged by the administration of the institution. The activities conducted by the institution are outlined below:

- Structured ad-hoc type of activities. Ad-hoc activities are ‘one off’ activities that are conducted without long term planning and are infrequent. They are
for healthy elderly people; the participants are selected by the staff and have no involvement in making the preparations or determining the types of activity to be conducted.

- Social related occupations, such as social visits and celebration of festive occasions.
- The occupations are driven by the availability of resources, financial and personnel. Such occupations occur infrequently. Sometimes, the occupations are funded by a nongovernmental organisation, private organisation or by individual contributions. For example, an annual dinner in a hotel or a recreational visit arranged by a private company. However, often no occupations are conducted.

The in-house activities are fully supervised and managed by the staff. This includes selection of participants, preparation of materials and the environment and safety issues while the activity is being conducted.

The list of activities conducted since the commencement of 3LP is in Appendix 4.1. They are recreational and social occupations that aim to occupy the residents’ time, to encourage socialisation and to provide exposure to the environment outside the institution.

4.2 Proposed intervention - Lively Later Life Programme (3LP)

4.2.1 Introduction – the need for a health promotional programme in the institution

The need for a health promotional programme was identified through normative needs, described and expressed needs by the elderly people in the institution. This method of identifying needs follows the method for identifying needs for health promotional activities suggested by Ewles and Simnett (2003), Scaffa, et al., (2010) and Scriven (2010).
Literature indicates that there are various issues in elderly institutions that result in the emergence of needs amongst institutionalised elderly people. For example, institutions for elderly people often provide a low level of human need satisfaction, such as physiological and the safety needs (Umoren, 1992). Furthermore, literature indicates that there are various negative physiological, psychological and psychosocial implications as a result of living in an elderly institution such as occupational deprivation, alienation and disfranchisement, lack of meaningful relationships, loss of autonomy and individuality, depression, social isolation and loneliness, as discussed in the review.

Their sedentary life style is one of the contributing factors to the deterioration of physical and mental wellbeing and quality of life among elderly people who live in institutions (McPhee et al. 2004; Subasi and Hayran, 2005; Chen et al. 2007; Roe et al. 2009; Chen, 2010).

Occupational therapists have a significant role in maintaining quality of life and life satisfaction in elderly people living in institutions. However, Atwal et al. (2003) and Marshal and Mackenzie (2008) say that the potential role of occupational therapy in residential settings is not well recognised. So, the time has come to emphasise on the importance of Occupational Therapy profession in residential settings by designing a programme that will provide opportunities for residents to engage in meaningful occupations, maintain health and wellbeing and to have a quality of life.

### 4.2.2 The aim and objectives of 3LP

The primary aims of 3LP are to promote health awareness and facilitate enhancement of health and wellbeing amongst elderly people in an institutionalised setting through re-designing the lifestyle of the residents.

The aims can be achieved through raising self-awareness and knowledge with regard to the benefits of engagement in occupations, limiting sedentary lifestyle and subsequently changing behaviour and attitudes towards occupations.
The objectives of the programme are aligned with models for an ageing population, such as Model of Successful Ageing (Rowe and Khan, 1997), Model for Active Aging (World Health Organisation, 2002) and Model of Healthy Ageing (Centres of Disease Control, 2008).

The objectives are:

1. To facilitate engagement in life through meaningful and valued occupation.
2. To maintain or facilitate enhancement in physiological function, psychological and psychosocial function.
3. To facilitate enhancement in ERA, GSE and QoL amongst institutionalised elderly people.

These three objectives can be achieved through re designing lifestyle of elderly people in the institution.

Lifestyle redesign is described as:

“... a process of occupational analysis whereby clients acquire knowledge about the characteristics of occupation and an understanding of the impact on their lives, and then apply these skills to develop a healthy routine of occupations”

(Jackson et al., 2001: p. 11)

The redesign process in 3LP involves the use and application of various theories in occupational therapy, research, health promotion and education and involves engagement in various meaningful occupations. In addition, the programme utilised several techniques and approaches as in traditional occupational therapy.

Two successful lifestyles re-design schemes such as the Lifestyle Redesign programme (Clark et al. 1997) and the Lifestyle Matters programme (Mountain, et al., 2008) were taken as models for 3LP. However, the programme was customised
to the local setting in relation to the types of the occupations conducted, programme environment and aligned with the cultural perspectives in Malaysia. Description of the Lifestyle Redesign programme (Clark et al. 1997; Jackson et al. 1998; Mandel et al. 1999) and the Lifestyle Matters programme (Mountain et al. 2008) and some conceptual similarities and differences between 3LP with the adapted programmes, i.e. the Lifestyle Redesign programme and the Lifestyle Matters programme are presented in Appendix 4.2.

4.2.3 The emblem of the 3LP

The emblem shown below (Figure 4.1) represents the Lively Later Life Programme (3LP). The fresh young green leaf indicates the new beginning of life. Life is perceived as a tree that keeps on growing. Even when the tree is matured, solid and firm in the ground, it will keep on growing and producing fresh new leaves. This indicates the willingness and ability to strive and survive and in life’s adversities. The leaf represents the elderly people who are willing to change life style by engaging in occupations in the presence of challenges and limitations associated with living in an institution. It represents a fresh start in life thus enabling them to have an active life in the future. Three arrows pointing downward represent the three main objectives of 3LP that are aligned with various successful health promotional programmes for elderly people. A single line that holds the three components together represent the occupations conducted in 3LP (Figure 4.2).
The name of the programme indicates the participants and the overall outcome from participating in the programme. *Later Life* indicates that the participants for this program consist of elderly people, whilst *Lively* indicates the dynamic process of the programme and outcomes hoped to be achieved after attending the programme. Unlike the some words *Active*, successful or healthy, *Lively* can describe a positive affect (happiness) and active engagement with life (behaviour) and is thus aligned with the objectives of the programme.

**Figure 4.1 : Emblem of the 3LP**

**Figure 4.2: Representation of objectives and theoretical framework of 3LP in the leaf**
4.2.4 Theoretical framework of 3LP

Three theoretical frameworks govern the development of 3LP;

1. Health promotion and education that will assist in redesign of the lifestyle of elderly people in institutions.
2. The use of occupational therapy theory; i.e. Health through occupation.
3. Social cognitive theory (Bandura, 1997) - The use of the self-efficacy enhancement programme (SEEP).

These three frameworks are integrated and interrelated in 3LP as shown in Figure 4.3.

Figure 4.3: Theoretical framework for 3LP

4.2.4.1 Health promotion and education (lifestyle re-design)

It is important to conduct health promotion activities in the institutional setting (Robertson, 1991; Markle-Reid, et al, 2006). Institutionalised elderly people are
exposed to various issues such as occupational deprivation and barriers that impede them from engaging in occupations, such as deterioration in health condition, lack of resources and environmental barriers such as the rules and regulations that impede autonomy (Chen, 2010). They are at risk of becoming inactive which subsequently contributes to poor health. The occupational therapist has a vital role in preventing further deterioration of health in elderly people in institutions through health promotional activities that encourage institutionalised elderly people to engage in meaningful and individualised occupations.

The preventative role in occupational therapy through health promotion programmes is not a new role. It has been a theme for occupational therapy since the early 80’s and there is a growing recognition for preventative roles for occupational therapists (Jaffe, 1986; White, 1986, Rider and White, 1986). In the eighties, the health promotion programme to change lifestyle was often identified as a wellness programme that enables people to take control of their own health status (Spalding, 1996). Health promotion can be defined as a process of enabling people to increase control over, and to improve, health by adopting lifestyles and other factors related to health such as social, economical, environment and personal factors (WHO, 1986; Seymore, 1999).

Occupational therapists have skills including application of knowledge, evaluation and treatment planning required for health promotion. Health promotion as a term gained acceptance after an international conference on health promotion by the World Health Organisation in Ottawa, Canada and the launch of the Ottawa Charter for Health Promotion in 1986 (WHO, 1986). The Charter is reflected in the role of occupational therapy in health promotion and preventative programmes (Scriven and Atwal, 2004).

The role of occupational therapist in health promotion and preventative programmes for elderly people gathered momentum when Kirchman et al. (1982) looked at a preventative programme that included vocational, recreational activities, physical exercise and education programmes to sustain elderly people living in the
community. They found that there was an increased perception of health and quality of life. Since then, the role of occupational therapy in prevention and promotion has been developed and various guidelines have been established (Barney, 1991; Scriven and Atwal, 2004; Mountain, 2008; Scaffa et al. 2008).

Health promotion through lifestyle redesign that focus on engagement in occupation has been successfully implemented in various programmes such as the Lifestyle Redesign programme conducted in Western countries including USA and in UK (Clark et al. 1997; Jackson et al. 1998; Mandel et al. 1999) and the Lifestyle Matters programme (Mountain et al., 2008) and other programmes conducted by Lipschutz (2002); Matuska et al. (2003); Horowitz and Chang (2004) and Barnes, et al. (2008). However, all of the studies above were applied to well elderly people living in the community. Thus, it is an appropriate time for an occupational therapy health promotion programme that emphasises lifestyle redesign through engagement in occupation to be conducted in elderly institutions.

There are three main models for health promotion that are often adopted for health promotional programme in elderly people; Successful ageing model (Rowe and Khan, 1998), Active Ageing Model (AAM- World Health Organisation, 2002) and Healthy Ageing Model (Centre of Disease Control, (2008). The Active Ageing Model was adopted as the model for 3LP.

The rationale for adopting the Active Ageing Model is that it;

a. Promotes active participation with life, engagement with family and community. In addition, AAM also promotes continued participation in social, cultural, economic and spiritual matters

b. Recognises and stresses the importance of human right amongst elderly people. Rights to have opportunity and fulfilment in their life, to be independent, to participate in occupation, to have autonomy and dignity.
The strategic planning in AAM shifts from fulfilling needs to fulfilling rights.

c. Recognises and stresses the need for a physical environment that is accessible and friendly.

d. Acknowledge the benefits of meaningful relationships with friends, neighbours, family members and stresses the importance of successful intergeneration solidarity that will provide aid and support.

e. Supports engagement in individualised and meaningful occupations and acknowledges the influence of culturally appropriate occupations.

f. Recognises the need to encourage balance in occupations.

g. Identifies the determinants of active ageing, which include culture, physical environment, social, personal determinants and individual behaviour.

h. Acknowledges the effect of engagement in occupation, such as engagement in physically related activities which can delay deterioration in functional ability.

This rationale above is related to elderly people in institution. Previous studies indicate that elderly institutions often provide for only basic needs and are often associated with occupational deprivation and lack of autonomy and individuality. In addition, the AAM acknowledges the effect of culture on occupation and acknowledges the importance of intergeneration solidarity that contributes to quality of life.
Factors that negatively influence health were identified; therefore a health promotional programme should take these issues into consideration. In relation to this study, deterrents to health like sedentary lifestyle, constraints in the institutions, and individual health characteristics were taken into consideration when designing 3LP.

The use of this model for an occupational therapy health promotion programme was acknowledged by Wilcock (2007). She stressed that occupational therapy is (the) ‘agent of active ageing’ (p. 17).

4.2.4.2 Occupational therapy theory - health through occupations

The 3LP is grounded in occupational therapy theory and the use of meaningful occupations to improve health and well-being. It is the core foundation for occupational therapists (Yerxa et al. 1990, Clark et al. 1991; Iwarsson et al. 1997).

The uniqueness of the occupational therapy profession lies in the fact that there is a relationship between occupations, occupational engagement, health and wellbeing (Yerxa, 1989; Jackson, 1996; Zemke and Clark, 1996; Willcock, 2001; Law, 2002; Christiansen, 2007; Law, 2007; Lee et al. 2008). Experience in occupational engagement creates a vision about future possibilities and contributes to changes in life (Mandel et al. 1999; Hearle et al. 2008). Participation in occupations also produces health outcomes and it has been the main focus in occupational therapy literature and the philosophical basis of the profession (Pierce, 1998; Willcox, 2001 Kielhofner, 2007; Law, 2007; Lee et al. 2008). Furthermore, occupational therapists believe that engagement in occupation is necessary for the human existence and the engagement in occupation is actually life itself (Zemke and Clark, 1996; Henderson, 1996; Mandel et al. 1999).
Studies discussed in the review indicate the occupation patterns amongst institutionalised elderly people and the benefits of engagement in occupations. Various studies in the occupational therapy field and related professions have shown the benefits of engagement or re-engagement in occupation to promote maintenance in health and well-being. However, most of the evidence comes from descriptive studies which have various limitations or are from qualitative studies. Findings from descriptive studies, such as a cross-sectional study are perceived to have a low level of evidence (Melnyak and Fineout-Overholt, 2005; Taylor, 2007). Conclusive evidence from high levels of evidence such as from systematic review, meta-analysis or clinical trials is still insufficient (Dirette et al. 2009). This study intends to provide some evidence regarding the benefits of engagement in occupation to elderly people who live in institutional settings.

4.2.4.3 Social cognitive theory – SEEP

To redesign the residents’ sedentary lifestyle, to modify behaviour and to improve the participants’ level of engagement in meaningful occupational activity was expected to be a challenging process as most of the participants have been living in the institute for a long time; thus the institutional culture and predilection towards the sedentary lifestyle was strongly embedded in the participants’ routines and daily life. The culture imposed by the institute engendered a lack of individual internal locus of control so the participants believed that their destiny was controlled and determined by external factors such as fate (to live in the institute) and the environment (lack of opportunity, rules and regulations, lack of a support system; stereotypical perception towards elderly people) of the institute.

The theory chosen to facilitate motivation and engagement with 3LP is Bandura’s Social Cognitive Theory (SCT). This is aligned with proposed strategy to facilitate motivation Song, et al. (2004) and Wilkinson (1979) who stressed that sense of motivation can be facilitated with the use of SCT.
There are two main reasons on why the SEEP is needed. These are; low self-efficacy amongst institutionalised elderly people (Kim et al. 2006) and SEEP will facilitate engagement in occupations. Low self-efficacy is predicted when there is lack of attainment in the need for self-direction amongst institutionalised elderly people.

In relation to this study, three source of self-efficacy i.e. Performance accomplishment, vicarious experience and verbal persuasion were used in the individual sessions of 3LP to facilitate participants’ enhancement and motivation to engage in the occupation. Furthermore, Bandura (1997) stressed that the level of perceived self-efficacy can be enhanced regardless of age and self-efficacy in elderly people is often associated with misinterpretation of personal abilities. Thus, education, motivation, encouragement and feedback can be used to help elderly people to reappraise their personal abilities. Self-efficacy enhancement programmes that help to re-appraise belief in personal abilities could enhance the level of engagement in activities (Easom, 2003; Chang, 2007)

4.2.5 Approaches in 3LP

Three main approaches were used to facilitate health promotion activities and changes in lifestyle amongst the residents. These approaches as suggested by Ewles and Simnet (2003) are; behaviour change, education and client-centred focus. These approaches will be combined to achieve the aim of 3LP and the combination is shown in Figure 4.
4.2.5.1 The behaviour change approach

The behaviour change approach is aimed at changing the residents’ attitude and behaviour from a sedentary lifestyle to a ‘livelier and healthier’ lifestyle. In this approach, there is a need for elderly people to change not only their behaviour but also their attitude.

4.2.5.2 The educational approach

The aim in this approach is to facilitate acquisition of knowledge and understanding in the topics discussed. The knowledge and understanding obtained helps to provide awareness. Personal values are explored and attitudes towards the changes identified; this which helps the participants to make the decision to change behaviour and adopt a livelier and healthier lifestyle.

For example, in relation to this study, participants were made aware of their occupation engagement through reflexion on their occupation before and after their
relocation. Participants described the effect of engagement in occupation prior to relocation and the effect of occupation deprivation and alienation after relocation to the institution. Personal experience provides powerful awareness amongst participants.

The importance and the effect of engagement in occupation were described in the following week through didactic presentations from the researcher or external speakers. Knowledge, awareness and understanding about the issues explored will assist in evaluation of personal values which subsequently will assist elderly people to make informed choice and behavioural change.

4.2.5.3 The client-centred approach

The client–centred approach is also known as empowerment approach. In this approach, the researcher will assist elderly people to identify occupations that they wish to engage in. This is according to their personal choice, values and interest. The researcher will facilitate understanding, identifying and addressing their concerns, teaching appropriate skills, providing support, opportunity, resources, encouragement and addressing barriers related to engagement through individual and group sessions in 3LP. In this empowering approach, the elderly people have the power and the right to make their own decisions to control their own life. A culturally sensitive indigenous empowerment model as stressed by Yip (2004) will be used to empower the elderly people. This model emphasises teaching about rights and responsibilities, preserving harmony, and empowering the individual and significant others. Gradual empowerment will be stressed to participants in this study aligned with the doctrine of filial piety.

4.2.6 Characteristics of 3LP

There are several unique characteristics of 3LP:

1. Individualised occupations.
3. Multi-layered components and core content.
4. Motivational components - Self Efficacy Enhancing Programme (SEEP).

These four characteristics are interrelated to assist in achieving the aims of 3LP as shown in Figure 4.5 below. The following section will discuss the uniqueness of 3LP.

Figure 4.5: Interrelated characteristics in 3LP

4.2.6.1 Individualised occupation

Several factors have been associated with active engagement with occupation in elderly institutions. The factors are physical and cognitive function, personality traits, motivation, perceived control and quality of activities (Green and Cooper, 2000; Van’T Leven and Jonsson, 2002; Zimmerman et al. 2003; Wadensten, 2007; Kolanowski and Buettner, 2008; Hill et al. 2010; Tietelman et al. 2010). The physical, cognitive and personality factors must match the activities, demand and personal interest (Kolanowski et al. 2001, Van’T Leven and Jonsson, 2002;
Kolanowski and Buettner, 2008; Chen, 2010; Hill, 2010). In another words, the occupation should be tailored to individual needs and demands (Haastregt et al. 2000; Steultjens et al. 2004). In addition, the social environment such as social support, networks and social cohesion also influence engagement (McNeil, et al., 2006; Stahl et al. 2001). A social environment that provides positive reinforcement and feedback will facilitate active engagement (McNeil, et al., 2006; Tietelman et al. 2010).

A sense of motivation and self-determination will initiate the engagement with tasks and facilitates higher level of participation (Yerxa et al. 1989; Green and Cooper, 2000; Hasseskus, 2002; Ball et al. 2007). Motivation can be facilitated through meaningful types of occupations and through reinforcement and engaging elderly people with occupations that provide a sense of enjoyment and sense of control over the occupations (Green and Cooper, 2000; Muse, 2005; Dacey, Baltzell and Zaichkowsky, 2008; Hill et al. 2010; Tietelman et al. 2010).

These factors stress the need for individualised occupation. Individualised occupations require participants to develop their own objectives (individualised goals). This will encourage the development of self-regulated skills (Rejeski and Mihalko, 2001). Occupations in 3LP therefore are occupations which relevant to demographic characteristics, such as gender and age, aligned with religious and cultural beliefs, related to previous roles in life and address the needs and priorities of the participants. In addition, based on an unmet need model (Cohan-Mansfield, 2001), meeting unmet needs such as providing occupation and sensory stimulation will prevent inappropriate behaviour which includes an inactive lifestyle.

4.2.6.2 Meaningful occupation

The literature indicates that meaningful occupations for ‘healthy’ institutionalised elderly people are occupations that provide a sense of continuity, familiarity, personal interest, self-determination, autonomy and occupations that provide opportunity to have social contact with relatives, friends and family members (Green
and Cooper, 2000; Van’T Leven and Jonsson, 2002). In recent quantitative studies, Eakman, et al. (2010) and Scott and Debrew (2009) found that engagement in meaningful occupation facilitated a sense of purpose in life. Examples of meaningful occupations that are often engaged in by the institutionalised elderly people are, reminiscence activities, family and social related occupations, individual occupations, such as reading, knitting, and musical activities (Legarth et al. 2005; Vernooij-Dassen, 2007; Harmer and Orrell, 2008). An interest checklist and occupation analysis will provide information regarding meaningful occupations for the participants in this study.

4.2.6.3 Multi-layered components and core content

3LP consists of the various components and content below which confer uniqueness to the intervention:

a. Individual and group sessions.

b. Nine interrelated themes in group sessions that focus on the benefits of engagement in occupation towards physiological, physiological and psychosocial function

c. 3LP facilitates engagement; provides opportunity and addresses barriers to engagement in occupations.

d. 3LP facilitates empowerment in relation to the choice of occupations conducted.

e. Use of occupational analysis and occupation reflexion to provide insight and awareness towards engagement in occupation.

f. 3LP provides theory and practical knowledge which will facilitate motivation and increase understanding.

g. Motivational components in 3LP facilitate adherence and increased motivations for engagement.

Further information about the components and content of the 3LP is in the 3LP manual.
4.2.6.4 Motivational components of 3LP (The SEEP)

As discussed before, it is postulated that there is a lack of motivation amongst institutionalised elderly people to engage in occupations. Some participants may have lived in the institution for a long time, subsequently the ‘institutionalised culture’ such as lack of motivation and low self-esteem may be strongly embedded in their life. Therefore, a motivational programme is needed. The SEEP will also facilitate changes in attitude towards engagement in occupation. The programme will be used mostly during the individual sessions. Sources of self-efficacy and strategies to facilitate motivation are shown in Figure 4.6 below.
Self Efficacy Enhancing Programme (SEEP)

Strategies

- Breaking down task into smaller components to achieve mastery.
- Review the occupations conducted and achievement
- Review benefits obtained
- Provide positive feedback on engagement in occupational activities, verbal reinforcement.
- Upward social comparison – to facilitate motivation.

- Discuss the achievement of another residents that has similar characteristics (modelling).
- Support form groups.
- Discuss the benefits / effect from engagement in occupational activities during the individual and group session through reflective process and story telling
- Provide visual example e.g. increased in mobility and functional status.
- Use of upward social comparison

- Encourage and convince resident to engage in occupational activities (use of expert and reference power)
- Provide example, benefits of the engagement, provide information the effect of disengagement.
- Identify barriers.
- Explore issues associated with disengagement.
- Explore strategies to minimised issues.
- Provide positive feedback and persuasion.

Figure 4.6: SEEP and strategies
The use of self-efficacy to enhance engagement and adherence has been used in many rehabilitation programmes, such as the health promotional activities to redesign the lifestyle and adherence to exercise for nursing home residents (Resnick et al. 2009); occupational therapy and physiotherapy students (Kamwendo, 2000), the relaxation training programme for caregivers (Fisher and Laschinger, 2001), weight loss programmes (Roach et al. 2003; Reicks et al. 2004), the Self-care self-efficacy enhancement programme for elderly people in the nursing home (Chang et al. 2007; Chang, 2010), the walking exercise programme for diabetic patients (Chau et al. 2005); the exercise programme for elderly people (Lee et al. 2008; Resnick et al. 2008; Shin et al. 2009). Lee, et al. (2008) found that self-efficacy theory and the self-efficacy enhancement programme can be used to overcome psychological barriers, increased confidence, initiate and maintain physical activity behaviour, increase engagement and increase positive perceptions towards physical activity. Evidence from various interventions that promote lifestyle changes with the use of cognitive-behavioural strategy was found to be more effective than programmes that use health education, prescription and instruction alone (Resnick et al. 2008; Brawley et al. 2000)

4.2.7 Duration, core content and method of delivery

The 3LP were conducted over six months. There was no definite time frame for the programme to take an effect. However, programmes that have similarities with 3LP have been used over varying time scales. The Lifestyle Redesign Programme (Clark et al. 1997) was conducted over nine months. Lipschutz (2002) offers a shorter programme of eight weeks; Horowitz and Chang (2004) offer a 16 week programme; whilst Mountain et al. (2008) offer a Lifestyle Matters programme for 27 elderly people living in the community for eight months. Thus, it was postulated that the success of such similar programmes depends on location, content of programme, settings and number of elderly people who taking part in the programme.

The 3LP was delivered in group and individual sessions. Based on the time frame available, every participant in the experimental group received one individual hour
session per month and two hours per week in group sessions. Therefore, the total intervention hours for each participant in the experimental group were 54 hours.

The overall programme model is illustrated in Figure 4.7. The figure indicates the main theme in the group session, method of delivery, expected changes in occupation and the main expected health outcomes of the programme i.e. quality of life, and positive expectation towards ageing and high perceived self-efficacy.
CHAPTER 4

• Occupation analysis
• Occupation and health
• Physical occupation and health
• Mental and cognitive occ. and health.
• Social occupation and health.
• Personal activity and health.
• Institution and community Management
  • Exploration
• Synthesis and graduation

• Individual and
  • Group approach.
• Didactic instruction
• Experiential learning
• Self Exploration
• Exchange ideas with peer (discussion and sharing experiences)
• Self Efficacy Enhancing Programme (SEEP)

• Ability to do more meaningful occupation
• Improve physiological, psychological and psychosocial functions.
• ability to safely accessing the public facilities in the community.
• Ability to plan, organized time
• Improve knowledge in benefits of occupation and managing health.
• Decreased social isolation and depression.
• Autonomy and assert individuality

• Improved quality of life
• Improve future expectation in life.
• Improve self-efficacy

Figure 4.7 3LP Model (adapted from Jackson et al. 2008)
4.2.8 Sessions in 3LP

The following sections will describe the two type of sessions conducted for the participants in the experimental group. These two sessions will be integrated to ensure that the aim and objectives of 3LP are achieved. Any ambiguity or personal doubt that arose during group sessions was discussed further in individual session.

4.2.9 Individual sessions in 3LP

4.2.9.1 Aim and objectives of the individual session

The primary aim for the individual sessions is to provide opportunity for each participant to accomplish personalised goals whilst living in the institute. The objectives of the individual sessions depend on the topic discussed and occupation engaged in by the participants.

The general objectives of the individual session are:

1. To establish rapport with the participants, develop trust and to deepen the level of relationship

2. To identify demographic characteristics, reason for admission and experiences of living in the institute

3. To identify daily occupational patterns and associated problems with engagement in occupations.

4. To conduct an individual occupational analysis, thus providing awareness and insight regarding occupational balance in the elderly person’s life.

5. To identify hopes for the future, life goals and wishes, individual needs.
6. To plan for individual occupation.

7. To identify hobbies and interests that want to have conducted.

8. To provide opportunity for the participants to clarify any issues pertaining to the topic discussed during group sessions and provide in more in-depth explanation if required.

9. To explore hobbies and future interests in order to plan for personalised goals.

10. To identify and discuss issues pertaining to the challenges associated with accomplishment of individual goals and engagement in personalised occupation

4.2.9.2 Themes and activities in the individual session

No structured theme was planned for individual sessions. The content of the individual session highly depends on the participants’ needs and demands. However, the sessions had several topics that served as a general guideline and this is aligned with the core theme in the group sessions. The guideline of the monthly individual session is as shown in Figure 4.8. Further explanations about the topic discussed are in Appendix 4.3.
### Meeting number:

<table>
<thead>
<tr>
<th>Number</th>
<th>Main activities / Discussion topics</th>
</tr>
</thead>
</table>
| **1**  | Establishing rapport  
Identifying demographic information  
Identifying daily occupational activities (occupational analysis) & lifestyle  
Identifying hobbies and interest (Interest Checklist)  
Plan for personalised occupations  
Hopes and direction in life  |
| **2**  | Response to previous group sessions  
Exploring hobbies and interest  
Life goals & wishes  
Plan for personalised occupations – ADL, productive occupations and leisure for short terms and long terms  |
| **3**  | Response to previous group sessions  
Identifying progress on personalised occupation plan  
Monitoring personalised occupations – encourage self-exploration and efficacy.  |
| **4**  | Response to previous group sessions  
Monitoring personalised occupations  
Identify challenges associated with personalised occupations and exploring alternative solutions.  
Identifying progress, changes, alterations needed and response.  |
| **5**  | Monitoring personalised occupations  
Identify challenges associated with personalised occupations and exploring alternative solutions.  
Identifying progress, changes, alterations needed and response.  |
| **6**  | Monitoring personalised occupations  
Personal reflection  
Identification of changes (current lifestyle)  
Hopes and plan for the future.  |

Figure 4.8: Guideline topic for the individual session
4.2.9.3 **Method of delivery in the individual session**

The topic explored during the individual meeting was a different in each meeting as shown in Figure 4.8. The session was conducted in the form of a discussion, questions and answer session with an emphasis on self-discovery, self-exploration which empower the participants to seek strategies for finding solutions to the issues raised by the participants.

The individual meetings were conducted at any venue requested by the participants. This increased participation (Voelkl et al. 1995). The session put emphasis on encouragement of participants to explore individual options, take the initiative and to take an active role in achieving individual goals. This is to encourage empowerment and autonomy in making decisions, thus facilitating internal locus of control. The individual sessions will facilitate enhancement of self-efficacy and adherence to engagement with the occupation through the use of self-efficacy enhancement strategies (SEEP).

During the main activities in the individual sessions, the researcher plays various roles which overlap at various stages. The roles are as a facilitator, as a mediator and as a listener.

4.2.10 **Group sessions in 3LP**

4.2.10.1 **Aim and objectives of the group sessions**

The primary aim for the group sessions is to provide the opportunity for each participant to explore a variety of themes that will assist the process of lifestyle change in a supportive environment through interaction, socialisation and peer exchange. The objectives for the group sessions are as below (as adapted from Craig and Mountain, 2007):
1. To provide information through a didactic process of learning associated with the topics and themes on each week of the programme.

2. To obtain feedback from the participants. The feedback would serve as validation and a sense of ‘security’ to the participants by knowing that he or she is not the only person who has a problem, thus the focus group sessions will enhance social support and friendship.

3. To provide a supportive environment. The friendly atmosphere that exists during group sessions provides a chance for the participants to practise their skills in a supportive environment, thus enhancing further understanding and retention.

4. The group sessions provide opportunity for the participants to model other ‘successful’ participants.

4.2.10.2 Themes and activities in group sessions

The content of the group sessions in 3LP is divided into nine core themes as listed in Table 4.1. The central theme of 3LP is awareness of the concept of occupation and health outcomes as a result of active participation in the occupation (Mandel et al. 1998). However, the themes are flexible depending on the themes which emerge from the groups and need of the groups. Overall content and detailed content of 3LP is in the 3LP manual.

Various group activities were conducted in group sessions. Creativity in performing the occupation will be encouraged throughout the programme as creativity encourages self-identity, self-expression, greater sense of fulfilment, self-awareness and motivation (Blanche, 2007). The selection of the occupations by group team is based on those valued most by the elderly and that will enhance the outcome of 3LP. The occupations valued most include:
• Physical activities and recreational activities – Outdoor and indoor activities, for example, walking in a park, dance, traditional exercises, ball exercises, traditional games and music sessions.

• ADL – domestic and personal hygiene,

• Educational, preventive and exploratory (health promotion type of activities) – fall prevention, transportation, safety in the institute, ergonomic manual handling, sleep, healthy eating and nutrition, taking medication,

• Spiritual activity – religion related occupations.

• Cognitive activities – cognitive training, group discussion. Reminiscence and validation therapy. Life history can be used as a powerful tool to understand the participants’ daily occupations; and reflexion of their life to enhance motivation and engagement in the activity (Wiseman and Whitefoard, 2007).

• Psychosocial occupations – outings, leisure activities,

• Productive occupations – gardening, crafts, paid employment, voluntary work.

• Activities to promote traditional values by re-establishing social connection with family members. Re-establishing connection with family members and interdependency with family members are perceived as important aspects in healthy ageing in Hong Kong (Lee and Fan, 2008).

Table 4.1: Core themes of 3LP

<table>
<thead>
<tr>
<th>No</th>
<th>Durations</th>
<th>Weeks</th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 week</td>
<td>1</td>
<td>Theme 1 Introduction to occupation</td>
</tr>
<tr>
<td>2</td>
<td>4 weeks</td>
<td>2 - 5</td>
<td>Theme 2 Health and Occupations</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Occupational analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Health and occupation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Life goals, hope and wishes</td>
</tr>
<tr>
<td>3</td>
<td>4 weeks</td>
<td>6 - 9</td>
<td>Theme 3 Physical occupations and health</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Physical exercises and</td>
</tr>
<tr>
<td>Chapter</td>
<td>Duration</td>
<td>Weeks</td>
<td>Theme</td>
</tr>
<tr>
<td>---------</td>
<td>----------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>4</td>
<td>3 weeks</td>
<td>10-11</td>
<td>Theme 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2 weeks</td>
<td>12-13</td>
<td>Theme 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>3 weeks</td>
<td>14-17</td>
<td>Theme 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>4 weeks</td>
<td>18-21</td>
<td>Theme 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>2 weeks</td>
<td>22-23</td>
<td>Theme 8</td>
</tr>
<tr>
<td>9</td>
<td>1 week</td>
<td>24</td>
<td>Theme 9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.2.10.3 Methods of delivery in the group session

The group sessions were delivered through didactic presentation, a process of exchanging and sharing information with other residents, brainstorming for ideas, problem solving, experimentation through direct experience and personal exploration in individual session. This method is allied to the Lifestyle Redesign programme (Clark et al. 1997; Jackson et al. 1998; Mandel et al. 1999) and the Lifestyle Matters programme (Craig and Mountain, 2007; Mountain, et al., 2008).

The didactic presentation focused on the theoretical and practical aspects of the programme module such as the techniques of joint protection, analysis of daily occupation, personal hygiene and health related benefits of occupation associated with the core themes of 3LP. This method will give the elderly new information and perspectives on new ways of overcoming problems and challenges in daily activities. Each participant also had the opportunity to share their experiences in occupational engagement, through ‘story telling’ style (Mandel et al. 2007; Craig and Mountain, 2007). Details of the group activity protocol which was adapted from Cole (2005) are in Appendix 4.4.

Relating to the main activities in the group sessions, the researcher plays various roles which overlap at various stages. The roles are as a leader of the group, as an information and knowledge provider and as a facilitator.

4.3 Differences between 3LP and the ‘In-house programme’

There are major differences between the ‘in house’ programme and 3LP which are summarised in Table 4.2 below.
<table>
<thead>
<tr>
<th>No.</th>
<th>Areas</th>
<th>‘In house programme’</th>
<th>Lively Later Life Programme (3LP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aims and objectives</td>
<td>No specific aims and objectives. Main objective is to provide exposure and to ‘occupy time’ and to reduce boredom.</td>
<td>Specific aims and objectives. Focus on change of occupational behaviour and lifestyle through health education and promotional activities, improved awareness and knowledge.</td>
</tr>
<tr>
<td>2</td>
<td>Nature</td>
<td><em>ad hoc</em>, infrequent, non-purposeful, Mostly reactive towards resident needs policy. A ‘top-down’ approach.</td>
<td>Personalised and meaningful occupations. Needs are identified by researcher (literature reviewed-normative need), from needs expressed by participants (felt and expressed need). Reactive and proactive, ‘bottom-up’ approach.</td>
</tr>
<tr>
<td>3</td>
<td>Theoretical framework / models</td>
<td>Custom practice framework.</td>
<td>Three main theoretical frameworks:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1. Health promotion and education.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Occupational therapy theory – health through occupation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Social cognitive theory Models</td>
</tr>
<tr>
<td>4</td>
<td>Resources / organisation</td>
<td>Mainly staff determined types of activities. Dependent on creativity of staff member and time available. Funded by the institution, nongovernmental organisation, private organisation or individual contributions. Materials / preparation are provided by staff.</td>
<td>Occupational therapy and other qualified personnel (guest lecturers), volunteers. Occupation determined by participants. Occupations are prepared by participants, supported by researcher.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>5</td>
<td>Evaluation</td>
<td>None Informal interview (satisfaction with activity).</td>
<td>Quantitative and qualitative evaluations - Interest analysis, Expectations regarding ageing (ERA), General self-efficacy (GSE), Quality of life (QoL), focus groups.</td>
</tr>
<tr>
<td>7</td>
<td>Location.</td>
<td>Outside and inside the institution</td>
<td>Outside and inside the institution. Dependent on needs of participants.</td>
</tr>
<tr>
<td>8</td>
<td>Types of</td>
<td>Social related</td>
<td>Based on themes and</td>
</tr>
<tr>
<td>9</td>
<td>Structure</td>
<td>Structured – participants are selected. Often involves ‘healthy’ elderly.</td>
<td>Unstructured – participants are randomly selected, occupations are self-directed.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>
| 10 | Approach | Custom practice approach. | Three main approaches.  
2. Educational approach.  
3. Client centred approach (empowerment). |
| 11 | Duration | Depends on type of activity. (no continuity). | 6 months continuously, each participant gets 2 hours of group session per week for 24 weeks and 1 hour individual session per month ( = 52 hours per person). This is excludes engagement in occupation at individual times. |
| 12 | Skills needed | Management skills. | Occupational therapy skills – evaluation, organisation, rehabilitation, management, communication, coordinating, counselling, analytical skills, |
Example of activity

Social related occupations, such as social visits and celebration of festive occasions.

Occupations (ADL, work and leisure). Engagement in meaningful and individualised occupation.

### 4.4 Conclusion

This chapter has discussed the two types of interventions that were conducted for the participants in the study. Participants in the experimental group took part in the proposed intervention (3LP), whilst participant in the control group participate in the “In-house programme” conducted by the staff of the institute. The programmes have different sets of objectives. The in-house programme consists of structured social and recreational occupations aimed at occupying the residents’ time, to encourage socialisation and to provide outside exposure to the participants. There is no specific theoretical background underpinning the in-house intervention.

The 3LP was designed through the use of various theoretical frameworks to underpin the intervention and the fundamental philosophy of 3LP is that there is relationship between engagement in meaningful occupation with health and wellbeing. However, the institutional environment often associated with largely providing for basic human needs is said to cause deterioration in physical and mental health and encourage residents to adopt a sedentary lifestyle. Furthermore, there is also deterioration in self-efficacy and internal locus of control due to lack of autonomy and loss of individuality. The 3LP has incorporated the self-efficacy enhancing strategies in the individual and group sessions to encourage the re development of self-efficacy and engagement in occupation to improve quality of life for the elderly people who live in the institute.
4.5 Summary points of Chapter 4

- This chapter discusses two types of intervention. In-house intervention that was conducted by the institute and followed by the participants in the control group of the study.

- Participants in the experimental group, participated in the new intervention (3LP) conducted by the researcher.

- The 3LP was shaped and designed by the application of occupational science; health promotion and the fundamental belief that engagement in purposeful occupations will facilitate health and wellbeing.

- The core ideas that drives the development if 3LP is the Activity theory in ageing, the relationship between health and occupation and the negative effect of living in an institutionalised setting.

- The 3LP was adapted from a successful lifestyle redesign programme for well elderly people in the community; the Lifestyle Redesign programme (Clark et al. 1997; Jackson et al. 1998; Mandel et al. 1999) and the Lifestyle Matters programme (Mountain, et al., 2008; Mountain and Craig, 2011).

- The 3LP consists of individual and group session. Each participant attended one hour of individual session/per month and two hours of group sessions in six months aimed at facilitating accomplishment in the occupations, whilst the group sessions provide information for the participants to redesign their lifestyle.
There was no specific structured framework for individual and group session. There was a tendency to change from time to time according to the participants’ needs and demands.

Individual sessions were delivered through discussion, with emphasis on self-exploration and discovery to enhance self-efficacy and to encourage autonomy and individuality.

The content of the group sessions consisted of nine core themes and the main objective of the theme was to provide theoretical and practical knowledge and facilitate awareness regarding the benefits of engaging in occupations in order to maintain health and wellbeing.

Occupational self-analysis and reflective process performed through storytelling are the two main methods to facilitate self-awareness and insight regarding the participants’ lifestyles.

Researcher plays a significant supportive role in individual and group sessions.
CHAPTER 5:

RESULTS AND DISCUSSION – CHARACTERISTICS OF THE PARTICIPANTS
CHAPTER 5

5.0 Introduction

This chapter will present the quantitative results and the qualitative findings regarding the characteristics of the participants obtained before and after the 3LP. This chapter will initially present the pre intervention quantitative results and qualitative findings and data integration followed by post intervention qualitative results and qualitative findings. The discussion section will be presented at the end of this chapter by integrating the pre and post results and findings aligned with the methodology of the study.

5.1 Pre intervention descriptive analysis

5.1.1 Demographic information before randomisation

Participants in the study were predominantly male (68.3%, n=56), over 75 years old (83.0%, n=68) with a mean age of 74.1 (±8.09), Malay (68.3%, n=56), never completed high school (95.0%, n= 78), have lived in the institution more than three years (36.8 months ± 34.5), have at least one health related problem (74.4%, n=61 elderly people), have no contact with family members (51.2%, n=42 elderly people) and were admitted to the institute by other people such as family, Department of Social Welfare, or neighbours (82.9%, n=68) as shown in Table 5.1.

Cross tabulation based on gender indicated that 92.3% (n=24) of female participants had never go to school or had never finished standard six (7 to 12 year olds), 61.5% (n=16) are below 75 years old, 50.0% (n= 13) are re-located to the institute by the Department of Social Welfare, Malaysia, 46.2% (n=12) and 34.6% (n=9) are still married or are widowed respectively. 53.6% (n=30) of the male participants are single and 21.4% (n=12) are self-admitted to the institution.
<table>
<thead>
<tr>
<th>Variables</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>- Male</td>
<td>56 (68.3)</td>
</tr>
<tr>
<td>- Female</td>
<td>26 (31.7)</td>
</tr>
<tr>
<td>Total</td>
<td>82 (100.0)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>- 60 to 75 years old</td>
<td>14 (17.0)</td>
</tr>
<tr>
<td>- above 75 years old</td>
<td>68 (83.0)</td>
</tr>
<tr>
<td>Median (IQR) :</td>
<td>76.0 (65.0-83.0)</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
</tr>
<tr>
<td>- Married</td>
<td>30 (36.6)</td>
</tr>
<tr>
<td>- Single</td>
<td>35 (42.7)</td>
</tr>
<tr>
<td>- Widow</td>
<td>17 (20.7)</td>
</tr>
<tr>
<td>Race</td>
<td></td>
</tr>
<tr>
<td>- Malay</td>
<td>56 (68.3)</td>
</tr>
<tr>
<td>- Chinese</td>
<td>20 (24.4)</td>
</tr>
<tr>
<td>- Indian</td>
<td>5 (6.1)</td>
</tr>
<tr>
<td>- Others</td>
<td>1 (1.2)</td>
</tr>
<tr>
<td>School qualification</td>
<td></td>
</tr>
<tr>
<td>- never gone to school</td>
<td>36 (43.9)</td>
</tr>
<tr>
<td>- up to standard six</td>
<td>37 (45.1)</td>
</tr>
<tr>
<td>- Lower certificate</td>
<td>5 (6.1)</td>
</tr>
<tr>
<td>- Others – certificate.</td>
<td>4 (4.9)</td>
</tr>
<tr>
<td>Duration in institution</td>
<td></td>
</tr>
<tr>
<td>- 1 to 36 months</td>
<td>70 (85.4)</td>
</tr>
<tr>
<td>- 37 to 72 months</td>
<td>9 (11.0)</td>
</tr>
<tr>
<td>- 73 to 180 months</td>
<td>1 (1.2)</td>
</tr>
<tr>
<td>- 109 to 144 months</td>
<td>1 (1.2)</td>
</tr>
<tr>
<td>- 145 to 180 months</td>
<td>1 (1.2)</td>
</tr>
<tr>
<td>Duration median (IQR):</td>
<td>74.0 (68.0 – 80.0)</td>
</tr>
<tr>
<td>Min / max :</td>
<td>1 / 180</td>
</tr>
<tr>
<td>Range :</td>
<td>179</td>
</tr>
<tr>
<td>Number of health problems</td>
<td></td>
</tr>
<tr>
<td>- No health problem</td>
<td>21 (25.6)</td>
</tr>
<tr>
<td>- 1</td>
<td>29 (35.4)</td>
</tr>
<tr>
<td>- 2</td>
<td>22 (26.8)</td>
</tr>
<tr>
<td>- 3</td>
<td>10 (12.2)</td>
</tr>
<tr>
<td>Number of family members or friends</td>
<td></td>
</tr>
</tbody>
</table>
who keep in touch
- No one 42 (51.2)
- 1 – 5 29 (35.4)
- 6 - 10 10 (12.2)
- 11 - 15 1 (1.2)

Reas ons for admission
- Self- admission 14 (17.1)
- Admitted by others 37 (45.1)
- Admitted by the Department of Social Welfare 29 (35.4)
- Admitted by the enforcement agency 2 (2.4)

SD = Standard deviation, IQR = Inter-quartile range

Table 5.1 Characteristics of the participants (pre randomization)

5.1.2 Demographic information after randomisation

A Mann Whitney u test was conducted on the demographic data to determine whether there is any difference between groups. The analysis indicated that there is no significant difference in the demographic variables between the control group and experimental groups (p > .05) as shown in Table 5.2. In addition, a Shapiro-Wilk test for normality was conducted on all of the dependent variables. The result of the analysis indicated that there are significant differences in some dependent variables including ERA, domain 3 in WHOQoL and the question number 1 in WHOQoL (p < .05), suggesting violations of the normality assumptions. Therefore, it was decided that non-parametric test would be used in the analysis of the quantitative data obtained.

<table>
<thead>
<tr>
<th>Variables / Group</th>
<th>Experiment N (%)</th>
<th>Control N (%)</th>
<th>(u)</th>
<th>Z scores</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Male</td>
<td>28 (60.9)</td>
<td>28 (77.8)</td>
<td>688.0</td>
<td>-1.62</td>
<td>0.11</td>
</tr>
<tr>
<td>- Female</td>
<td>18 (39.1)</td>
<td>8 (22.2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>46 (100)</td>
<td>36 (100)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 60 to 75 years old</td>
<td>25 (54.3)</td>
<td>20 (55.6)</td>
<td>782.0</td>
<td>-.43</td>
<td>0.66</td>
</tr>
<tr>
<td>- above 75 years old</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Median age (IQR):

<table>
<thead>
<tr>
<th></th>
<th>Median</th>
<th>IQR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21</td>
<td>(45.7)</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>(44.4)</td>
</tr>
<tr>
<td>Married</td>
<td>74.0</td>
<td>(68.25-80.0)</td>
</tr>
<tr>
<td>Single</td>
<td>74.50</td>
<td>(67.25-80.0)</td>
</tr>
</tbody>
</table>

### Marital status

<table>
<thead>
<tr>
<th>Status</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>11</td>
<td>(32.6)</td>
</tr>
<tr>
<td>Single</td>
<td>20</td>
<td>(43.5)</td>
</tr>
<tr>
<td>Widow</td>
<td>11</td>
<td>(23.9)</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>(41.7)</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>(41.7)</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>(16.6)</td>
</tr>
</tbody>
</table>

### Race

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malay</td>
<td>33</td>
<td>(71.7)</td>
</tr>
<tr>
<td>Chinese</td>
<td>9</td>
<td>(19.6)</td>
</tr>
<tr>
<td>Indian</td>
<td>4</td>
<td>(8.7)</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>(63.9)</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>(30.6)</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>(2.8)</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>(16.6)</td>
</tr>
</tbody>
</table>

### School qualification

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>never go to school</td>
<td>18</td>
<td>(39.1)</td>
</tr>
<tr>
<td>up to standard six</td>
<td>25</td>
<td>(54.3)</td>
</tr>
<tr>
<td>Lower certificate</td>
<td>3</td>
<td>(6.5)</td>
</tr>
<tr>
<td>Others – certificate</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>(50.0)</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>(33.3)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>(5.6)</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>(11.1)</td>
</tr>
</tbody>
</table>

### Duration in institution

<table>
<thead>
<tr>
<th>Duration</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 36 months</td>
<td>41</td>
<td>(89.1)</td>
</tr>
<tr>
<td>37 to 72 months</td>
<td>4</td>
<td>(8.7)</td>
</tr>
<tr>
<td>73 to 180 months</td>
<td>1</td>
<td>(2.2)</td>
</tr>
<tr>
<td>181 to 144 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>145 to 180 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration median (IQR)</td>
<td>26.0</td>
<td>(13.50-45.25)</td>
</tr>
<tr>
<td></td>
<td>32.0</td>
<td>(12.25-58.75)</td>
</tr>
</tbody>
</table>

### Number of health problem

<table>
<thead>
<tr>
<th>Health Problem</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>no health problem</td>
<td>12</td>
<td>(26.1)</td>
</tr>
<tr>
<td>1</td>
<td>16</td>
<td>(34.8)</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>(26.1)</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>(13.0)</td>
</tr>
</tbody>
</table>

### Number of family members or friend who keep in touch

<table>
<thead>
<tr>
<th>Number of Family Members or Friends</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No one</td>
<td>20</td>
<td>(43.3)</td>
</tr>
<tr>
<td>1 – 5</td>
<td>18</td>
<td>(39.1)</td>
</tr>
<tr>
<td>6 – 10</td>
<td>7</td>
<td>(15.2)</td>
</tr>
<tr>
<td>11 – 15</td>
<td>1</td>
<td>(2.2)</td>
</tr>
</tbody>
</table>

### Reason for admission

<table>
<thead>
<tr>
<th>Reason for Admission</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self- admission</td>
<td>10</td>
<td>(21.7)</td>
</tr>
<tr>
<td>Admitted by others</td>
<td>20</td>
<td>(43.5)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reason for Admission</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20</td>
<td>(43.5)</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>(47.2)</td>
</tr>
</tbody>
</table>

### Number of family members or friend who keep in touch

<table>
<thead>
<tr>
<th>Number of Friends</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No one</td>
<td>20</td>
<td>(43.5)</td>
</tr>
<tr>
<td>1 – 5</td>
<td>18</td>
<td>(39.1)</td>
</tr>
<tr>
<td>6 – 10</td>
<td>7</td>
<td>(15.2)</td>
</tr>
<tr>
<td>11 – 15</td>
<td>1</td>
<td>(2.2)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reason for Admission</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self- admission</td>
<td>10</td>
<td>(21.7)</td>
</tr>
<tr>
<td>Admitted by others</td>
<td>20</td>
<td>(43.5)</td>
</tr>
</tbody>
</table>
Table 5.2: Characteristics of the participants in Experiment and Control Groups.

The Interest Checklist v6.1 (Heasman and Brewer, 2008) was used to identify the residents’ future interests and degree of attraction towards the interests. The results shown in Table 5.3 indicate that there is occupational deprivation and need for the elderly people to engage in occupations. The complete result of the interest checklist is in Appendix 5.1

<table>
<thead>
<tr>
<th>No</th>
<th>Category</th>
<th>Past (n)</th>
<th>%</th>
<th>Present (n)</th>
<th>%</th>
<th>Future (n)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Health and fitness</td>
<td>68</td>
<td>82.9</td>
<td>25</td>
<td>30.5</td>
<td>72</td>
<td>87.8</td>
</tr>
<tr>
<td>2</td>
<td>Sports</td>
<td>17</td>
<td>20.7</td>
<td>0</td>
<td>0.0</td>
<td>53</td>
<td>64.6</td>
</tr>
<tr>
<td>3</td>
<td>Creative</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>2.4</td>
<td>10</td>
<td>12.2</td>
</tr>
<tr>
<td>4</td>
<td>Productivity / work</td>
<td>62</td>
<td>75.6</td>
<td>2</td>
<td>2.4</td>
<td>15</td>
<td>18.3</td>
</tr>
<tr>
<td>5</td>
<td>Leisure</td>
<td>68</td>
<td>82.9</td>
<td>57</td>
<td>69.5</td>
<td>76</td>
<td>92.7</td>
</tr>
<tr>
<td>6</td>
<td>Social</td>
<td>62</td>
<td>75.6</td>
<td>0</td>
<td>0.0</td>
<td>62</td>
<td>75.6</td>
</tr>
<tr>
<td>7</td>
<td>Outdoor</td>
<td>75</td>
<td>91.5</td>
<td>3</td>
<td>3.7</td>
<td>68</td>
<td>82.9</td>
</tr>
<tr>
<td>8</td>
<td>Education</td>
<td>65</td>
<td>79.3</td>
<td>5</td>
<td>6.1</td>
<td>45</td>
<td>54.9</td>
</tr>
<tr>
<td>9</td>
<td>Religious</td>
<td>64</td>
<td>78.0</td>
<td>20</td>
<td>24.4</td>
<td>65</td>
<td>79.3</td>
</tr>
<tr>
<td>10</td>
<td>ADL activities</td>
<td>82</td>
<td>100.0</td>
<td>15</td>
<td>18.3</td>
<td>59</td>
<td>72.0</td>
</tr>
<tr>
<td></td>
<td>TOTAL (%)</td>
<td>82</td>
<td>100.0</td>
<td>82</td>
<td>100.0</td>
<td>82</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 5.3: Result of the Interest Checklist pre intervention

5.2 Pre intervention qualitative descriptive analysis

5.2.1 Characteristics of the participants in pre intervention focus groups.

The median (IQR) age for participants in the pre intervention focus group are 74.5 (65.0-80.0) and the median (IQR) duration of living in the institute is 25.6(20.5-50.5). Eight of the participants did not have contact with family members or friends,
whilst, three participants have frequent contact with family members. Most of the participants do not have major medical problems. The common medical problems are diabetic, hypertension and pain associated with the muscular-skeletal system. One male participant had a history of CVA’s and one female participant is HIV+. The characteristics of the participants are in Appendix 5.2.

5.3 Post intervention descriptive analysis

5.3.1 Demographic information post intervention

After six months of the 3LP, 76 participants completed the research programme. Four male participants in experimental group had died and two male participants in the control group had died. Therefore, total participants for the experimental group are 42 and participants for control group are 34 respectively as shown in Figure 3.4 in Chapter 3.

5.3.2 Changes in occupational pattern for participants in experimental group post intervention

The meaningful occupations engaged in by the participants in the experimental group was divided on the basis of occupational performance areas, i.e. ADL, work and leisure occupations aligned with areas in occupation as outline by American Occupational Therapist Association (2008).

Activities of daily living (ADL) are the occupation most engaged by the participants in the experimental group, followed by leisure occupation and work related occupations. Analysis indicated that the 73.9% (n=34) of the participants in the experimental group engaged in ADL and the activity contributed to 57.1% (n=97) of the total occupation. Leisure related occupations were engaged in by 58.7% (n=27 participants) and these occupations contributed to 30.0% (n=51) of the total occupations. The least common occupation engaged by the participants was work related occupation, as shown in Table 5.4.
Further analysis on each activity engaged in by the participants indicated that the most frequent activity is indoor activities such as bingo, snakes and ladders, ‘congkak’, ‘dam Haji’ and other board games. These activities were engaged in by 25 participants (59.5%), followed in frequency by individual and group exercises (42.9%, n=18) and religious related occupation such as attending religious classes (40.5%, n=17) as shown in Appendix 5.3. A description regarding participants who did not responded well to intervention is in Appendix 5.4.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Groups</th>
<th>ADL</th>
<th>Work</th>
<th>Leisure</th>
<th>Total occ. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N (%)</td>
<td>f (%)</td>
<td>N (%)</td>
<td>f (%)</td>
</tr>
<tr>
<td>Male</td>
<td>60-75 year old</td>
<td>9 (19.6)</td>
<td>28 (58.3)</td>
<td>6 (13.0)</td>
<td>8 (16.7)</td>
</tr>
<tr>
<td></td>
<td>(n=13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Above 76 year old</td>
<td>12 (26.1)</td>
<td>33 (62.3)</td>
<td>6 (13.0)</td>
<td>6 (11.3)</td>
</tr>
<tr>
<td></td>
<td>(n=15)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>60-75 year old</td>
<td>11 (23.9)</td>
<td>34 (52.3)</td>
<td>7 (15.2)</td>
<td>8 (12.3)</td>
</tr>
<tr>
<td></td>
<td>(n=12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Above 76 year old</td>
<td>2 (4.3)</td>
<td>2 (50.0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td></td>
<td>(n=6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOTAL (n=46)</td>
<td>34 (73.9)</td>
<td>97 (57.1)</td>
<td>19 (41.3)</td>
<td>22 (12.9)</td>
</tr>
</tbody>
</table>

f = frequency of occupations conducted, N = number of participants engaged in the occupation, ADL = Activities of Daily Living

Table 5.4: Summary of number of occupations conducted; based on gender and age groups for the experimental group
5.4 Post intervention qualitative descriptive analysis

5.4.1 Characteristics of participants in the experimental groups

There were 23 participants who participated in the post experimental focus groups. Most of the participants have health problems such as diabetes, hypertension, chronic obstructive pulmonary disease (e.g. bronchitis), arthritis and pain in the muscular-skeletal system. The brief characteristics of the participants and changes in occupation pattern in the post experimental focus groups are in Appendix 5.5.

5.5 Discussion

The majority of the participants (82.9%) were re-located by other people such as officers from the Department of Social Welfare, Malaysia which indicates that they had been living in an impoverished environment with lack of social support and income prior to relocation. Previous studies indicate that the level of income amongst elderly people in Malaysia is low, due to low level of education and most have to depend on their children (Masud et al. 2006; Masud and Haron, 2008). There is a similarity with previous Eastern literature regarding the reason for relocation to elderly institutions. Countries such as Hong Kong, Taiwan and Egypt indicated that living alone and lack of social support are the main reasons for relocation (Kwok, et al. 1998; Liu and Tinker, 2001; Shyu and Lee, 2002; Boggatz et al. 2009; Wu et al. 2009; Chang and Schneider, 2010), in addition to other factors which is similar in Western literature which indicates that deterioration in health status affects the ability to be independent (Dellasega and Mastrian, 1995; Rodgers, 1997; Penrod and Dellasega, 1998; Luppa et al. 2010). Living in the impoverished environment could have relationship with low level of education.

The majority of the participants have a low level of education which affects their ability to read and write in Bahasa. However, some of the Malay elderly people were able to read and write in Arabic. This reflects the history of the country and living environment where they lived when they were young adults. All of the
participants come from rural areas and where informal education is obtained from Sekolah Pondok (Hut School) at local little mosque (Madrasah) (Misriaton, 1986; Shaharuddin, 1992; Wikipedia, 2009). Secular schools initiated by the British prior to independence in 1957 are mostly located in urban areas. They are for elite groups and use English as the medium of instruction. This puts the people who are poor and rural people at a disadvantage (Han, 2008). Furthermore, there is a traditional belief that the role of women is to look after the family (Yan, 2004; Kalthom, Noraini and Saodah, 2008) with subsequent inequality in education between man and women prior to the independence of the country (Jacobs, 1996; Pong, 1999; Masud et al. 2008; Masud and Haron, 2008). As in previous studies amongst elderly people in Malaysia many of participants of this study did not go to school or have a good level of education, especially the females, (Masud and Haron, 2008; Masud et al. 2008; Zaiton, Sazlina and Renuka, 2009). These historical circumstances would contribute to the results obtained regarding the educational background of the participants.

42 (51.2%) of the participants did not maintain connections with their family. Loss of social connection as a result of re-location to an elderly institution or decreased visitation is frequently described in both Western and Eastern literature (Barry and Miller, 1980; Pott et al. 2001; Yamamoto-Mitani et al. 2002; Gueldner et al. 1992; Cheng et al. 2010). Loss of connection could be due to lack of resources (Chen, 2010) such as public telephone and the institutional rules that do not allow the residents to carry a mobile phone. Furthermore, literature from Eastern countries indicates that there are elderly people who choose to sever ties with children as a result of feeling humiliated and abandoned and choose to emotionally detach themselves from their children (Lee et al. 2002; Cheng and Chan, 2006; Cheng, 2009).

There is a clear indication that the participants were deprived of occupation. The modified Interest Checklist (Heseman and Brewer, 2008) indicated the most of the daily occupation in the past (prior to re-location to the institute) were not continued when the participants were in the institute. This finding supports previous findings that indicate lack of meaningful occupation in elderly institutions and loss of
opportunity to continue occupations after re-location to the institution (Perkins et al. 1993; Nolan et al. 1995; Abbot, et al, 2000; Green and Cooper, 2000; Mozley, 2001; Ice, 2002; Hancock et al. 2006; Kolanowski and Litaker, 2006; Holthe et al. 2007; Harmer and Orrell, 2008; Chuang and Abbey, 2009; Cook and Stanley, 2009).

However, the participants expressed the need to engage in various occupations in the future. For example, results from Interest Checklist indicated more than 80% of the participants in the experimental group want to engage in leisure and social related occupations inside and outside the institute, 56.5% (n=26) want to engage in daily individual exercises and 76.1% (n=35) want to engaged in religious related occupation. These findings suggests that hopes are high and desire still exists amongst the participants in spite of adversities of living in the institution, which is similar to those in the work of Touhy (2001), Westburg (2003) and Duggleby and Wright (2005) who stress that hopes is one of the coping resources amongst older adults with various adversities in life. Furthermore, this finding is supported by the Continuity theory (Atchley, 1989) which explains that elderly people wish to maintain previous roles and engage in occupation in spite of obstacles and constraints in life to maintain a sense of continuity.

Analysis of the types of the occupation engaged after the intervention shows that there is similarity with the result of the interest checklist. The result of the checklist indicated that 87.0% (n=40) want to engage in leisure occupations in the future and the occupation engaged after the intervention indicated that the leisure occupation was engaged by 81.0% (n=34) of the participants in the experimental group. This finding is similar to those in previous studies which indicate that leisure occupations are the most occupations engaged in by elderly people in the community (Menec, 2003; Haggblom-Kronlof and Sonn, 2006; Chilvers, Corr and Singlehurst, 2010). The finding indicates that the participants want to continue their daily occupation prior to re-location and indicates the need to have autonomy in conducting daily occupations. In addition, occupations related to leisure may be perceived as
occupations that will provide them with various benefits, such as health and fitness, social interaction and a sense of control.

The benefits of engagement in occupation (as planned in 3LP) can facilitate changes in future expectations towards ageing, self-efficacy and quality of life and the ideographic experience with engagement will be described in the next chapter.
5.6 Summary points for Chapter 5

- Characteristics analysis of all of the participants indicated that most of the participants are male (68.3%, n=56), above 75 year old (83.0%, n=68) with median age (IQR) of 76.0(65.0-83.0) year old, are Malay (68.3%, n=56), never completed secondary school (95.0%, n= 78), have lived in the institution for more than three years (74.0 months (68.0-80.0)), have at least one health related problem (74.4%, n=61), have no contact with family members (51.2%, n=42) and were relocated to the institution due to inter-related factors which incline towards lack of financial and social support.

- Modified interested check lists (Heasman and Brewer, 2008) shows that the participants in the study want to engage in various occupations like the occupations prior to relocation which is related to their roles in life. However, most of the occupations, like leisure related occupations were not engaged in by the residents and the residents often engaged in passive leisure occupation. This shows that the participants are deprived in occupation opportunity.

- There are 42 participants in the experimental group and 36 in the control group after randomisation using random allocation software (Saghaei, 2004), A Mann Whitney u test indicated that there is no significant difference in demographic characteristics such as sex, age, race, duration in institution, school qualification, reasons for admission between participants in the control and experimental groups which indicates that the groups are comparable. Twenty participants consented to take part in pre experimental focus groups; interviews were stratified according to gender and age to ensure representation.
• Participants in the experimental group were assigned to 3LP, whilst participants in control group participated in the ‘in-house’ programme.

• After six months, 76 participants completed the intervention. Four participants from the experimental group and two participants in control group had died.

• Results from an interest checklist indicated that there are changes in occupational pattern amongst participants in the experimental group. The participants mostly engaged in ADL related occupations and work related occupations. Female participants aged between 60 to 75 year old engaged more in ADL occupations compare to male and other age groups.

• Occupations engaged in mostly are occupations that were similar to occupations conducted prior re location which suggests the need for continuity in life.

• 23 participants participated in the post experimental focus groups and most of those are the participants of the pre experimental focus groups. The participants are stratified according to gender and age groups.
CHAPTER 6:

OVERVIEW OF THE QUALITATIVE FINDINGS
6.0 Introduction

This chapter will provide an overview on the qualitative findings for the pre and post 3LP.

Qualitative analysis indicates that there are similar and overlapping themes emerging from the three domains investigated i.e. ERA, GSE and QoL. Overlapping themes often occur in studies regarding people’s experience (e.g. Boyle, 2005; Corbally et al. 2007; Marriott and Thompson, 2008). Furthermore, overlapping and inter-related themes are expected as there are relationships between the domains in the participants’ life, either direct relationships, for example a positive relationship between quality of life and self-efficacy. The relationship is mediated by other factors like health, engagement in occupations, social support or a supportive environment. For example, engagement in leisure occupations or the availability of social support facilitates life satisfaction, which subsequently facilitates enhancement in quality of life.

This chapter will present all of the overlapping themes in the pre and post experimental periods that emerged after analysis with IPA. Distinctive themes and themes shared with other domains will be presented in the chapter that discusses the domain.

6.1 Themes emerging from pre intervention focus groups

Analysis of the focus groups indicated that there are many preliminary themes that overlapped (provide similar meaning) subsequently, the preliminary themes that overlapped or were possibly similar were merged (or clustered) to become subthemes or master themes aligned with stage 4 in IPA.

The subthemes for all of the pre experimental focus groups are presented in Figure 6.1. The figure shows the continuum of themes that are intertwined and connected with each other within the three domains in the participants’ life; i.e. ERA, GSE and
QoL. The themes are taken from word repetition techniques (Ryan and Burnard, 2007) or constructed by the method suggested by Smith, et al. (2009) from the themes that are identified in left margin of the transcripts.

Area 1 indicates preliminary themes that are related to coping experiences used by participants whilst Area 2 indicates preliminary themes that are related to negative experiences in relation to the domains investigated. However, these two areas are inter-related to form an overall experience within the three domains of the participants’ lives.

The overlapping, subthemes that supported each other were collapsed to form master themes. Master themes were clustered together to form a higher order of themes (super-ordinate themes).

**AREA 1 : Coping experiences**

**AREA 2: Negative experiences**

*Italic = words in Bahasa*

**Figure 6.1: The continuum of subthemes emerged and linkages in the pre experimental phase for all groups**
6.1.1 Pre experimental master themes and super-ordinate themes

After stage 6 of IPA’s (searching for similarity of themes across groups), three super-ordinate themes emerged; Apprehension and distress, adjustment and adaptation, future hopes and wishes. Each super-ordinate theme consisted of two master themes as shown in Figure 6.2. These super-ordinate themes and master themes are shared and overlap within the three domains in the participants’ lives.

Figure 6.3 shows that there are themes that are shared amongst the domains investigated. However, there are some themes (master themes and sub-themes) that are distinctive to each domain. Themes that are shared and that are distinctive will be presented in the chapter that discusses the domains.

For example, in super-ordinate theme 1: Apprehension and distress. In master theme 1 (external issues) all of the subthemes such as cultural values and norms, rules and regulations, expectation towards others are exclusive to GSE and not shared with any other domain. Similarly, in master theme 2 (internal issues) the subtheme, doubt towards personal abilities, is exclusive to GSE and it is not shared with other domains. However, in Super-ordinate theme 2 (adjustment and adaptation) in master theme 2 (acceptance \(\text{(Redha)}\)) the subthemes ‘\textit{dah nasib}’ \(\text{(it is my fate)}\) in ERA is shared with GSE and QoL. This indicates that sub themes overlap and are shared within the study measures.
Figure 6.2: Super-ordinate themes and master themes in the pre experimental phase
Figure 6.3: Themes shared amongst the domains in the pre experimental phase

ERA = expectations regarding ageing, GSE = General self-efficacy, QoL = quality of life, *Italic* = words in Bahasa
6.2 Themes emerged from post intervention focus groups

A similar process of clustering overlapping or similar theme was conducted in the pre experimental stage. Figure 6.4 shows the continuum of themes that intertwine and are linked to each other in describing the experience and meaning for the participants who participated in 3LP. Themes that supported each other, overlapped or connected were collapsed to form master themes. As above, master themes were clustered together to form super-ordinate themes.

Figure 6.4: The continuum of subthemes emerged and linkages in the post experimental phase for all groups

6.3 Post experimental master themes and super-ordinate themes

In the analysis of post intervention focus groups one superordinate theme emerged. The participants described their experience as ‘being able to’ which indicates changes that occurred in their life after participating in 3LP. Six master themes emerged from the analysis and showed themes are inter-related and the themes are

*Italic = words in Bahasa*
shared between domains in the participants’ lives. However, there are some themes that are distinctive to each domain. The themes that are shared and the distinctive themes will be presented in the chapter that discuss the domain. Figure 6.5 shows all of the themes that are clustered. Figure 6.6 shows the themes in each domain investigated.
 CHAPTER 6

Super-ordinate Theme:
‘Being able to’
(Changes in life)

Master theme 1:
‘I am busy’
1. Variations of occupations in daily life.
2. Meaningful occupations (like home)

Master theme 2:
‘I can’
1. ‘Tak sangka’ (unexpected), Changes in physical abilities and connection with other people.
2. Sense of confidence
3. Sense of freedom
4. Independent
5. Help other residents.
6. Better sleeping pattern

Master theme 3:
‘I know / I have’
1. Knowledge and awareness

Master theme 4:
‘Next week’
1. Plan for future.
2. Hopes and direction in life
3. Purpose in life

Master theme 5:
‘I feel’
1. Positive affect – Happy, loved, satisfied, great *(like young man again!)*
2. ‘Syukoor’ (contentment)
3. At peace and ‘ready to die’
4. Motivated
5. Sense of security
6. In control

Master theme 6:
‘I want’
1. More benefit
2. Facilities and opportunity.

Italic = words in Bahasa

Figure 6.5: Themes emerged in the post experimental phase

255
Super-ordinate Theme:
‘Being able to’ (Changes in life)

Master theme 1: ‘I am busy’
- QoL: Variations of occupations in daily life.
- Meaningful occupations (like home)

Master theme 2: ‘I can’
- ERA: ‘Tak sangka’ (unexpected). Changes in physical abilities and connection with other people.

Master theme 3: ‘I know / I have’
- GSE: Knowledge and awareness.

Master theme 4: ‘Next week’
- ERA: Plan for future. Hopes for future

Master theme 5: ‘I feel’
- GSE:Motivated Confident

Master theme 6: ‘I want’
- ERA: More benefit Facilities and opportunity.

Sub-themes
- QoL: ‘Tak sangka’ (unexpected). Changes in physical abilities
- QoL: Sense of freedom
- Better sleeping pattern
- Independent
- Helping other residents.
- GSE: Knowledge and awareness.
- QoL: Meaningful relationship.
- QoL: Plan for future Direction in life
- QoL: Purpose in life
- GSE Plans for future Direction in life
- GSE: Purpose in life

ERA = expectations regarding ageing, GSE = General self-efficacy, QoL = quality of life, *Italic* = words in Bahasa

Figure 6.6: Themes shared amongst domains in the post experimental phase.
6.4 Conclusion

Analysis of focus groups is a complex processes that require intensive engagement with the data. Pre and post focus groups in this study showed that there are many overlapping, and similar sub themes that are alike and the themes are connected to each other. There are also themes that are distinctive to a particular domain.

Themes that are shared and distinctive themes will be presented in each chapter that are presented according to the domain investigated.

The participant’s names for the selected quotes were not used for the purpose of protecting anonymity and were replaced by pseudo-name throughout the study.
6.5 Summary points of chapter 6

- Analysis of qualitative data is a complex process and very often overlapping themes will emerge especially if there are many issues investigated and if the objectives of the focus groups is to identify participants’ experiences.

- Analysis of the pre and post experimental focus groups indicated that the preliminary themes are scattered across each transcript, inter-related within and between focus groups.

- Analysis of comments (descriptive, theoretical, metaphoric and conceptual) formed preliminary themes.

- Preliminary themes that are overlapped, or were possibly similar were merged to become subthemes or master themes aligned with the method of analysis as suggested for IPA studies.

- Individual master themes were clustered to form a higher order of themes (super-ordinate themes).

- At the end of data analysis in IPA, three super-ordinate themes emerged for pre experimental and one super-ordinate theme for the post experimental focus groups. The master themes and sub themes, shared or distinctive to each domain investigated, will be explored in detail in the chapter designated specifically to the domain.
CHAPTER 7:

EXPECTATIONS REGARDING AGEING (ERA) – RESULTS, FINDINGS AND DATA INTEGRATION
7.0 Introduction

This section will present the quantitative results and the qualitative findings for pre and post intervention of the 3LP for ERA. The qualitative findings will complement the quantitative results to provide an overall and broad picture of the study, a benefit of the mixed methods and the study design, i.e. a concurrent embedded experimental mixed model design, as suggested by Creswell and Plano Clark (2007) and Leech and Onwuegbuzie (2009). Pre and post results and findings will be integrated to form a meta-inference and will be presented in the discussion section.

7.1 Quantitative and qualitative data integration from pre 3LP

7.1.1 Pre 3LP quantitative results

While results indicated that median scores for total ERA for the control group are higher compared to the median of the participants in the experimental group as shown in Table 7.1, the Mann-Whitney U test revealed that there is no significant difference in the total scores of ERA between the experimental group (Md = 30.6, n = 46) and the control group (Md = 33.3, n = 36), U = 689.0, z = -1.30, p = 0.19, r = 0.14) and other domains in ERA as the p value for all domains are above 0.05. This result suggests that the groups are comparable. The box plot indicates that the scores are in the range of 50 to 75 per cent with no outliers or extreme values as shown in Figure 7.1. Overall, the expectations towards future orientation in life amongst the participants in both groups are between low and medium.

The scores in the ERA physical domain indicate the lowest expectations, with median scores (IQR) of 25.00 (14.58-33.33) in the experimental group and 25.00 (10.42-33.33) in the control group. The result indicates that the participants in both groups are expecting the same high deterioration in physical function more than the cognitive and mental health domains in ERA scale.
<table>
<thead>
<tr>
<th>No</th>
<th>ERA Domains</th>
<th>Groups</th>
<th>Md (IQR)</th>
<th>(n)</th>
<th>u</th>
<th>Z</th>
<th>p</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Physical scores</td>
<td>E</td>
<td>25.00 (14.58-33.33)</td>
<td>46</td>
<td>-0.37</td>
<td>0.71</td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>25.00 (10.42-33.33)</td>
<td>36</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Mental scores</td>
<td>E</td>
<td>33.33 (31.24-43.75)</td>
<td>46</td>
<td>725.0</td>
<td>-0.98</td>
<td>0.33</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>41.67 (25.00-50.00)</td>
<td>36</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Cognitive score</td>
<td>E</td>
<td>33.33 (16.67-41.67)</td>
<td>46</td>
<td>677.0</td>
<td>-1.42</td>
<td>0.15</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>33.30 (25.00-50.00)</td>
<td>36</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Total ERA</td>
<td>E</td>
<td>30.50 (19.44-36.11)</td>
<td>46</td>
<td>689.0</td>
<td>-1.30</td>
<td>0.19</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>33.33 (22.22-44.44)</td>
<td>36</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

E = Experimental Groups, C=Control groups, ERA = Expectations Regarding Ageing, Md=Median, IQR = Interquartile range, n = number of participants, d = effect size, u – Mann-Whitney u test, Z = Z scores, p = probability.

Table 7.1: Result of pre-intervention ERA and differences between groups

Figure 7.1: Box plot distributions between experimental groups and control group in total ERA scores
7.1.2 Pre 3LP qualitative findings

Two super-ordinate themes emerged from the 3LP focus groups, i.e. adjustment and acceptance and future hopes and wishes. The master themes within the super-ordinate themes consist of two sub-themes; ‘biasalah …’ (it is normal) and ‘dah nasib’ (it is my fate) as shown in Figure 7.2.

\[\text{Figure 7.2: Themes from pre intervention focus group}\]

7.1.2.1 Super-ordinate theme 1: Adjustment and adaptation

Low expectations towards health and wellbeing were often expressed in the pre-experimental focus groups. The participants provide an ideographic experience regarding the physiological changes affecting their functional ability and deterioration in expectations towards future orientation in life. The challenges in speed and proficiency in engaging with daily activities, pain and aches in the muscular-skeletal system, deterioration in endurance and sensory function are repeatedly described by the participants.
However, analysis from pre experimental focus groups indicated that the participants have already adjusted and adapted to the changes, which provide sense of acceptance. The participants described the experience of deterioration in health function as a part of the ageing process and considered that as ‘biasalah’. ‘Biasalah’ is a Malay word that means ‘it is normal’. In addition, the participants described the physiological changes as ‘dah nasib’ (it’s a fate).

For example, the experience was illustrated by Mr Abu, an 86 year old man. He revealed:

*It is ‘biasalah’, having pain here and there, having diabetes, we are old people. I can accept the changes, what to do? it is my ‘nasib’ (fate). Before, I could run but now, I can only walk slowly [pause], my knees are really painful when I am walking, so I have to walk slowly.*

Another participant, Mr. Ramli, a 65 year old male illustrated the physiological changes in a metaphoric way. He said:

*everything in this world has its contradiction, contrary to young is old, contrary to live is to die, contrary to strong is weak, contrary to rich is poor. Everything has its limits. It is ‘biasa’ (normal) process in life, it is unavoidable. I cannot do anything about it; it is a ‘takdir’ (a destiny) that was determined for us ‘azali’ (before birth).*

Another participant described the changes in their living environment and considered the changes as fate. Furthermore, participants accept the conditions and acclimatise the new environment by establishing close relationship with inmates or staff to accept the situation. For example, Mrs. Zabedah, an 86 year old female said:

*‘it is our ‘nasib’, (fate) we have to accept it whether we like it or not. It was determined that I have to live here, probably until I die. It is ok, I have many close friends here, I have my daily meals, and the staff here are good to me [pause] although I do miss my children very often. I think of all the staff here as my children.*
7.1.2.2 Super-ordinate theme 2: Future hopes and wishes

Various wishes, hopes and expectations also emerged from analysis of the pre experimental focus groups as shown in Figure 7.2. Two master themes emerged from this super-ordinate theme, i.e. Future wishes for variation in daily life and future wishes for general health and wellbeing, future health wishes, social expectations and occupational expectations. The participants’ health wishes consist of wishes for good physical, mental and social function in the future.

Master theme 1: Variations in daily life

Hopes and wishes to have variety in daily life and be given the opportunity to perform various occupations were expressed frequently by participants. The participants described various occupational expectations which they hope to be able to perform in the future. Most of the expectations to engage in occupations are related to experience and previous roles in life, such as a housewife or as paid employees. Mrs Hitam, a 71 year old widow stated:

“I wish they would allow me to cook my own food, I really want to cook a nice ‘nasi lemak’ (coconut rice), it has been so since I cooked for myself. I am not sure whether I can cook anymore [pause], probably I have lost my skills. The food here is ok, but it is not as good as my cooking, I think I can cook better than the chef here. It is so tasteless’

Mr Yaacon Arif, a 68 year old man illustrated his expectations by describing his experience in daily occupations prior to being admitted to the institute. In addition, he was making a comparison between his previous occupations and those in his current living situation.

“At home, I lived in rural area, I used to do many types of work, from sunrise until sundown, to get some money, I felt tired but I felt healthy, I frequently perspired a lot, I think that is healthy, I felt ‘light [pause] but in here I do not do anything, I sleep all day while waiting for the sirens, then rest again [pause] I feel unhealthy. I think it is good if I can do some work [pause] whatever work, I don’t mind [pause]. It is good if I could get some money, I don’t have to wait for visitors to give money to me”
CHAPTER 7

The institutional regulations have an impact on the participants’ autonomy to exercise independence and go outside the institute compound; which limits exposure the surrounding environment. This was illustrated by Mrs. Mariam, she said:

“I wish they would allow us to go outside, just to walk around the shops [pause], don’t worry [pause] I will not run away, I don’t have anywhere else to go, I don’t have money to get a taxi to go home and I don’t know how. I feel like ‘katak bawah tempurung’ (a frog under a coconut shell), I don’t know what happens outside the gate”

Participants in the study also described their wishes to re-establishing relationship with their children and their love ones. One of the participants described his feelings and expectations towards his children. He said:

“I really wish that I could speak with my children. They seldom come, and I don’t know what is happening to them [pause], are they doing well [pause], how are my grandchildren, I really miss them, I don’t have phone to call them [pause]”

Master theme 2: General health and wellbeing.

Wishing for good health was frequently expressed by many participants. Future health wishes expressed by the participant’s implies that the participants are wishing to have good health in the future thus they will be able to perform daily occupations in a proper way, in spite of expecting deteriorations in health conditions as indicated in the first theme. For example, Mr Suhaimi, 85 year old man described his health wishes:

“I hope in the future, I will be physically healthy, as now, [pause] to be able to walk without walking sticks or wheelchair, and not just lie in bed waiting to die like some people, and I hope I will not be a ‘crazy’ person”

Religious related expectations are the central to all health expectations. Participants of the study were hoping to have the opportunity to attend religious related occupations such as religious classes. This clearly was describes by Mrs. Sarema, an 80 year old female.
“I am old, I am not sure when I am going to die [pause], may be tomorrow [pause], I just hope that I will be healthy in the future, so I could have the opportunity to get more religious knowledge [pause], to be able to pray in a proper way [pause], so I can die in peace”

7.1.3 Discussion and data integration pre 3LP for ERA

7.1.3.1 Introduction

This section will discuss the data obtained from quantitative results and qualitative findings from scores in ERA questionnaires and themes that emerged from pre intervention focus groups. The results and the findings will be integrated. In this way, the overall and broad picture of the phenomena under study will be obtained (Tashakkori and Teddlie, 2003; Creswell et al. 2003; Creswell and Plano Clark, 2007).

Results from pre intervention indicated that there is no significant differences in scores of ERA between the experimental group and the control group in total ERA and in all domains of ERA, which indicated that the group and the mean scores for total ERA for all participants are 31.37(14.11). To date there is no study that has been conducted in Malaysia and there is no study on ERA that have been conducted in elderly institution using ERA-12, thus comparison will be made with ERA scores’ from community dwelling elderly people in Western and Eastern countries.

7.1.3.2 Discussion

Pre intervention results indicate that the total scores in ERA and the scores in the domains of ERA are lower than in previous studies amongst elderly people in the community (Sarkisian et al. 2005; Baird et al. 2009), lower than younger people in Singapore (Joshi et al. 2010) and health professionals (Davis et al. 2011). However, the scores are higher than community elderly people in Korea (Kim, 2009). A brief
description of the ERA scores is in Appendix 6.1. The results indicated that there are demographic characteristics and cultural factors that influence the ERA scores.

Deterioration in physical, mental and cognitive domains of ERA are expected amongst participants in the study, with lowest expectations towards physical function. These findings support previous work by Sarkisian, et al (2001; 2005), Jang, et al. (2004) and Kim (2009) who found that low expectations especially in the physical health domain are frequently expressed by elderly people in the community. Deterioration in health makes elderly people perceive their health status poorly, which subsequently leads to low perception towards ageing. These findings also suggest that low expectations towards ageing are common amongst elderly people regardless of where the elderly people live.

Pre experimental qualitative findings indicated that the deterioration was perceived as ‘biasa’ (normal) and a part of ageing process. Furthermore, the participants’ belief that the deterioration in the domains in ERA is ‘nasib’ (fate) and it is ‘takdir’ (destiny) that they have to live in the institute away from their children and family.

There are two inter-related factors that contribute to low expectations. The factors are:

a. Demographic characteristics of participants.

b. Religious and cultural core value of the participants.

a. **Demographic characteristics of participants**

Literature indicates that demographic characteristics such as an old age, low level of education, low quality of life, poor health and poor social support contribute to low expectations towards the future (Zorn, 1997; Sarkisian et al, 2002, 2005, 2006). Similarly, the demographic characteristics of the participants in this study could contribute to the low scores. For example, 83.0% (n=68) of the participants are
above 75 years old, 74.4% (n=61) have at least one major health related problem, 89.0% (n=72) had never gone to school and 82.9% (n=68) were relocated due to socio-economical related issues. In addition, the majority of the participants come from rural areas; which impedes opportunities for education, to access health services and to obtain health information. Problems of access, financial constraints, geographical location and living alone imposes difficulties in seeking health care especially for elderly in the rural areas (Shahar et al, 2001; Kamil et al, 2002; Poi et al, 2002; Sherina et al, 2004). Subsequently, they have to seek alternative treatment from a bomoh (traditional healer) who is more accessible and affordable (Chen, 1981; Kamil and Teng, 2002).

Furthermore, most of the participants were at young age or early adulthood during the Second World War, at times of the socio-economic crisis, political instability and experienced the lack of health care provision shortly after the independence of the country in 1957. They had experienced various hardships, physical and psychological traumas in life and deprivation of basic needs. Studies indicate that the experience of trauma in war survivors had significant effect on current physiological and psychosocial functioning (Shields and Bryan, 2002; Stresssman et al. 2008). In addition, participants had to work as labourers in rubber plantations, paddy fields, in construction, fishing and the mining industry, all of which exposed them to greater risk of various musculoskeletal related injuries.

Therefore, demographic characteristics as discussed above could form low expectations towards ageing. Thus, they may perceive deterioration in health is a part of ‘normal’ in the ageing process as described by participants in pre experimental focus groups.

b. Religious and cultural core values amongst the participants

Qualitative findings pre intervention indicate that the participants have adjusted and adapted to the deterioration of health function and accepted the changes and the deterioration in health and well-being as ‘Biasalah …’ (a normal) part of ageing
process which was destined for them (‘dah nasib’ -fated to them). This is similar to findings in other studies in which elderly people consider ageing as the causal factor in deterioration in health condition (Keller et al. 1989; Williamson and Fried, 1996; Goodwin et al. 1999; Sarkisian et al. 2001). Belief in fate is common amongst people in Malaysia and is associated with its social and cultural core values. Its influence was illustrated by participants in focus groups.

Pre intervention focus groups indicated that the participants believed the deterioration in physical function was inevitable, was fated and was determined by a higher power, thus they had to accept the deterioration and surrender to fate. Belief in the power of a higher authority and fate to determine health status is similar to that seen in previous studies (Perrig-Chiello et al. 1999; Armer and Radina, 2006; Rodriguez and Young, 2006 and Tsai and Tsai, 2007). Belief in fate, karma, the will of God, that determines life courses and condition is common amongst Muslim people (Carter and Rashidi, 2003; Hodge, 2005; Small et al. 2005; Taleghani, et al., 2006; Pirani et al. 2008; Aminzadeh et al. 2009; Abdel-Khalek, 2010; Azaiza et al. 2010; Harandy et al. 2010) and Chinese people (Leung, 1996; Chung et al. 2000; Daly et al. 2002; Kong et al. 2002; Kwok and Sullivan, 2006; Tsai and Tsai, 2007; Wu et al. 2010). For example, accepting their fate to live in a residential care (Aminzadeh et al. 2009), having epilepsy (Small et al. 2005) or cancer (Taleghani et al. 2006; Harandy et al. 2010) amongst Muslim people and to cope with changes with ageing process (Chung et al. 2000), to accept palliative services (Kwok and Sullivan, 2006) and adjust to life condition (Tsai and Tsai, 2007) amongst Chinese people. Believe in fate amongst Muslim and Chinese people are described in proverbs and quotes below:

“Both riches and honours are settled by fate; their time of arrival each man must await”
- Chinese Proverb –

“When men speak of the future, the Gods laugh”
-Chinese proverbs-
Believe in fate helps the elderly people to make sense of his or her life condition (Leung, 1996), for adjustment and avoidance of disappointment (Tsai and Tsai, 2007), for acceptance and coping (Taleghani et al. 2006; Pirani et al. 2008) and for clarification of causes (Small et al. 2005; Harandy et al. 2010). Literature indicates that belief in fate (an external locus of control) is related to feelings of hopelessness and powerlessness (helplessness), especially when the situation is beyond their control (Gibson and Kenrick, 1998; Wu et al. 2004; Cheung et al. 2006; Fiori et al. 2006). Lack of an internal locus of control and feeling ‘powerless’ is often associated with institutionalised elderly people resulting from a lost sense of autonomy (Cox et al. 1991; Nystrom and Segesten, 1994; Lee, 1997; Madigan et al. 1999; Barkey and Tabak, 2002; Berglund, 2007; Brooker, 2008; Choi et al. 2008) and in elderly people who are depressed (Bramston and Tomasevic, 2001; Wu et al. 2004).

Thus, the belief in fate is postulated to produce low expectations towards ageing. However, it may help participants to adjust, to accept and cope with situations. These coping mechanism were identified in pre experimental focus groups.

Master theme 2 (Acceptance) and subthemes ‘dah nasib’ (it is my fate) indicated the mechanism used by the participants to acclimatise to the social environment and changes in lifestyle as a result of living in the institute.

Focus groups illustrated that the participants perceived the changes as a fate, passively accepted and adapted to the changes of a new environment. Passive acceptance of the living environment in elderly institution and ‘making the best out
of it’ are often described in the literature regarding elderly institutions (Kahn, 1999; Bergland and Kirkevold, 2001; Lee, 2002; Davies and Noland, 2003; Cook, 2008; Marshall and Mackenzie, 2008). Previous studies indicate that acceptance helps the elderly people to successfully adapt, cope and thrive within the new environment (Iwasiw, et al, 1996; Espejo et al. 1999; Bergland and Kirkevold, 2001; Lee et al. 2002; Hearle et al. 2005; Heliker and Scholler-Jaquish, 2006; Marshall and Mackenzie, 2008; Chuang and Abbey, 2009, Winterburn, 2009; Molony, 2010). Furthermore, acceptance and compliance with environment conditions are a part of the core values of Malaysian elderly people in order to maintain community spirit and harmonious living (Lim and Baron, 1996; Lim, 1998; Fortaine and Richardson, 2005; Mohd Yusof, 2007).

Although the pre experiment scores of ERA in both groups were low the scores were higher than the scores obtained by Korean elderly people who live in the community as the study by Kim (2009). Environment factors could contribute to the high scores of ERA in participants of the study as compared with the Korean elderly people.

There are three factors that can contribute to high expectations; i.e.

- a. The advantages obtained by living in the institution.
- b. Social relationships in the institution.
- c. Personal future hopes and wishes to engage in occupations.

   a. The advantages obtained from the institution

Environmental factors play a significant role in influencing behaviour and perception by shaping norms, providing opportunities or enforcing certain behaviour patterns (Law, 2002; McNeil et al, 2006). The high scores in ERA in this study (compared to scores in Korean elderly living in the community) are attributed to the physical and social environment of the institute. The residents in the institute could acquire health care at any time as there is a free clinic operated by two health nurses and is available 24 hours/day. In addition, any observable changes in health status can be identified.
by the staff or other residents and further health management could be given immediately. Thus, the health care benefits obtained by living in the institute are considered to produce the higher expectations regarding ageing than in the Korean elderly people.

b. Social relationships in the institution

The mental health domain in ERA scale consists of questions regarding social relationships, quality of life and perceptions towards depression. Pre intervention quantitative results shows that the deterioration in mental health (which includes social relationships) is least expected to deteriorate. This is thought to be the result of the social environment in the institution. The communal living environment, proximity and good relationships with other residents and staff could contribute to perceived low deterioration in the mental and social domain of ERA scale. Previous literature indicates that a communal living environment provides inter-dependency between residents, close social relationships and opportunity to help one another in time of need (Zaff and Devlin, 1998; Lee, 1999; Biggs et al. 2000; Cumming, 2002; Low, 2007; Taylor and Neil 2009). Privacy and individuality are perceived as less significant or unnecessary amongst institutionalised elderly people in Eastern countries (Lee, 1999; Lee, 2001; Low, 2007; Lee, 2010).

A good social environment such as a good relationship with staff and other residents contributes to positive future orientation towards life (McNeil et al. 2006). Furthermore, a good relationship with staff in the institution will provide a sense of respect, belonging to the establishment, psychological support, love and affection which eventually facilitate acceptance and adjustment to living in the institute (Bergland and Kirkevold, 2006; 2007). A good relationship is believed to be the source of the high future orientation towards mental health domain in ERA scale.

However, literature indicates that relationships between residents are primarily for adjustment, are non-meaningful relationship and are often limited to a standard pattern of communication (McKee et al. 1999; Cook et al. 2006; Chuang and Abbey,
Focus groups described the need for meaningful relationship and re-establishing social connection with family members and former friends. Although the participants are living in the institution which has many residents and provides abundant opportunity for socialisation the participants feel that they feel the lack of significant persons to whom they can relate, such as children and other loved ones. They feel that they are alone, lonely and that nobody understands them in spite of the many residents in the care home. This finding is expressed in Carstensen’s socio-emotional selective theory (Carstensen, 1992) which states that as people become older, they tend to reduce the size of their social networks, but increase the quality of relationships through the selective process of pruning and emphasis on relationships such as with family members that provide more emotional benefit.

However, literature shows that visitation from family members is often reduced or seldom occurs (Barry and Miller, 1980; Pott et al. 2001; Yamamoto-Mitani et al. 2002; Gueldner et al. 1992; Cheng et al. 2010). This contributes to loneliness and depression. Loneliness and depression occur more often in elderly people who live in institutions more than in elderly people who are in the community (Sherina, et al, 2006; Mohd Aznan and Samsul, 2007; Kim et al, 2009). Feeling alone and lonely as a result of the loss of a significant person in life due to death or re location (e.g. from community setting to an institute) are common among elderly people and the need for a meaningful relationship amongst the institutionalised elderly people are often described in the literature (Jonas-Simpson, 2006; Cheng et al. 2010; Kane, 2010).

Moreover, loss of social connection is frequently described by residents in institutional types of care for elderly people (Donnenwerth and Petersen, 1992; Kasl, 1972; Brown, 1995; Downe-Wamboldt and Tamlys, 1986; Higgs et al, 1992). Thus, it is no surprise that participants preserve the hope to re-establish connections with friends and family in spite of the constraints of the institutional such as lack of public telephone facilities and rules not allowing the resident to keep a mobile phone signifies. There is still the need to re-establish the connection with children, family and friends.
c. Future hope and wishes for occupations

Pre intervention focus groups indicated various hopes and wishes held by the participants. This finding suggest that although the elderly people have low expectations regarding ageing, they hope for better health status in the future, opportunity to engage in occupations and to re-engage in meaningful social relationships which is similar with previous findings that emphasis on the need to engage in occupations and a meaningful relationship amongst the institutionalised elderly people (Jackson, 1997; Perrin, 1997; French, 2002; Atwal et al. 2003; Wenborn, 2005; Hancock et al. 2006; Jonas-Symphson, 2006; O’Sullivan and Hocking, 2006; Berglund and Kirkevold, 2007; Haslam, 2008).

7.1.3.3 Conclusion for pre 3LP

The quantitative results indicate the participants expect deterioration in all domains in ERA scale and this can be explain by examining the demographic characteristics and cultural core values amongst participants in the study. Although they expect deterioration in ERA and accept with the deteriorations, however they hope and wish for an improvement in relations to health function and variation in daily life in the future.

7.2 Quantitative and qualitative data integration from post 3LP for ERA

7.2.1 Post 3LP quantitative results

The Mann-Whitney U test in Table 7.2 shows the statistical significance differences between the experimental group and control group (p<.05) in total ERA, in the physical and mental domains of ERA’s. However, there is no significant differences in cognitive domain (p>0.14).
Table 7.2: Results of ERA post intervention and differences between groups

Wilcoxon Signed Rank Test revealed a statistically significant increment in overall expectation regarding aging following participation in the 3LP programme, \( z = -5.01, p < .01 \), with medium effect size \( (d = 0.57) \). The median score for overall expectation regarding ageing increased from pre intervention (Md = 30.50) to post intervention (Md = 47.22) as shows in Table 7.3. Whilst there are no significant changes in the control group, \( z = -0.04, p > .05 \). Analysis on the median differences for the experimental group indicated that the highest changes occurred in physical and mental domain.
Therefore, it is concluded that participation in 3LP significantly improves expectations towards ageing as measured by ERA scale.

<table>
<thead>
<tr>
<th>ERA domains</th>
<th>Baseline</th>
<th>After 6 months</th>
<th>Z score</th>
<th>p value</th>
<th>Effect size (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median (IQR)</td>
<td>Median (IQR)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- EG</td>
<td>25.00 (14.58-33.33)</td>
<td>41.67 (33.33-50.00)</td>
<td>-4.65</td>
<td>0.00</td>
<td>0.53</td>
</tr>
<tr>
<td>- CG</td>
<td>25.00 (10.42-33.33)</td>
<td>25.00 (16.67-33.33)</td>
<td>-1.80</td>
<td>0.86</td>
<td>0.21</td>
</tr>
<tr>
<td>Mental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- EG</td>
<td>33.33 (31.24-43.75)</td>
<td>50.00 (41.67-58.33)</td>
<td>-4.22</td>
<td>0.00</td>
<td>0.48</td>
</tr>
<tr>
<td>- CG</td>
<td>41.67 (25.00-50.00)</td>
<td>33.33 (25.00-58.33)</td>
<td>-4.10</td>
<td>0.68</td>
<td>0.47</td>
</tr>
<tr>
<td>Cognitive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- EG</td>
<td>33.33 (16.67-41.67)</td>
<td>41.67 (33.33-50.00)</td>
<td>-4.07</td>
<td>0.00</td>
<td>0.47</td>
</tr>
<tr>
<td>- CG</td>
<td>33.30 (25.00-50.00)</td>
<td>37.20 (22.92-50.00)</td>
<td>-1.04</td>
<td>0.29</td>
<td>0.12</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- EG</td>
<td>30.50 (19.44-36.11)</td>
<td>47.22 (41.67-50.00)</td>
<td>-5.01</td>
<td>0.00</td>
<td>0.57</td>
</tr>
<tr>
<td>- CG</td>
<td>33.33 (22.22-44.44)</td>
<td>34.72 (19.44-47.92)</td>
<td>-0.04</td>
<td>0.97</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Table 7.3: Wilcoxon Signed Rank Test on ERA for experiment and control groups - pre and post intervention

A box plot indicated that there is an increase in the median for the experimental group after the 3LP, whilst there is no change in median for the control group and there are three outliers in the post experimental group for participants numbered 14, 15 and 39 as shown in Figure 7.3. Further information about these participants is in Appendix 7.1.
Figure 7.3: Box plot distribution of scores for total expectation regarding aging pre-intervention and post-intervention for experimental group and control group

7.2.2 Post 3LP qualitative findings

One super-ordinate theme emerged from the post intervention focus groups, i.e. ‘being able to’ that indicate changes in life. The participants described the changes in life and experiences of having various abilities to engage in occupations as a result of attending the 3LP. Five inter-related master themes emerged and each master theme consists of one or two sub-themes as shown in Figure 7.4.
Figure 7.4: Post intervention themes for experimental group

7.2.2.1 Master theme 2: ‘I can’

In this master theme, participants described their experience of being able to engage in occupations and changes in their abilities as ‘tak sangka’. “Tak sangka” are Malay words which mean unexpected. This finding implies that the participants were not expecting the changes at the beginning of the programme; for example, increase in abilities to engage in activities such as activities of daily living.

This can been seen through experiences illustrated by Mr. Khoo, a 76 year old man when asked about his daily occupations, said:

‘Now I am able to walk up to the 7 Eleven. That is quite far from here. I feel much stronger now. I feel less shortness of breath or pain in my leg. I didn’t expect that I would feel this way. I feel great [pause]’
Another participant described an increase of performance in daily occupations that brought a sense of peace and contentment. Mr Daub, a 76 year old man described his ability to conduct daily religious related occupations:

‘Now I can kneel down when praying. I can pray properly. I do the exercise every day, in the morning and in the evening; my knees are not in pain anymore. I can walk to the little mosque slowly. Nobody needs to push me in a wheelchair anymore [pause]. I can listen to the religious talks every week. I really feel at peace’.

Enhancement in physical function is postulated to have contributed to the development of the desire to develop an intimate relationship and plan for future. This was illustrated by Mr Jacob, a 65 year old man who previously had a stroke. He said:

‘Now I feel very healthy. It is much unexpected. I think I want to get married again [pause]. There are many women in here, which I can choose, I feel like a young man’

7.2.2.2 Master theme 3: ‘I have’

The social component of 3LP provides opportunities for the participants to re-established relationships with significant persons in their life, such as family members, children, spouse and neighbours. Furthermore, the participants are allowed to go outside the institute which provides opportunity for socialisation and to develop friendship in the community around the institute. Establishing connections with significant person was conducted through phone calls or writing letters and provided a sense of security, love and belonging. Furthermore, the need to be with the significant person in life indicates a sense of future expectations. This experience was illustrated by Mrs Fatimah a 70 year old widow:

‘...now I call my children once a week ... it is sufficient for me just to hear their voices ...I don’t miss them so much. I don’t feel lonely. I think they (the children) still love their mother’
In addition, maintaining social contact through the phone with children provides a sense of relief in spite of the infrequency of their visits to the institution, as stated by Mr Ali Kais, 80 year old male.

‘...when I call my children, I feel relieved to hear their voices ..., even though they seldom come, I can accept that ... they are not free. If they have free time, they will come ...’

7.2.2.3 Master theme 4: ‘Next week’

This master theme suggested that the participants are looking forward to the occupations that will be conducted. This finding also suggested that the participants have a sense of future direction in life. Furthermore, a sense of autonomy in engaging in occupations and asserting choices in the daily schedule provides a sense of achievement and direction in life, thus facilitating higher expectations in life. Focus groups indicated that the participants had varieties of plans for the future which included personal plans related to domestic and recreational occupations, plans for re-connection with family members or long term plans related to fulfilling religious related obligations. This was illustrated by many of the participants when they were asked about their daily schedule. For example, Mrs Yam, 67 year old women described her sense of achievement and future plans.

‘I feel satisfied if I can complete making many bracelets in a day, I want to do it every day [pause], so I can sell them to the visitors or to the shops nearby. Nobody forces me to do it, but I like to do it, I can sleep if I feel tired’

Another example was given by Mrs Tomah:

‘We plan to go to the market tomorrow morning to buy materials for cooking. We want to cook ‘nasi lemak’ for lunch tomorrow ‘

Mrs Noreen, a 60 year old female expressed her future expectations in relation to expectations towards her children, paid occupations and religious expectations. She said:

‘If I am healthy, Alhamdullilah [pause]. My children promise to come here from time to time. I work in the kitchen, so I don’t feel very lonely. If I live a
CHAPTER 7

long life, I would like to go to Mecca to perform a Haj with my children, so I could die in peace [pause]. I don’t have any other expectations’

7.2.2.4 Master theme 5: ‘I feel’

Increased abilities to engage in occupations such as ADLs facilitate a positive affect and contentment amongst participants and, a sense of achievement. This can be seen through the experiences related by Mr Abu, an 89 year old man when asked about his daily occupations. He said:

‘now I am really happy, I can walk properly, less ‘mengah’ (shortness of breath), I can pray with a proper technique, I can kneel down when praying [pause], unlike before, I can walk up to the food stalls and more [pause], Alhamdulillah, I feel much better’

7.2.2.5 Master theme 6: ‘I want’

This theme relates to future expectations amongst the participants. The participants are hoping to gain more benefits by living in the institute. This finding suggests that the 3LP facilitated an increased in expectations towards future orientation in life mediated through the ability to engage in individualised and meaningful occupations. Participants are hoping for more opportunities, facilities and frequency in engaging in occupations. This was illustrated through the need to have a library, frequency of the social visits, more autonomy, religious related occupations and more domestic activity.

For example, Mr Sámi, a 68 year old man, who has been in the institute for 24 months described the need to keep abreast of the current news. He stated that:

‘... for older people, I think we should have a library. Whoever is interested in religious knowledge can go to the religious section to read. Other people who like to know other things can go to that section ...’
Domestic activities which are preferred occupations by many female participants provide a sense of happiness and anticipation. For example, Mrs Dinah, a 64 year old Malay lady said:

‘...but I am not happy that I can cook once a week only, ... If would be great if I could cook more often ... we can take the ingredients from the kitchen ... we don’t need to buy’

The master themes and sub-themes emerging for the transcripts show that expectations are changing from expecting deteriorations in physical, mental and social functions to expecting higher achievement in functions as a result of being able to engaging in physical and social related occupations. The analysis also indicated that most of the master and sub-themes are inter-related. For example, unexpected changes in physical abilities facilities sense of happiness and satisfaction; and the changes enable them to plan for the future.
7.2.3 Data integration and discussion post 3LP for ERA

‘... to add life to the years that have been added to life’


7.2.3.1 Introduction

This section will discuss the overall results and findings from the scores in the ERA domains and the themes emerging from the post intervention focus groups. The results and findings will be integrated to provide overall picture of ERA.

7.2.3.2 Discussion

Quantitative results for post intervention indicated that there are statistical significant changes in scores for participants in the experimental group. There is no significant change in the ERA domains for the control group. Post intervention focus groups described the experience of participants being able to feel the changes in physical ability, have a meaningful relationship, hopes and having positive affect that brings various changes in daily life.

There are several inter-related factors that are encapsulated in 3LP that can contribute to an increase in ERA scores. These factors are;

a. Changes in physiological and psychosocial functions.
b. Future orientation towards life.

a. Changes in physiological and psychosocial functions

Post intervention focus groups indicated that the participants did not expect to feel the changes; mainly the changes in physical and social as a result of engagement in the occupations which are integrated in 3LP. Participants related experiences in regard to increased in physical tolerance, endurance, muscular strength that enabled them to engage in ADLs. The benefits of engagement in occupations such as enhancement of physical and social functions has been established in various studies.
as discuss in Chapter 2. In addition, previous studies indicated that perceived health status is one of the factors that contribute to future orientation towards life (Zorn, 1997; Sarkisian et al, 2002; Victor, Ross and Axford, 2004; Jang et al. 2004; Sarkisian et al. 2005; McNeil et al. 2006; Sarkisian et al. 2006; Bradach et al. 2010). Perceived positive changes in physical health status, which were experienced by the participants, could contribute to the high scores in ERA scale.

The quantitative results post intervention also indicates that there are statistical significant changes in mental health domain for the participants in the experimental group. Qualitative findings show that the changes were unexpected by the participants, for example their opportunity to re-establish meaningful relationships with family members.

The re-establishment of the meaningful relationship alleviates loneliness and provides them with a sense of relief and peace, thus contributing to further expectations in the mental health domain of ERA. Previous literature indicates that engagement in occupations was used as a means to develop social interaction and establish a meaningful relationship with other residents in order to avoid loneliness and depression (Geifer and Miko, 1995; Mckee, 1999; Kane, 2001; Brown et al. 2004; Winningham and Pike, 2007; Meeks and Looney, 2010) and to increased life satisfaction and quality of life (Raynes, 1998; Gause and Masesar, 1999; Duncan-Myers and Huebner, 2000; Kane et al. 2003; Bond and Corner, 2004; Elavsky et al. 2005; Tu et al. 2006; Howel and Kimbely, 2007; Murphy et al. 2007; Lobo et al. 2008; Cooney et al. 2009; Justine et al. 2010).

b. Future orientation towards life

Focus groups illustrated that engagement in occupations provided various psychological effects such as positive affect, creating hopes and making future plan as illustrated in Master theme 4 : ‘Next week’, and Master theme 5: ‘I feel’. For example, engagement in social activities in the community and re-establishing relationship with family members provided a sense of hope and future direction in
life this is illustrated by a plan to re-marry, feeling like a young man, organising a plan for the next domestic session and the plan to go to Mecca with their children. These findings are similar to previous findings that indicate engagement in occupation improved affect, fostered a sense of hope and purpose in life (Borell et al. 2001; Elavsky et al. 2005; Meeks et al. 2007; Low and Molzahn, 2007; Mozley et al. 2007; Eakman et al. 2010).

These future plans, sense of direction and future hopes in life communicated by the participants indicated that participating in 3LP improved the mental health domain of ERA. According to Spancer, et al. (1997) hopes include cognitive and emotional dimensions, such as imagining possibilities, goals, wills and intentions in life. Furthermore, a sense of hope and purpose in life contribute to high expectations towards ageing (Forbes, 1994). Thus, engagement in 3LP facilitated an improvement in the mental health domain in ERA.

The lowest changes, seen in the cognitive domain in the ERA scale were expected. Unlike changes in physical and mental domain in ERA scale, the cognitive aspect is not directly felt by the participants. Furthermore, 3LP does not focus on facilitating cognitive ability such as memory function as this is not identified as the need of elderly people in institutions. The structure of the 3LP was changed to fit into the education background of the participants. A systematic review indicated that physical exercise improves cognitive capacities (Angevaren et al. 2008). However, the physical exercise component in 3LP is methodologically different from the study by Angevaren, et al. (2008). The physical exercise component is a simple and low impact type of exercise that encourages joint mobilisation and suppleness and to reduce pain. Furthermore, this type of exercise will encourage the participants to perform independently. Thus, it can be concluded that the changes in cognitive domain after the intervention are not due to the physical exercise component of the programme.

Changes in cognitive domain could be initiated by group activities such as reminiscence activities and other occupations that increase cognitive components
such as concentration and reaction time. Previous studies indicate that reminiscence activities facilitate enhancement in cognitive function for elderly people in institutions (Chao et al. 2006; Wang, 2007) and elderly people in the community (Watt and Cappeliez, 2000; Tanaka et al. 2007; Chung, 2009). It was found that reminiscence activities improved blood flow to the frontal lobe as shown with single photon emission computed tomography (SPECT) in a patient with Alzheimer’s disease (Tanaka et al. 2007). Engagement in occupations such as physical activities and musical activities also increased concentration and reaction time (Clare and Hocking, 2003; Nilsson and Nygard, 2003; Jouper, Hassmen, Johansson, 2006; Gutman and Schindler, 2007; Mozley, 2007; Harrmer and Orrell, 2008; Man, Tsang, Hui-Chan, 2010).

Post intervention focus groups also indicated that some wishes expressed by participants indicated that the participants wished for more opportunities and benefits. This finding suggests that the process of expectation and wishing is malleable and keeps on changing depending on the circumstances. Fulfilment of a need creates a wish for fulfilment of another need. Human need will continuously expend regardless of age and living circumstances to achieve the higher human needs illustrated by Maslow’s’ Hierarchy of Needs (Maslow, 1987).

7.2.3.3 Conclusion post 3LP for ERA

Overall, the present data highlighted the changes in physical, mental and social functions of the participants in the 3LP. These changes have shifted the expectations towards ageing from expecting deterioration to maintenance and expecting higher achievement in ageing that cause changes from low expectations to high expectations at the end of the 3LP. In addition, the findings from post intervention focus groups imply that the participants perceived a positive outlook towards the future. Participation in 3LP facilitates an increase in ERA.
7.3 Overall conclusion

Pre intervention results of ERA indicated that the scores are lower than scores amongst elderly people in Western countries but higher than community dwelling elderly people in Eastern countries like Korea. This study has identified the effect of religious and cultural core values on ERA. The participants in the study perceived that the deteriorations are inevitable, a normal process of ageing and were determined by fate. In addition, the characteristics of the participants such as health status and life experience also contributed to low scores in ERA. However, the benefits of living in the institution, such as health care could contribute to high scores in ERA scale.

Post intervention data indicated that there were significant changes in all domains in ERA scale. The 3LP increase ERA amongst the participants in the experimental group. Physical and mental changes are the most noticeable changes after attending the 3LP. The changes increased future orientation, initiated a sense of hope and direction in life. Additional themes that emerged from focus groups indicated that although the participants expect deterioration, they hoped for maintenance in physical, mental and social function in the future. These findings suggested that the expectations are shifting towards fulfilment of higher human needs, as described by Maslow (Maslow, 1987) after the implementation of the 3LP. The integration between quantitative and qualitative data obtained pre and post intervention is presented in Figure 7.5 and provides an overall picture regarding ERA pre and post intervention.
Figure 7.5: Integration of pre and post intervention for ERA for the experimental group.

Quantitative results

**PRE - INTERVENTION**

Expectation Regarding Ageing (Median)
- Physical health (25.00)
- Mental health (33.33)
- Cognitive function (33.33)
- Total ERA (30.50)

**POST - INTERVENTION**

Expectation Regarding Ageing (Median)
- Physical health (41.67)
- Mental health (50.00)
- Cognitive function (41.67)
- Total ERA (47.22)

- significant differences between pre and post intervention in physical, mental and total ERA.

Qualitative findings

**Acceptance (Reda)**
- ‘qiatatulah’ (physiological changes)
- ‘dah nasib’ (it is my fate)

**Variation in daily life**
- Engagement in meaningful occupations.
- Meaningful relationship.

**Health and wellbeing**
- Physical and mental functions

**Adjustment and adaptation**
- Future hopes and wishes

**Future plan, purpose in life**
- ‘Next week’

**Positive affect**
- ‘I feel’

**Meaningful relationship**
- ‘I have’

**More benefits, facilities and opportunities**
- ‘I want’

**‘Tak sangka’**
- (unexpected changes)
- ‘I can’

**‘I feel’**
- (‘I feel’)

**‘I can’**
- (‘I can’)

**‘I want’**
- (‘I want’)

**Lively Later Life Programme (3LP)**
7.4 Summary of points for Chapter 7

- Low level of ERA scores was obtained in both groups prior to 3LP as compared with ERA amongst Western elderly people, but the scores are comparable to Asian populations.

- Both groups are expecting a high deterioration in the physical domain of ERA, whilst the mental health domain is least expected to deteriorate.

- Deterioration in physical function was perceived as a normal part of aging, was considered as fate and determined by a higher power.

- Various factors contribute to the formation of low expectations regarding aging such as the demographic characteristics of the participants, environment factors, constraints and resources available in the institute.

- Although the participants expect deterioration in all domains of ERA they hoped for a good health status in the future, opportunity to engage in occupations and to re-establishment of a meaningful relationship. In other words, people can have low expectations, but they are often hoping for something better.

- Results following the 3LP indicate that there is a significant increase in ERA scores amongst the participants in the experimental group in the overall scores for ERA and its three domains.

- The most significant differences between pre and post intervention was in the physical and mental health domains of ERA. The unexpected changes in physical and mental function were felt and experienced by the participants when engaging in daily life, thus contributing to the significant differences.
• Engagement in the personalised and meaningful occupations that were conducted through 3LP produced the significant differences between pre and post intervention. The occupations provided physical and social benefits to the participants. In addition, the engagement created a sense of future self, future direction and a sense of hope in life. This facilitates future expectations towards later life.

• Expectation and human needs are malleable processes that can be change according to personal characteristics and environment. Fulfilment of expectations and needs will create other expectations and needs.

• Focus groups indicated that the changes in expectations are towards achieving higher needs in Maslow Hierarchy of Needs such as the need for acknowledgement, maintaining high relationships with family members, establishing intimate relationships, financial independence and performing a high level of religious ritual.
CHAPTER 8:

GENERAL SELF-EFFICACY (GSE) – RESULTS, FINDINGS AND DATA INTEGRATIONS
8.0  Introduction

This section will present the quantitative results and the qualitative findings for pre and post intervention of the 3LP for the GSE. The qualitative findings will be integrated to supplement the quantitative results and so provide an overall and broader picture to the study.

Pre and post results and findings will be integrated to form an inference and will be presented in the overall discussion section.

General self-efficacy was evaluated using the 10 items of GSE scale (GSES). According to Schwarzer and Jerusalem (1995) the possible range of scores in GSE is 0 to 40, with no 'cut off point'. General self-efficacy was not determined as either as positive or negative. Low scores indicate that subjects have low self-efficacy and confidence in dealing with general issues, whilst high scores indicate high self-efficacy and confidence in facing and dealing with various issues (Schwarzer and Jerusalem, 1995).

8.1  Quantitative and qualitative data from pre 3LP

8.1.1  Pre intervention quantitative results

The median scores of the GSE in the control group are higher than median of the participants in experimental groups respectively as shown in Table 8.1; however Mann-Whitney U test revealed no significant differences between the groups. This indicated that the groups are comparable. The box plots for experimental groups indicated that the box is within the middle of the whiskers. There is no outlier or extreme score in the groups as shown in Figure 8.1.
### Table 8.1: Results of GSE pre intervention and differences between groups

<table>
<thead>
<tr>
<th>Scale</th>
<th>Groups</th>
<th>Md (IQR)</th>
<th>(n)</th>
<th>u</th>
<th>Z</th>
<th>p</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSES</td>
<td>E</td>
<td>22.00 (20.75-25.00)</td>
<td>46</td>
<td>810.0</td>
<td>-0.17</td>
<td>0.87</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>22.50 (20.00-26.00)</td>
<td>36</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

E = Experimental Groups, C=Control groups, GSES = General Self-Efficacy Scale, Md=Median, IQR = Interquartile range, n = number of participants, d = effect size.

---

8.1.2 Pre intervention qualitative findings

Two super-ordinate themes emerged from the pre intervention focus groups; i.e. feeling of apprehension and distress, adjustment and adaptations. Super-ordinate theme 1 (Apprehension and distress) encompasses two master themes, whilst one master theme developed for super-ordinate theme 2 (adjustment and adaptation) as shown in Figure 8.2. These super-ordinate themes describe participants’ ideographic experiences that relate to low GSE.
**Super-ordinate Theme 1:** Apprehension and distress (I can’t …)

**Super-ordinate Theme 2:** Adjustment and adaptation

**Master theme 1:** External issues
- Cultural values and norms
- Rules and regulations
- Expectations of others
  - Institutional environment
  - Lack of opportunities and facilities

**Master theme 2:** Internal issues
- Doubt towards personal abilities and capacities

**Master theme 2:** Acceptance (Reda)
- ‘tak apalah …’ (It is ok)
- ‘dah biasa’ (I am used to it)
- Compromise life style
- ‘no choice’
- ‘dah nasib’ (it is my fate)

*italic = words in Bahasa*

**Figure 8.2: Pre intervention themes for GSE**

### 8.1.2.1 Super-ordinate theme 1: Apprehension and distress

In this super-ordinate theme, the participants described their sense of apprehension and distress which has an effect on general self-efficacy. Two master themes emerged from this super-ordinate theme, i.e. External and internal issues.

### 8.1.2.1.1 Master theme 1: External issues

The external issues are issues at the institutional level that restrain participants to live life as it was prior to re-location to the institution, such as engagement in occupation. There are issues regarding rules and regulations in the institution that effect engagement in occupations including lack of opportunity and availability of resources. Furthermore, the participants have to conform to the expectations of staff,
other residents and culture. The participants’ feel apprehension and distress with the possible implications of contravening the regulations.

For example, Mr. Ramli, a 65 year old man described his distress at the implications of disobeying the existing rules of the institution and expectations of staff. He described his concern as below:

*They [the staff] did not allow me to go out by myself, because that is the regulations in here, ... [pause], if I break way, they will seize me, they might send me to the jail ward [pause], maybe they will not allow me to live here anymore, I am the one who will be more at loss [pause].*

In addition, Mr. Daud, a 76 year old described the experience of being required to abide by the regulations. He said:

‘if we follow our own head, trouble will come, we are not in our own home, there are rules in here that we have to adhere to, we have to accept that, we must abide with the regulations’

Mr. Ratna Seelan, 84 year old man described the rules affecting his occupations, he said:

*I haven’t had a drink [beer] since I come here, because that is regulations.*

Some of elderly people in the focus groups are concerned about perception towards them if they engage in social occupations that are against the cultural norms, such as dancing and going to a social club. This shows the cultural issues pertaining to engagement and social expectations towards elderly people in Malaysia. This is clearly illustrated by a 65 year old man. He described his concern in engaging in social occupations as a result of social expectations towards elderly people. He said:

*What other people might think of us if we go to a dandut?dance club, they might think we are demented, they might say [pause] that old man who has no conscious ?control [pause], ‘kubur kata mari, rumah kata nanti’* (a Malay
proverb that means: The graveyard is already calling, but family want us to stay alive)

These themes indicated that the participants have low general self-efficacy in dealing with external issues in the institution.

### 8.1.2.1.2 Master theme 2: Internal issues

Internal issues are issues at the individual level which relate to personal abilities and capacities. The participants described their apprehensiveness at not be able to engage in occupations as a result of doubt relating to physical, social and cognitive abilities such as muscular strength and endurance, mental capacity and financial capability. This finding could also suggest that participants might have loss of their confidence or mastery of their personal skills.

For example, Mrs Hitam, a 71 year old female described her apprehension at going out of the institute both as a result of the external issues (regulations) and a lack of confidence in her physical and cognitive abilities (internal issues). She said:

“I am scared to go out, even if they [the staff] allow me to go out, I don’t know where to go and I might get lost [pause], people drive very fast, and I walk very slow [pause], if I get hit by a car or fall down, I will be in trouble [pause]”

Other residents described their doubt about their physical abilities, preventing them from engaging in physical activities. For example, Mr Baharuddin, a 75 year old man explains:

How am I going to go out, I feel sore at all time, I am not strong anymore [pause], there is no need [pause], I had enough going out when I was young.
8.1.2.2 Super-ordinate theme 2: Adjustment and adaptation

In this super-ordinate theme, participants described their experience and the mechanisms used to deal with the issues in the institution that reduced general self-efficacy. One master theme emerged from the transcripts; i.e. acceptance (reda).

8.1.2.2.1 Master theme 2: Acceptance (Reda)

In this master theme, the participants described their experience in adjusting and accepting the external issues that constrained them and had an impact on general self-efficacy. Super-ordinate theme 2 (Adjustment and adaptations) demonstrates their experience in dealing with the issues raised such as regulations that influence autonomy, lack of variation in daily life, lack of opportunity to engage in occupations and lack of recreational opportunity. They passively accepted the issues (redha). Redha is Malay word that often used by the participants in the transcripts and the word carries a meaning of ‘pleased and approved’ (with what is given).

Several sub-themes emerged which indicated passive acceptance; such as ‘tak apalah …’ (it is ok), ‘dah biasa’ (I am used to it), the compromised life style, there is ‘no choice’ and ‘dah nasib’ (it is my fate). These are words associated with low self-efficacy.

For example, Mr Abbas, a 65 year old man described his acceptance as transcript below:

*What can I do [pause], it is my fate to live in here [pause], we have to surrender to our fate [pause], trust (in God) [pause], and be patient [pause], it is ok for me, dah biasa dah [pause], this was determined for us, what can we do?*.

The participants also indicate that they have no power to change the system, thus they have to passively accept the situation. Mrs Sariam, a 74 year related her acceptance of the constraints of living in the institute. She said:
What can we do, we don’t have other choices [pause], if we stay at home, who will provide us meals, who is going to give us the money, who will look after our health, it is going to be more difficult, there is everything here, I don’t have to worry about food, drink and clothes.

One participant described her daily schedule as a need to acclimatise to with changes in life and perceived the changes as ‘dah biasa’ (used to it). She said:

‘I have lived here for a long time, I dah biasa (used to), every day is like this, ...I am used to it, like the proverb ‘alah bias tegal biasa’ (A Malay proverb that means: poison will loses its toxicity because one is used to it).

Another participant, Mr. Suhaimi, an 80 year old man, describes the need to change to be accepted in a new environment with a Malay proverb.

We have to change our lifestyle; we have to follow the regulations, like the proverb says ‘masuk kandang kambing mengembek, masuk kandang harimau mengaum’ (if we enter a sheep barn, we have to sound like a sheep [to be accepted], if we enter a tiger cage, we have to roar like a tiger [to be accepted].

Mr. Yaacob a 67 year old man stated his self-resignation regarding the inability to go out of the institute. He said:

Tak apalah [it is ok]. There is no need for me to live outside, there is nothing there, I am old’

8.1.3 Discussion and data integration for pre 3LP in GSE

This section will discuss the data obtained from quantitative results and qualitative findings from pre 3LP for GSE. Both data will be integrated to provide an overall and broader picture of GSE in the participants.
8.1.3.1 Introduction

Quantitative results indicate that the median scores in GSE for participants in the control group are higher than median for participants in the experimental group. However, the Mann-Whitney U test indicated that there is no significant difference between the groups, an indication that both groups are comparable.

Themes emerging from the pre intervention focus groups indicated that participants experienced a sense of fear and distress as a result of issues that impede engagement in occupation; such as rules and regulations, societal and cultural norms, and reservations about personal abilities. Subsequently they accept the situation and perceived it as their fate and the need to acclimatise to the situation.

8.1.3.2 Discussion

As anticipated, the pre intervention scores of GSES in both groups were low; slightly lower than elderly people living in the community in Hong Kong (23.05) but slightly higher than elderly people in the community in Japan (20.22) (Scholz et al. 2005). This finding is similar to previous findings by Kim, et al. (2006) who found institutionalised elderly people in Korea have low self-esteem and general self-efficacy. However, results in this study indicated that the GSE scores for both groups are much lower as compared with elderly people who live in the community in Western countries (e.g. France, Great Britain and United States of America) (Scholz et al. 2005). There are two reasons for the low level of GSE amongst participants as compared to community dwelling elderly people in Western countries. The reasons are:

a. Cultural differences between Eastern and Western people.

b. Lack of availability of the sources self-efficacy arising from the institutional environment and characteristics of the participants.
CHAPTER 8

a. Cultural differences between Eastern and Western people

One of the cultural values amongst Eastern elderly people as in Hong Kong, Japan and Malaysia is the belief in external forces that determine life and health status such as fate and a ‘supreme power’ (Lee, 1999; Kond et al. 2002; Wu et al. 2004; Mohd Yusof, 2007; Mok et al. 2007; Tsai and Tsai, 2007). This belief has an impact on self-efficacy. Although the two constructs are different, previous studies indicate that there is a relationship between self-efficacy and locus of control (Leganger, et al. 2000; Dunn, Elsom and Cross, 2007; Chen, Acton and Shao, 2010) supporting the argument of Bandura (1997).

Bandura (1997) stressed that people with high self-efficacy tend to attribute success or failure towards internal factors, e.g. ability, motivation and effort (internal locus of control). Whilst, people with low self-efficacy attribute their success or failure towards external factors, e.g. chance, fate, luck, ‘supreme power’ or ‘powerful others’ (external locus of control). Acceptance of external locus of control and the influence of powerful others that determine life is also present in this study; as described by the participants in the pre experimental focus groups. For example, belief in a higher power that determines fate/destiny in life (to live in the institution).

Focus groups displayed a sense of acceptance with fate in Master theme 2 (acceptance) (Redha). Belief in fate (external locus of control) may help participants to adjust, cope with and make sense of their life conditions. This is similar to previous findings regarding the basis of acceptance in fate (Leung, 1996; Taleghani et al. 2006; Pirani et al. 2008). Furthermore, belief in fate will assist in providing meaning to any given situation (Tagaya et al. 2000; Maier-Lorentz, 2004; Grando et al. 2009).

Most of the participants in the study are Malay (Muslim) and Chinese and the teachings of Islam and Confucius stress the importance of accepting and following fate which guides the course of life. Punishment follows those who do not believe in and accept their fate. This study shows that there were many participants who
attributed the reason for living in the institution as a fate. This is similar to previous findings. Studies from Eastern countries like Hong Kong and Taiwan show that elderly people perceive living in elderly institution as a fate to which they must surrender and accept and there is no value in opposing the given situation (Iwasi et al. 1996; Lee, 1999; Chan and Kyser-Jones, 2005; Chao et al. 2008; Wu et al. 2009; Chen, 2010; Yu and Pertrini, 2010).

Surrendering and accepting fate indicated that the participants felt hopeless and powerless and the situation was beyond their control (Gibson and Kenrick, 1998; Wu et al. 2004; Cheung et al. 2006; Fiori et al. 2006). Feelings of powerlessness are often encountered amongst institutionalised elderly people (Bowling and Fromby, 1992; Nystrom and Segesterd, 1994; Brown, 1995; Berglund, 2007; Brooker, 2008; Choi et al. 2008). In addition to the feeling of powerlessness to fate, they also often feel powerless with constrains in the institution. For example, the feeling of powerlessness to dispute the rules and regulations that deny them from engaging in meaningful occupation as described in focus groups.

Pre intervention focus groups indicated that the participants feel apprehension and distress at engaging in occupations such as socialisation with community outside the institution or other occupations like the occupations they engaged in prior to the relocation. There was a fear of the punitive result of disputing the rules and regulations. The participants have no control, feel powerless and passively have to accept the circumstances.

This finding supports the work of Lee (1999) and Lee, Woo and Mackenzie (2002) who found institutionalised elderly people in Hong Kong passively accepting the rules and regulations and saw the rules and regulations as ‘the law of the country’, ‘important and necessary’ (p. 1123). In addition, customary and religious cultural core values amongst people in Malaysia stress that they should comply and respect the authority of staff to avoid friction, interpersonal conflicts, preserve ‘adab’ (mannerism) and avoid ‘loss of face’ (Mastor et al., 2000; Yusaini, 2008; Zawawi, 2008; Mansor, 2010).
This phenomenon illustrated by the participants indicates that the participants have low general self-efficacy. People with high self-efficacy often exhibit risk taking behaviour, but people with low self-efficacy often exhibit safety precaution behaviour (Bandura, 1997). This finding also suggests that participants are willing to trade certain aspects of life (e.g. autonomy and individuality; personal freedom) for fulfilment of basic physiological needs (e.g. need for food and shelter). This finding conforms to the importance of fulfilment the basic human need prior to attainment of other higher needs as outlined by Maslow (1987).

Wu, et al (2004) and Scholz, et al. (2005) acknowledge that there are differences in scores of GDS across cultures and countries. However, they stress that there is ‘no real difference’ and any differences are due to differences in the cultural perspectives of elderly people. Furthermore, Schwarzer, et al. (1992) argues that because of the differences in culture, some people may have low of personal self-efficacy, but high level of ‘collective self-efficacy’. Indeed, there are several studies that indicate people with high collective culture tend to endorse external locus of control more readily than people in individualised cultures (Padilla, Wagatsuma and Lindholm, 1985; Wong and Piran, 1995; Wu, Lee and Bishop, 2001; Tang and Kwok, 2004). These cultural differences could offer an explanation regarding the variation in scores of GSE amongst the Western and Eastern elderly people.

Another cultural issue that contributes to low self-efficacy is related to the living arrangements of the participants. Findings from focus groups indicated participants have to make many compromises as a result of the communal living arrangements, for example sharing common facilities such as toilets, living areas and compromised by noises from other residents, and respect for the staff. This phenomenon was described by elderly people with old proverbs which emphasize the need to compromise and conform to the collective culture and core values in the society. Life with many compromises is often discussed in literature regarding elderly people who live in a communal environment (Lee, 1999; Rosen et al. 2008; Chung and Abbey, 2009). Compromise is often used amongst Asian elderly people in order to
avoid argument, direct confrontational and ‘loss of face’ which is a cultural value of Asian people (Lee, 1999; Mohd Yusof, 2007). Lee (1999) indicates that belief in harmony will assist in adjustment to, and acceptance of, living in an institution.

b. Lack of attainment of the sources self-efficacy related to the institutional environment and characteristics of the participants

The second possible cause of low GSE amongst participants in this study is lack of attainment to the sources of self-efficacy. Bandura (1997) states that there are four sources of self-efficacy; i.e. performance accomplishment, vicarious experience, verbal persuasion and physiological and emotional states.

Sense of performance accomplishment can be achieved through engagement in occupation. Engagement in occupation facilitates an increase in domain specific self-efficacy or general self-efficacy (Geifer and Miko, 1995; Abbot, 2000; Elavsky et al. 2005; McAuley et al. 2005; Cipriani et al. 2006; Gary, 2006; Murrock and Madigan, 2006; McAuley et al. 2007; Mountain et al. 2008; Shin et al. 2009; Mountain and Craig, 2011). However, occupational deprivation and occupational disfranchisement often occurs in elderly institutions (Perrin, 1997; French, 2002; Atwal et al. 2003; Wenborn, 2005; Hancock et al. 2006; O’Sullivan and Hocking, 2006; Haslam, 2008). Occupation deprivation also occurs in the institution as described by the participants in this study.

Descriptive analysis of this study indicates few participants engaged in occupation and the occupations are not conducted by professionals, infrequent, incidental and purely to pass time. These findings conform to those in other studies regarding the nature of occupation engaged in by institutionalised elderly people (College of Occupational Therapy, 1998; Van’T Leven and Jonsson, 2002; Hancock et al. 2006; Kolanowski and Litaker, 2006; Harmer and Orrell, 2008). This finding indicates that the participants lack attainment in performance accomplishment, an important
source of self-efficacy. This lack is seen to have lowered the GSE amongst participants in this study.

Another possible reason for low GSE is the health conditions of the participants. The results show that 73.9% (n=34) of the participants in the experimental group have at least one medical problem, such as arthritis or other muscular skeletal conditions that affect mobility or any other physical function. Previous studies indicate that deterioration in physical and mental health functions such as frailty, fatigue, low self esteem, pessimistic about future, are often associated with institutionalised elderly people (Quinn, 2000; Blazer, Celia and Hybels, 2004; Manthorpe and Iliffe, 2005; Hedberg et al. 2010). Prolonged disengagement in occupations, immobility and inactivity could cause decreased or loss in musculoskeletal function and sensory deprivation (Rabiner et al. 1996; Sviden and Borrell, 1998; O’Sullivan and Hocking, 2006; Wagner et al. 2008) and occupational skills (Hearle et al. 2005; O’Sullivan and Hocking, 2006) or doubt about personal skills as shown amongst participants in this study. These features will contribute to low self-efficacy related to engagement in occupations. In addition, deterioration in health conditions lowered domain specific self-efficacy (Mandes de Leon et al. 1997; Gutting et al. 2003). This conforms to Bandura’s (1997) assertion that physiological and emotional states affect self-efficacy.

Pre intervention focus groups indicated that participants’ lack of social supports caused the feeling of being isolated, lonely and deprived of a meaningful relationship. Bandura (1997) stressed that verbal persuasion and social reinforcement from social relationships with other people increased self-efficacy. Reviews indicate that relationships between staff and residents are often a clinical orientation type of relationship (Shattell, 2004; Berglund and Kirkvold, 2007; Sormunen et al. 2007; Wilson and Davies, 2009) and the staff are more engaged in dependence-supporting tasks than social engagement-supportive responses (Pearson and Fitzgerald, 2003; Stabell et al. 2004). Relationships with family members and friends are often deteriorated (Barry and Miller, 1980; Pott et al. 2001; Yamamoto-Mitani et al. 2002; Gueldner et al. 1992; Cheng et al. 2010) and relationships
between residents are often infrequent and of a non-intimate nature (McKee, 1999; Kolanowski and Litaker, 2006).

Contrary findings were found with regards to the relationship between residents and staff in this study. Findings from focus groups indicated that there is a good relationship between staff and the residents and between residents. The relationship was in the form of a pseudo parental relationship in which the participants were addressed as uncle, aunty, grandma, etc. This indicates cultural values and respect aligned with the doctrine of filial piety (Yip, 2004; Chuang and Huang, 2007; Wu et al. 2009).

This type of relationship is probably the result of the cultural core values and perception towards elderly people in Malaysia reflecting traditional values and religious affiliations (Mohd Yusof, 2007). However, this finding suggests that although relationships are good, they do not take the form of verbal persuasion or reinforcement to encourage elderly to engage in occupations that will contribute to self-efficacy. The finding could also suggest that staff and the residents expect elderly institutions to be a place for elderly people to be idle which conforms with disengagement theory (Cumming and Henry, 1961).

Furthermore, the staff expects the residents to follow rules and regulations and they lack knowledge regarding the benefits of engagement in occupations. Lack of encouragement to engage in occupations, over protectiveness and expectations for residents to be passive, idle and dependent are also found in previous studies (Aller and Coeling, 1995; McKee et al. 1999; O’Sullivan and Hocking, 2006; Harmer and Orrell, 2008). Furthermore, there is also a societal value and expectation of elderly people which tends to promote a sedentary lifestyle (Fiatarone et al. 1996). This could contribute to low self-efficacy amongst the participants as yielded in pre intervention findings.
8.1.3.3 Conclusion for pre 3LP in GSE

Quantitative results indicate that GSE amongst participants in this study are low as compared with Western elderly people in the community. The differences could be assumed to be due to the cultural differences such as acceptance of external locus of control that determines fate and lack of promotion of self-efficacy in the institution.

Pre experimental focus groups show that the participants wish to engage in occupations. However, they described a sense of apprehension in engaging in occupations because of the regulations and constraints, lack of confidence in their physical, social and cognitive abilities. This suggests that the elderly people had lost their sense of confidence regarding personal skills and abilities or feared the possible complications of disputing the set rules and regulation of the institution. Furthermore, they have to conform to the social expectations towards elderly people.

The participants were seen to accept the circumstances and perceived that as fate. This perception helps participants to adjust and cope with the situation and maintain the benefits of living in the institution. Findings from data integration indicate that participants’ willingness to compromise autonomy to gain what is perceived as more important in life reduces their GSE.
8.2 Quantitative and qualitative data from post intervention of the 3LP

8.2.1 Post 3LP quantitative results

The median scores for the experimental groups is higher compared to the median of the participants in control group (27.00 and 22.50 respectively) and there are statistical significant differences between the experimental group and control group as shown in Table 8.2 and box plot in Figure 8.3. There is no outlier in both groups.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Groups</th>
<th>Md (IQR)</th>
<th>(n)</th>
<th>U</th>
<th>Z</th>
<th>p</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSES</td>
<td>E</td>
<td>27.00 (25.00-29.00)</td>
<td>42</td>
<td></td>
<td></td>
<td>276.0</td>
<td>-4.60</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>22.50 (20.00-26.00)</td>
<td>36</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

E = Experimental Groups, C=Control groups, GSES = General Self Efficacy Scale, Md=Median, IQR = Interquartile range, n = number of participants, d = effect size.

Table 8.2: Results of GSE post– intervention and differences between groups

A Wilcoxon signed rank test revealed a statistically significant effect in general self-efficacy following participation in the 3LP programme, $z = -5.33$, $p < .001$, with
medium effect size (d = 0.61). The median score of the satisfaction with life factor increased from pre- 3LP (Md = 22.00) to post-3LP (Md = 27.00) as compare with the control group, z = - 1.41, p > .05, with small effect size (d = 0.16). The median score in the control group was unchanged at 22.50 as shown in Table 8.3.

Therefore, it is concluded that participation in 3LP enhanced GSE amongst participants in the experimental group.

<table>
<thead>
<tr>
<th>Study measures</th>
<th>Baseline</th>
<th>After 6 months</th>
<th>Z score</th>
<th>p value</th>
<th>Effect size (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median (IQR)</td>
<td>Median (IQR)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- EG</td>
<td>22.00 (20.75-25.00)</td>
<td>27.00 (25.00-29.00)</td>
<td>-5.33</td>
<td>0.00</td>
<td>0.61</td>
</tr>
<tr>
<td>- CG</td>
<td>22.50 (20.00-26.00)</td>
<td>22.50 (20.00-26.00)</td>
<td>-1.41</td>
<td>0.16</td>
<td>0.16</td>
</tr>
</tbody>
</table>

EGG = Experimental group, CG = Control group, IQR = interquartile range, GSE = General Self efficacy.

Table 8.3 – result of the Wilcoxon signed rank test on GSE for experimental group and control group post intervention

The box plot indicated that there is an increase in the median for the experimental group after the 3LP, whilst there is no significant change in the control group (Figure 8.4).
8.2.2 Post 3LP qualitative findings

**Super-ordinate Theme:**
‘Being able to’ (Changes in life)

**Master themes**

- Master theme 2: ‘I can’
- Master theme 3: ‘I know / I have’
- Master theme 4: ‘Next week’
- Master theme 5: ‘I feel’

**Sub-themes**

- ‘Tak sangka’ (unexpected), Changes in physical abilities
- Knowledge and awareness
- Plan for future, Direction in life
- Motivated, Confident

*italic = words in Bahasa*

Figure 8.5 : Post intervention themes for GSE in the experimental group.

Figure 8.4 – Box plot distribution of scores for GSE pre and post intervention

CHAPTER 8

Figure 8.4 – Box plot distribution of scores for GSE pre and post intervention
8.2.2.1 **Super-ordinate theme: ‘being able to’ (changes in life)**

This super-ordinate theme describes the experience of changes in being able to engage in occupations as a result of following the 3LP. There are four inter-related master themes emerged that describe the participants’ general self-efficacy. The master themes are; ‘I can’, ‘I know’, ‘next week’ and ‘I feel’ (Figure 8.5).

8.2.2.1.1 **Master theme 2: ‘I can’**

The changes that were experienced by the participants facilitated enhancement in belief in their physical and social abilities. For example, changes in muscular skeletal strength, endurance and decreased pain facilitated self-efficacy allowing them to stroll outside the institute and confidently engage in social related occupations. Furthermore, successfully engaging in a variety of occupations provided a sense of accomplishment and optimism about future.

For example, Mgrs. Noreen, described her daily occupations that illustrate her confidence in her physical abilities. She said;

> ‘after morning tea, [pause] I go to the kitchen to help to prepare lunch, cutting, cleaning the vegetables and fish, then I help in clean-up the kitchen and the dining hall [pause]

Social interaction with people outside the institution provides a broader view of the world, a positive affect and a sense of freedom. This was expressed by Mr. Yaacob, a 68 year old man who had had a CVA and walked with a stick. He said;

> I feel free that I can go out of the institute to buy anything that I want, or just to walk around the shops, I can talk to the people at the shops, or just sit and have coffee at the coffee shops. I feel that my world is huge [pause].
3LP facilitated self-belief and confidence in their own ability to perform daily occupations and to complete tasks. For example, Ms. Mariam who has her own work making bracelets; a paid occupation, stated that

‘... I will put my own effort, if I don’t have any more beads, I will go to the shops to buy colourful beads, strings, I will go with staff, I will ask them to send me or I go with Mr. E (researcher).

Mr. Loo, 72 year old Chinese man described his physical and social self-efficacy and autonomy in engaging with occupations outside the institution. He said;

‘Sometime I go out to have lunch at the stalls [pause], the food tastes much better, then I walk back slowly.

8.2.2.1.2 Master theme 3: ‘I know / I have’

The programme also facilitated a sense of confidence in dealing with various issues in the institution, such as health issues, awareness of the importance of physical activities, maintaining social relationships and developing coping mechanism towards issues in the institution. For example Mr Samin who had diabetic complications stated that;

‘... if my feet pain, I have to find medication, have to clean my feet first, .... If I have any other problem, ... I will tell kepala (the ward attendant),

The confidence to perform daily occupations was greatly enhanced through awareness of their own accomplishment and acknowledging the important effects of occupations. This serves as powerful influence in the tasks performed. As stated by Mr Abu regarding the importance of daily exercise for his health.

‘... exercise is necessary, so we have to remember, if we want to get better, we have to come often for exercise, take medications, we have to do what we learn,

The 3LP also provided information regarding the benefits and methods of engaging in occupations through the didactic and practical presentations that were conducted
during the group sessions. Furthermore, 3LP involved occupational analysis and reflexion in group and individual sessions. This provided awareness regarding the level of individual participation, benefits of engagement in occupations and methods of engaging in occupations which subsequently facilitate a sense of perceived general self-efficacy. For example, the procedure of how to make free phone calls to family members or how to go out of the institute. This was shown by many participants. For example, Mrs. Mariam Kumin described her engagement in social occupations with family members. She said;

*I know how to contact my children; I will go to the office once a week to call my children.*

Furthermore, Mrs. Fatimah described the implications of having some knowledge of how to exercise and the relationship between exercise and health by reflecting on her previous life experience. She said;

*Now I know the importance of exercise for my health [pause], that way I feel so lethargic and lazy [pause], because I never perspired in here [pause], I used to work very hard at home, in here they [the staff] ask us to relax all day.*

### 8.2.2.1.3 Master theme 4: ‘Next week’

This master theme indicated that participants have various plans to engage in occupations which indicated that participants are confident with their abilities and willing to take a risk. This demonstrates that they have a high general self-efficacy.

For example, Mrs. Fatimah, an 85 year old female said;

*I plan to go home this weekend, I hope they [the staff] will allow me to go home by myself, I know how to go to town to take a bus to go home. I want to visit my neighbour* [pause].
In addition, Mr. Samin, described his plan and shows his confidence in engaging in physical activities. He said;

‘I think I want to try playing badminton tomorrow, I used to play before’

8.2.2.1.4 Master theme 5: ‘I feel’

Mrs. Ellan Chop described her experience of engaging in social occupations with family members. The experience provided her with sense of peace and happiness. She said;

‘I feel very happy to be able to speak to them, alhamdullilah, even though they could not come to visit me, but I know they still love me, I feel at peace’.

Mrs Yam, a 67 year old woman described her sense of achievement, motivation and future plans for engaging in her preferred occupation. She said;

‘I feel satisfied if I can complete making many bracelets in a day, I want to do it every day [pause], so I could sell it to the visitors or to the shops nearby. (Shown in picture below)
A sense of confident is often described by participants who engage in physical related activities. For example, Mr. Khoo who previously had a knee pain described his confidence. He said;

‘I can walk by myself to the food stall’

Analysis of the master themes that emerged indicated that the themes are inter-related. For example, master theme 2: ‘I can’ is related to master theme 4: ‘next week’ and also related to master theme 5: I feel. Changes in physical abilities enable participants to make future plans and cause positive affect and a feeling of happiness.

8.2.3 Data integration and discussion for post 3LP in GSE

This section will discuss the data obtained from quantitative results and qualitative findings for post 3LP. Both data will be integrated to provide an overall and broader picture regarding GSE amongst participants after the intervention.

8.2.3.1 Introduction

Quantitative results indicated that there is significant change in GSE after the intervention for participants in the experimental group whilst, there is no significant changes in GSE for participants in control group. Post experimental focus groups illustrated participants’ experiences with changes in physical abilities, knowledge, a sense of confidence and motivation to deal with issues in the institution which all facilitate higher GSE.

8.2.3.2 Discussion

Two inter related factors are postulated for the increase in GSE amongst participants in this study. These factors are;

a. Attainment of the sources in self-efficacy.

b. The mechanics of 3LP.
a. Attainment of the sources in self-efficacy

Analysis of the post experimental focus groups indicated that the participants related their experiences engaging in the various occupations which facilitated a sense of confidence, positive affect and optimism towards future life. These pointed to an increased in general self-efficacy. A previous lifestyle design study indicated that engagement in occupations increase overall physical and mental health which subsequently increase self-efficacy and confidence (Mountain et al. 2008), which is similar to this study. The changes experienced by the participants facilitated a sense of confidence and belief towards personal abilities which subsequently caused an increased in GSE. For example, changes in functional ability and socialisation which subsequently increased in GSE.

This finding is also supported by previous studies that show engagement in occupations facilitates an increased in self-esteem and specific self-efficacy (Geifer and Miko, 1995; Abbot, 2000; Elavsky et al. 2005; Murrock and Madigan, 2006; McAuley et al. 2005; Cipriani et al. 2006; Gary, 2006; McAuley et al. 2007; Shin et al. 2009). In addition, Leganger, et al. (2000), Scholz, et al. (2002) and Luszczynska, Gutierrez-Dona, and Schwarzer, (2005) stress that there is a positive relationship between GSE with specific domains of self-efficacy such as self-efficacy to engage in physically related activities.

b. The mechanics of 3LP

Another important factor that contributes to enhancement in GSE is mechanics of 3LP. 3LP removes barriers to occupational engagement through providing knowledge and autonomy to the participants. Literature indicates that barriers to occupational engagement for institutionalised elderly people are both internal (for example physical and mental conditions, previous life style and lack of knowledge regarding the important of occupations) and external (for example restrictions, lack
of opportunity and resources) (Kolt et al. 2006; Kowal and Fortier, 2007, Haslam, 2008; Chen, 2010).

3LP provides information regarding the benefits of engaging in occupations, method to overcome barriers during the individual and group sessions, provides opportunities and resources needed for engagement. Knowledge and autonomy in engaging in occupations empowers the elderly people which facilitated an increase in internal locus of control. This finding is similar to findings in other studies that show the effect of knowledge is to increase confidence and decrease stress associated with completion of tasks related to physical and ADL activities amongst elderly people (Easom, 2003; Lee, Lim and Lee, 2004; Sanford et al. 2006; Gary, 2006; Chang et al. 2007; Murrock and Madigan, 2008; Francis, Taylor and Haldeman, 2009; Shin et al. 2009).

Stress and distress have a negative impact on self-efficacy (Wu et al. 2004; Thygesen et al. 2009), thus, reduction in stress and distress (as result of issues in institution, e.g. rules, regulation, lack of opportunity, feeling powerless), associated with the process of engagement will facilitate a sense of confidence to engage in tasks, which subsequently enhances self-efficacy. Furthermore, Bandura (1997) concludes that knowledge will enhance coping strategies, decrease a sense of personal vulnerability and increase cognitive control efficacy which subsequently increase self-efficacy. Elevating barriers through providing knowledge and resources facilitated successful engagement with the occupations. Successful engagement provided a strong source self-efficacy in line with the prime source of self-efficacy described by Bandura (1997). Furthermore, the self-efficacy enhancing programme (SEEP) provides motivation through positive feedback and verbal persuasion, which has been noted to facilitate further increase in GSE.

Types of occupations engaged in or chosen by the participants also contributed to the increased self-efficacy. Previous literature indicates that the occupations often conducted amongst institutionalised elderly people are occupations that provide a sense of continuity related to previous roles in life, a sense of security, a motivation
to help others, provide interaction with other people, are personally interesting and engender a sense of control (Geiger and Miko, 1995; Kitwood, 1997; McKee, Harrison and Lee, 1999; Atwal, Owen and Davies, 2003; Aubin et al. 2002; Legarth et al. 2005; Phinney et al., 2007; Vernooij-Dassen, 2007; Harmer and Orrell, 2008). Similarly, analysis of the occupations engaged in by the participants in the experimental group indicates that the occupations are related to previous roles in life thus they provide a source of reminiscence, meaningful occupations and have already been mastered by the participants. For example, cooking activities, activities related to gardening, volunteerism and social related occupations which related to participants previous roles in life. Occupations that have been mastered by the participants provide a sense of confidence for completion which eventually facilitates increased self-efficacy.

8.2.3.3 Conclusion for post 3LP

The present data clearly highlights the changes in GSE amongst participants in 3LP. The participants in 3LP group showed significant changes in their level of GSE after participation in 3LP as compared with participants in the control group.

The themes emerging from the post experimental focus groups incorporate experience of changes in general self-efficacy as a result of being able to engage in occupations as planned in 3LP. The benefits obtained from participating in 3LP such as increased physical health conditions and social relationships facilitate an increase in general self-efficacy. Furthermore, the group and individual sessions of 3LP provided knowledge and awareness to the participants regarding the important and benefits of occupations. The knowledge and awareness obtained encouraged further participation in 3LP.

The participants demonstrated a sense of perceived self-efficacy by showing confidence, motivation and competence in engaging in occupations. Subsequently, the participants showed an optimistic orientation towards future life. This finding
suggests that there is relationship between GSE with expectations towards future orientation in life.

8.3 Overall discussion

Pre intervention results indicated that the GSE amongst the participants was low and the focus groups illustrated the phenomena in relation to constraints and expectations that the participants had to acknowledge and tolerate. Lack of attainment of the sources of self-efficacy is postulated have an impact on GSE. The results and the findings reflect the cultural values and societal expectations amongst the participants and the staff of the institution. To date, no GSE study has been conducted in Malaysia, this makes the discussion of the result more difficult. Although data is available from Asian countries, such as Hong Kong and Taiwan, Wu et al (2004) and Scholz, et al. (2005) stress that the value of GSE is different across cultures and countries.

Post intervention results and findings indicate that there are significant increases in scores of GSE amongst participants in the experimental group. 3LP provides various sources of self-efficacy, such as performance accomplishment, vicarious experience, verbal persuasion and changes in health status through engagement in self-directed and autonomous occupations. It is proposed that the changes were caused by the changes in the sources of self-efficacy. The changes are affected the specific domain of self-efficacy which subsequently affecting the GSE amongst the participants in the experimental group.

The integration between quantitative results and qualitative findings obtained pre and post intervention is presented in Figure 8.6. Integration of both data provides an overall broad picture regarding GSE pre and post intervention. Qualitative findings complement and expand the quantitative results, which is aligned with the aim of the study design (Tashakkori and Teddlie, 1998; Creswell, 2003; Onwuegbuzie and Teddlie, 2003).
Quantitative results

**PRE - INTERVENTION**

- **General Self-efficacy (GSE)**
  - Median (IQR) – 22.00 (20.75-25.00)

**POST - INTERVENTION**

- **General Self-efficacy (GSE)**
  - Median (IQR) – 27.00 (25.00-29.00), significant differences between pre and post intervention $z = -5.33$, $p = 0.001$, $r = 0.56$

Qualitative findings

**External issues**
- Cultural values & norms
- Rules and regulations
- Inst. Environment
- Lack of opportunity and facilities

**Internal issues**
- Personal abilities and capacities

**Acceptance (Reda)**
- 'tak apalah' (it is ok)
- ‘dah biasa’ (I am used to it)
- Compromise lifestyle
- ‘no choice’
- ‘dah nasib’ (my fate)

**Apprehension and distress (I can’t)**

**Adjustment and adaptation**

**Being able to**

- Changes in abilities, patterns and freedom.
  - (‘I can’)
- Knowledge and awareness
  - (‘I have’)
- Future plan, direction in life
  - (‘Next week’)
- Positive affect
  - Motivated & confident
  - (‘I feel’)

Figure 8.6: Integration of pre and post intervention for GSE for the experimental group
8.4 Summary points for Chapter 8

- Low level of GSE as compared with GSE amongst community dwelling elderly people in Western countries was obtained in both groups prior to 3LP, but the scores are comparable to scores from community dwelling elderly people in Hong Kong and Japan.

- Two inter related reasons for the low scores were related to cultural differences in Western and Eastern countries and lack of attainment to the sources of self-efficacy.

- Eastern elderly people have a predominantly external locus of control with the belief that it is fate that determines life events and outcomes. Belief in fate is embedded strongly in the participants’ life which is related to their religious and social cultural environment. Western literature indicates that the presence of an external locus of control is associated with low self-efficacy. However, previous studies stress there is no real differences in GSE between Western and Eastern elderly people.

- Participants described the need to engage in the occupations, but felt apprehensive about engaging as a result of constraints in the institutions, fear of implications, the need to conform to societal and cultural values of the society and the institutional environment.

- Participants in the study lacked sources of self-efficacy including lack of engagement in occupations that provide a sense of performance accomplishment, lack of verbal persuasion to engage in occupations, which is related to expectations of the participant and deterioration in
• Post 3LP results indicated that there is a significant increase in GSE compared with the participants in the control group. Participation in 3LP increased GSE amongst participants in the experimental group.

• Focus groups illustrated the phenomena in which that the participants received sources of self-efficacy. They described an increase in confidence, positive affect and optimism towards future life.

• The mechanics of 3LP in which the programme eliminated barriers to engagement, provided knowledge, opportunities and resources. This empowered the participants in the experimental group to engage in variety of occupations.

• These factors are postulated to contributed to an increased in GSE scores amongst participants in the experimental group.
CHAPTER 9:

QUALITY OF LIFE (QoL) - RESULTS, FINDINGS AND DATA INTEGRATION.
9.0 Introduction

This section will present the quantitative results and the qualitative findings for pre and post intervention of the 3LP for QoL. The qualitative findings will be integrated to supplement the quantitative results, to provide an overall and broad picture of the study as an aspect of the mixing dimension and design of the study.

9.1 Quantitative and qualitative data integration from pre 3LP

This section will initially present the quantitative data followed by the qualitative findings obtained from the participants in the experimental and control groups prior to the 3LP. Both data will be integrated in the discussion section.

9.1.1 Pre intervention quantitative results

Pre intervention quantitative results will deal with the analysis of questions 1 and 2, followed by analysis of all domains in WHOQoL-Bref

9.1.1.1 Analysis of question 1: How do you rate your quality of life?

Descriptive analysis indicated that 59.83% (n=28) of the participants in the experimental group and 77.7% (n=28) of the participants in control group stated that their quality of life is poor or either poor or good as shown in Table 9.1. 62.2% (n=51) of participants in both groups indicated their QoL in neither poor nor good, but the data shows inclination towards good QoL.
Table 9.1: Descriptive analysis of question 1

Mann-Whitney U test indicated that there is no significant difference in Question 1 of WHOQoL for experimental group (Md=3.00, n=46) and control group (Md=3.00, n=36), U = 666.00, z = -1.77, p = 0.08, d = 0.19) as shown in Table 9.2.

Table 9.2: Mann-Whitney U Test for Question 1 and 2 of the WHOQoL-Bref pre experimental study for experimental group and control group
9.1.1.2 Analysis of question 2 - How satisfied are you with your health?

Descriptive analysis of this question indicated that 54.3% (n=25) of the participants in experimental group and 55.6% (n=20) of the participants in control group stated that their health is neither poor or good respectively as indicated in Table 9.3.

Mann-Whitney U test indicated that there is no significant differences in Question 2 of WHOQoL for experimental group (Md = 3.00, n = 46) and control group (Md = 3.00, n = 36), U = 694.00, z = -1.38, p = 0.17, d = 0.15 as shown in Table 9.2. 54.9% (n=45) of participants in both groups indicated their health status is neither poor nor good, but the data shows inclination towards good health status.

<table>
<thead>
<tr>
<th>Scale</th>
<th>E (n=46)</th>
<th>C (n=36)</th>
<th>A (n=82)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n(%)</td>
<td>n(%)</td>
<td>n(%)</td>
</tr>
<tr>
<td>Very dissatisfied</td>
<td>1 (2.20)</td>
<td>-</td>
<td>1 (1.20)</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>4 (8.70)</td>
<td>8 (22.20)</td>
<td>12 (14.60)</td>
</tr>
<tr>
<td>Neither poor or good</td>
<td>25 (54.30)</td>
<td>20 (55.60)</td>
<td>45 (54.90)</td>
</tr>
<tr>
<td>Satisfied</td>
<td>14 (30.40)</td>
<td>5 (13.90)</td>
<td>19 (23.20)</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>2 (4.30)</td>
<td>3 (8.30)</td>
<td>5 (6.10)</td>
</tr>
</tbody>
</table>

E = experimental group, C = control group, A = experimental and control groups
n = number of participants

Table 9.3 : Descriptive analysis of question 2

9.1.1.3 Analysis of all domains in WHOQoL – Physical, psychological, social relationships and environment

Median scores for all domains and total scores for WHOQoL is presented in Table 9.4. Mann Whitney U tests show that there is no significant difference in scores between the experimental group and the control group; which indicates that both groups are comparable.
Table 9.4: WHOQoL scores and Mann-Whitney U Test for all domains pre-experimental study for experimental group and control group

Figure 9.1 shows box plots for all domains in WHOQoL for experimental group and control group. The box plots indicated that there are three outliers in the control group. Participant number 81 shows positive extreme values in psychological and social health. Negative extreme values were noted for participant number 60 for psychological health.
Figure 9.1: Box plots for all domains in WHOQoL pre experimental study for experimental group and control group

9.1.2 Pre intervention qualitative findings

One super-ordinate theme emerged from the pre intervention focus group, adjustment and adaptation, as shown in Figure 9.2. Participants in the focus groups described their experiences in relation to quality of life as a result of ability to adjust and adapt to the changes in daily life in the institution. Subsequently two master themes emerged from the super-ordinate theme i.e. contentment (Syukoor) and acceptance (Reda).
9.1.2.1 Master theme 1: Contentment (*Syukoor*)

Participants expressed their contentment with various benefits obtained by living in the institution such as health care, food, shelter, safety, free from responsibilities and pressures in life and opportunity to focus on other things. *Syukoor* is an Arabic word frequently used amongst Malay people. *Syukoor* has a religious connotation as it is a word for contentment and thankfulness for what was been given by the supreme power. The word is scattered throughout the focus group transcripts, mentioned by many participants, thus it was taken as one of the master themes for QoL.

Having good health and ability to perform daily occupations independently provided a sense of quality of life for the participants. For example, Mr. Tamping, a 76 year old man conveyed his contentment regarding ability to engage in ADLs that provided quality of life to him;
“Syukoor, my life is good, even though I am an old man, I can walk slowly to the dining hall, I can see clearly, I can eat by myself, I don’t need anyone to help me”

Mr. Dudd illustrated a downward social comparison to describe his sense of contentment with his health status;

*There are many friends of mine who are already dead, syukoor, I still feel healthy, I am not in pain like other people in the ward [pause], I can walk on my own, I can eat on my own, I don’t need help from other people, my life is good, alhamdullilah.*

The pleasant physical environment of the institute was observed by participants to provide a sense of satisfaction, thus contributing to the quality of life. The physical environment which is perceived as beautiful and peaceful provides the participants with the opportunity to rest, relax and contemplate. For example, Mr. Suhaimi an 85 year old man said;

“there are plenty of big shady trees where we can relax after lunch and chat with friends. I often relax under that tree by myself; I feel at peace, I feel relaxed”

Contentment with the benefits and opportunities obtained was also identified as one of the experience that contributes to QoL. Mr. Sukhumi explains the benefits obtained by living in the institution that fulfilled his needs and goals perceived as important to him. Fulfilment of his important needs provided a sense of contentment. He said;

‘.. who will provide meals if I live outside (the institute) ?.

and further:

“I feel happy to live here, [break] syukoor ... I have what I need, I am satisfied, I am not worried about work and means to look for money to buy food, everything is prepared, I have six meals a day ... feel free from the pressure to work, house maintenance and so on ...I don’t even have to clean my plates, I don’t have to worry about anything anymore”
The friendliness of the staff and feeling safe living in the institute was also indicated as a construct of contentment. One participant remarked:

‘I feel safe in here, nobody is teasing me because I am old, I feel that I am respected, they (the staff) call me Mak Cik (auntie) they really take care of me, I can go to the clinic if I am not feeling well at anytime and I don’t have to worry about my children and my relatives and they don’t have to worry about me in here.
(Mrs Surinam, 80 year old female).

9.1.2.2 Master theme 2: Acceptance

Acceptance with their life situation and personal changes in life as described by the participants provide indications of quality of life. A 71 year old female, describes her acceptance

‘It is ok, I Redha (accept) what happens in my life, what was determined in my life [break] left by my husband for another woman. I couldn’t’ stand staying with my children, they have a small house in the city, I felt that I lived in a prison and I don’t have friends there. I redha that I have a place to stay, at least, I am not homeless. Even though the food here sometime is not nice, that’s’ ok [break] …, at least I have food to eat … (Mrs. Haram, 71 year old female)

Mr. Baharuddin, conveyed his sense of acceptance by shifting (lowering) the value of what was perceived important to him. He said;

Tak apalah [it is ok]. There is no need for me to live outside, there is nothing there, I am old, there is nothing out there that I want, I satisfied with my life, I don’t need anything out there, furthermore, my children sent me here, they don’t want me anymore [pause]
9.1.3 Discussion and data integration for pre 3LP

9.1.3.1 Introduction

Quantitative results indicated that the participants rate their QoL (Question 1) as neither poor nor good and described their satisfaction with health status (Question 2) as neither satisfied nor dissatisfied. However, the data inclined towards satisfaction with health and QoL. Quantitative analysis of the domains in WHOQoL amongst the participants in the experimental group shows that physical health conditions had the highest impact in WHOQoL scale, followed by the social relationships domain, whilst results from participants in control group indicated that social domain contributed most, followed by physical health condition. No significant difference between control group and experimental group in questions 1, 2, in all domains and total scores suggested that the data obtained between groups are comparable.

9.1.3.2 Discussion

To date, there is no normative value for QoL amongst elderly people in Malaysia using the WHOQoL-Bref. Thus, comparison was made with the scores obtained from Western and Eastern countries.

Pre intervention results indicated that the total scores and scores in all domains in WHOQOL-Bref are higher than institutionalised elderly people in Taiwan (Lai et al. 2005) and scores in physical health and social relationship domain for participants in this study are higher than community dwelling elderly people in Taiwan (Hwang et al. 2003) and Korean war veterans who live in the community (Lin et al. 2008). However, the total scores of WHOQoL and scores in all domains for participants in this study is lower than international older adults > 65 year old (Skevington et al. 2004), elderly people who live alone in Taiwan (Lin et al. 2008), healthy elderly people in Indonesia and Australia (Kasumaratna, 2008; Ikin et al. 2009), elderly people who live in rural areas and in a nursing home in Turkey (Luleci, et al. 2008;
Arslantas et al. 2009) and norms for elderly people (Hawthorne, et al., 2006). Description of the scores in previous studies is in Appendix 9.2.

This section will discuss three main possible explanations of why there are differences in scores in WHOQoL-Bref. The possible explanations are:

a. The attributes of participants in this study, such as health status, life experience and reason for relocation.

b. Religious, cultural values and norms amongst participants in the study.

c. Social relationships in the institution.

a) The attributes of the participants in the study

There are four important personal attributes that could have an impact, giving high scores in QoL, they are; physical and mental health status, duration of living in the institution, reason for relocation and hardship in life.

Participants in this study consist of physically and mentally well elderly people (independent in ADL, scores > 22 in MMSE and above 7 in GDS). Quantitative results from question 2 indicated that there is inclination towards satisfaction with perceived health status. In addition, good health status was also illustrated by participants in focus groups. Participants described a sense of contentment with health functions that enabled them to engage in daily activities within the super ordinate theme of adjustment and adaptation.

Previous studies indicated that one of the factors that affect perception towards QoL is good physical and mental health functions (Gause and Masesar, 1999; Mitchell and Kemp, 2000; Tseng and Wang, 2001; Kane et al, 2003; Tu et al. 2006; Cook and Stanley, 2009; Cooney et al. 2009). Frail and depressed elderly people perceived low QoL compared with ‘healthy’ elderly people (Hellstrom, et al., 2004; Wada, et al., 2005; Chan and Pang, 2007; Valente, 2006; Chung et al. 2007; Lee et al. 2009; Paskulin, et al., 2009; Van de Weele et al. 2009; Ali et al. 2010; Justine and Hamid,
2010; Kil et al. 2010). This could offer an explanation to the high scores in WHOQoL-Bref as compared to the study that was conducted in Taiwan (Lai et al. 2005). Participants in Lai et al’s (2005) study consisted of elderly people who were dependent and were depressed. Dependence and depression could contribute to low perception of QoL. Thus, this finding reinforces the principle that health status contributes to perception towards QoL.

Another factor that could contribute to high scores is related to the duration of living in the institution. Analysis of the demographic profile indicated that the median (IQR) duration of living in the institution is 74.0 (68.0-80.0) months. According to Wilson (1997), Lee, (2001), Mandville-Anstey (2002) and Lee et al. (2002), there are four stages of adjustment with living in an elderly institution; orientation, normalisation, rationalisation and stabilization. The stabilizing stage occurs at around five to six months after admission in which the residents resign from their previous life, accepting the circumstances, being thankful and starting to participate in the activities in the institution. The high QoL could be because the participants were already in the stabilizing stage; cope with the living situation, regain normality and integrate themselves as part of the community of the institution. This was supported by the description of participants’ experiences indicating a sense of adjustment and adaptation to the environment.

Based on the multiple discrepancy theory (MDT - Michalos, 1985; 86), the concept of life satisfaction that leads to QoL is related to current achievement (what is obtained) in life and aspirations / goals (what is wished for) in life, thus once what is aspired to is achieved, satisfaction and QoL with life will follow (Michalos, 1985; Diener, et al., 1999). Literature indicates that elderly people have different aspirations; goals in life, needs and things that are perceived important and priorities in life as compared with other groups of people. (Cooney, 1998; Kane & Kane, 2001; Ockander & Timpka. 2003; Vestling, Ramel & Iwarsson, 2005). For example, older people in institutions have a need for feeling safe and protected, whilst younger people in institutions seek control, productivity and flexibility (Kane & Kane, 2001), middle age women look forward to achievements and acquisitions in life, whilst
elderly women want to maintain the status quos and prevent deterioration in life (Cooney, 1989). This shows that the older women’s emphasis is on basic needs, such as health and materials as sources of life satisfaction, whilst middle age women have more diverse priorities and ranges of satisfaction and dissatisfaction.

In this study, QoL scores were high in spite of living with various constraints in the institution. This is possibly because the participants adjust and adapt their aspirations, needs and priorities to match with the realities and the acquisition or achievement of what is perceived as important and what matters to them. Cooney (1989) describes this as ‘fine tuning’ (p. 772), whilst Diener, et al. (1999) and Rejeski & Mihalko (2001) describe it as shifting values.

Pre experimental focus groups emphasised basic needs, such as food, shelter and health care as the most important things in their life. This is understandable in view of the social and demographic characteristics and economic status of the resident’s prior to relocation. In addition to the process of fine tuning and shifting values, participants also described undervalued advantages of living outside the institution. Obtaining what matters in life and devaluing the advantages of living outside the institution could facilitate a sense contentment amongst the participants which subsequently facilitates QoL. Thus, it is posited that the participants are willing to trade-off something perceived as less important, e.g. autonomy, for something perceived as more important in life (i.e. basic needs and safety). Contentment with basic needs is a factor that contributes to satisfaction is also described by Diener & Oishi (2002) and Chu & Leasure (2010).

Participants illustrated the sense of contentment (syukoor) and acceptance (redha) in the focus groups. Contentment was achieved through comparing their health condition with other residents and previous living conditions prior to re-location. Social comparison is often used by people with life threatening conditions (Jelicic and Kempen, 1999; Lindqvist, Carlsson and Sjoden, 2000; Lindqvist, et al., 2004; Sjodahl, et al, 2004; Buunk, et al., 2006; Seomun, et al. 2006) to reduce negative effects (Blazer, 2002; Dibb and Yardley, 2006; Uotinen et al. 2006; Cheng, et al., 2008), to increase self-esteem (Bearon, 1989; Dewar, 2003) and to facilitate a sense
of satisfaction and positive expectation towards the future (Chou and Chi, 1999; Jelicic and Kempen, 1999; Mehlsen, et al., 2003; Frieswijk et al. 2004; Cheng, et al., 2008). Lee, et al. (2002) view social comparison as a method of reframing the mindset, and as an adjustment mechanism to deal with various losses and depersonalisation as a result of living the an institution. The sense of contentment and acceptance that was obtained through social comparison and adjustment facilitated the aptitude to transcend the issues in the institution and achieve high QoL. Nystrom and Andersson-Segesten, (1990) describe transcendence as peace of mind; whilst Lindsey (1996) describes it as ‘health within illness’ (p.465).

Another factor that contributes to high perceived QoL is related to hardship in life prior to relocation to the institution. Analysis of the demographic profile also indicated that the median (IQR) age of the participants is 74.0 (68.25-80.00) year old, and 83% are above 75 years old. This revealed that the participants at a young age or early adulthood and experienced various physical, emotional, social and economic hardships in life for example, experiencing the Second World War, economic recession, prior independence of the country on foreign sovereignty before 1957, political instability and racial tension after independence of the country.

Hardship in life lowers perceived quality of life (Chan, 2000). People who experienced various adversities and hardships in life such as people who served in World War II, people who lived in rural areas, lack of economic resources and immigrants are often associated with low QoL (Guse and Masesar, 1999; Ikin et al. 2009; Arslantas, et al. 2009; Chang et al. 2010; Chu and Leasure, 2010).

Furthermore, demographic analysis also indicated that the participants, lacked education, lacked financial and social support prior to relocation, which eventually becomes the reason to volunteer for relocation to an elderly institution. This is similar to previous studies with regard to reasons for relocation to elderly institutions (Boggatz et al. 2009; Wu et al. 2009; Luppa et al. 2010). Elderly people who voluntarily relocated have a higher life satisfaction than elderly who are coerced by the social service system or by family (Dimond, et al, 1987; Nay, 1995; Morgan,
Reed and Palmer, 1997; Smith and Crome, 2000; Moshev-Ashley and Lemay, 2001; Capezuti et al. 2006; Wu et al. 2009).

Experience of hardship in life, improvised life conditions prior to relocation and voluntary relocation to an elderly institution may facilitate the development of a sense of acceptance, coherence and contentment with the living situations in the institution. Previous studies found that elderly people who experienced hardship in life prior to living in institution had a good quality of life (Guse and Masesar, 1999; Chang et al. 2010).

Perceived good quality of life may be mediated by ability to adjust and adapt with a pleasant environment, such as a place that did not require participants to live a ‘hard life’ to attain daily needs. It is hypothesised that adjustment and adaptation to a pleasant environment would be easier than adjustment and adaptation to live with various adversities, improvised living condition and hardships. Having decent accommodation that provided free basic needs such as meals, clothes, shelter, security, health care and respect from the staff, perceived as the things that most matter in life could offer an explanation of the considerable scores in QoL pre intervention. Focus groups offered supporting evidence to this statement by communicating a sense of contentment with the pleasant physical environment and the benefits obtained by living in the institution.

Furthermore, it is acknowledge that people with low social economic background (such as participants in this study) often have to make a greater effort to maintain high self esteem (Lee, 2010) and self-esteem contributes to quality of life (Sarvimaki and Stenbock-Hult, 2000; Fry, 2001; Kuehner and Buerger, 2005; Kim et al. 2009). Thus, as a result of various adverse circumstances, hardship and psychological issues experienced in life prior to re-location, it was easy for the participants to adjust and adapt to the environment in the institution and this contributed to perceived QoL.
b. Social relationships in the institution

Social relationships contribute to quality of life and life satisfaction amongst people in elderly institutions. However, as discuss in the review, relationships amongst residents in elderly institutions are often infrequent, only for adjustment and are non-meaningful relationships. They are faced with internal and external difficulties. For example, relationships with staff are often dependence-supporting, task-centered, and have a low level of emotional involvement.

However, this study found that there was a good relationship between staff and residents. Pre experimental focus groups illustrated participant’s sense of contentment with the close relationship and respect from staff. Feeling respected by staff has been described in various studies regarding institutionalised elderly people (Williams, 2006; Wadensten, 2007; Slettebo, 2008; Walent and Kayser-Jones, 2008; Wu et al. 2009). Literature indicates that the staff show respect in various ways, such as the use of a suitable tone of voice, listening to needs and method of caring (Williams, 2006; Wadensten, 2007; Slettebo, 2008; Walent and Kayser-Jones, 2008). In Eastern countries, respect for elderly people is expressed through the method of addressing the residents, i.e. not by their name but by age related titles such as uncle, aunty, grandma etc, which mimic parental relationships (Chuang and Huang, 2007; Wu et al. 2009). These diminutives indicate respect associated with the doctrine of filial piety (Chuang and Huang, 2007; Wu et al. 2009) and ‘adap’ (mannerism) towards elderly people in Malaysia (Yusaini, 2007). However, in Western countries, this diminutives and ‘false’ parental relationship is perceived as improper (Williams, Kemper and Hummert, 2004; Williams, 2006). Williams (2006) perceived this diminutive, like many other diminutives such as ‘honey’ and sweetie’ as ‘inappropriately intimate terms of endearment’ (p. 126).

Previous studies also indicate deeper involvement and a good relationship with staff increased participation in occupations, positive affect and increased pleasure (Meeks and Looney, 2011), providing a feeling of being valued, intimacy, involvement and nurturing a sense of contentment (Shattell, 2004; Pearson and Fitzgerald, 2003;
Stabell et al. 2004; Berglund and Kirkvold, 2007; Wilson and Davies, 2009). This assists the process of thriving in the institution (Abbott et al. 2000; de Veer and Kerkstra, 2000; Kane, 2001; Berglund and Kirkevold, 2007; Wilson and Davies, 2009) which subsequently facilitate high QoL.

Another factor that could contribute to high scores in the social domain in WHOQOL-Bref is relationships with other residents. Focus groups described the experience of adaptation and adjustment amongst participants living in the communal environment with various infrastructural limitations. Infrastructural limitations may trigger elderly people to become territorial and aggressive (Rosen, et al. 2008; Zeller et al. 2009). However, to ensure harmonious environment, participants related that they were willing to compromise and tolerate other residents. This type of reciprocal relationship and willingness to compromise to ensure harmonious living environment is often discussed in literature regarding institutionalised elderly people living in a communal environment (Rosen et al. 2008; Chuang and Abbey, 2009; Wilson and Davies, 2009). Literature from Eastern countries indicates that the collectivism and benevolence culture perceived as virtue enable the elderly people to cooperate with other residents to ensure a harmonious living environment (Lee, 1999; Chuang and Abbey, 2009). This culture made it easy for the elderly people in the study to remain open, cooperative, self-restrained, non-confrontational and to accept the communal living environment which eventually strengthens the nature of the relationship amongst the residents. This living environment could offer an explanation of the high scores in the social domain in WHOQOL-Bref.

These findings reinforce the fact that the social relationships is one of the most important factors that contributed to QoL and is similar to previous findings (Gause and Masesar, 1999; Mitchell and Kemp, 2000; Tseng and Wang, 2001; Kane et al, 2003; Tu et al. 2006; Cook and Stanley, 2009; Cooney et al. 2009; Lee et al. 2009). Furthermore, previous studies indicated that good emotional social support sources and interaction with friends and staff is positively associated with adjustment in elderly institutions (Porter and Kruzich, 1999; Mosher-Ashley and Lemay, 2001;
Depaola and Ebersole, 1995; Bergland and Kirkevold, 2006; Teeri et al. 2007; Cook and Clarke, 2010; Teitelman, 2010). This provides justification to the super-ordinate theme that emerged from pre intervention focus groups. Adjustment and adaptation was easy to achieve by the participants as they have good social support from friends and staff in the institution.

c. Religious, cultural values and norms amongst participants in the study

Religious conviction is fundamentally strong amongst people in Malaysia. Religious beliefs such as Islam, Christianity, Buddhism, Hinduism and Confucianism put a strong emphasis on contentment with life and this is strongly embedded in daily life as illustrated in many religious related proverbs as below:

“With coarse rice to eat, with water to drink, and my bent arm for pillow – I have still joy in the midst of all these things”
- Confucius-

“Riches are not from an abundance of worldly goods, but from a contented mind”
- Prophet Muhammad S.W.A -

“But godliness with contentment is great gain”
- Timothy, 6.6 -.

“Health is the greatest gift, contentment is the greatest wealth, faithfulness is the best relationship”
- Buddha –

Furthermore, cultural core values, norms and traditions amongst people in Malaysia expect people to be contented with what they have (Regan, 1980; Yusof, 1986; Yusaini, 2007), respect and compliance with authorities and rules and regulations to avoid friction or interpersonal conflicts (Sugirtharjah, 1994; Muthaly et al. 2006; Yusaini, 2007; Mansor, 2010). This are deeply imbedded in traditional culture, passed on through folklore and is expected behaviour (Kaplan, 2001). The contentment common in elderly people is illustrated a Malay proverb as below:
“Lebih baik satu burung ditangan dari pada sepuluh burung bebas berterbangan di dipokok (It is better to have one bird in your possession than ten birds flying freely in a tree – simply means something is better than nothing)
- Malay proverb –

In addition, in Malaysia there is a social expectation that elderly people should live a sedentary lifestyle (Fiatarone et al. 1996; Melillo et al. 1996; Sarkisian, 2005). The expectation is illustrated by the proverb below:

“Kubur kata mari, rumah kata nanti” (The graveyard is already calling, but family want us to stay alive – means that elderly people should ‘behave’ like elderly people, contented to relate themselves to religious concerns, to stay at home and not to engage in activities associated with young people such as going to the pub or recreational centres)
- Malay proverb –

As a result of these cultural values and social expectations, some elderly people in Malaysia do live in a sedentary fashion (Che et al. 1996; Khor et al. 1999; Shariff and Khor, 2005; Selvaratnam and Poo, 2007; Justine and Aizan, 2010). This is because religious factors and cultural core values expect elderly people to be contented with what has been given.

A sense of contentment with the benefits and opportunities such as health care, basic needs provision and safety was expressed by participants in the pre experimental focus groups. Contentment is synonymous with happiness and a good life (Carson, 1981) and can help to ease adjustment and adaptation to a new environment (Clare et al. 2008) and provide life satisfaction (Dahlan, Nicol and Maciver, 2011). This sense of contentment and the need to fulfil the expectations of authority (in order to avoid friction, to gain and provide respect and to maintain a harmonious environment) puts control on personal desires. Personal desires and goals become less important than group needs in a collective culture such as in Malaysia (Yusaini, 2007; Mansor, 2010). Thus, the residents are likely to adjust their needs and personal expectations and be willing to concede some elements in life, such as autonomy. Adjustment of personal needs to match realities could facilitate a sense of satisfaction and quality with life (Diener et al. 1999).
9.1.3.3 Conclusions for pre 3LP

The results indicated that the quantitative scores in all domains and in some specific domains are higher than previous studies in Eastern countries but lower than scores amongst community dwelling elderly people in Eastern and Western countries. The scores amongst the participants may be explained by the effect of attributes of the participants such as health status, reason for relocation and social relationships that exist in the institution. These findings reinforce the evidence that health status, reason for relocation and close social relationship contribute to QoL.

Pre experimental focus groups indicated that the participants are able to adjust and adapt to the institutional environment through establishing a sense of contentment with the health condition that enabled them to be independent in ADLs as well as the relationship with staff and other residents. Contentment and acceptance was achieved through comparing themselves with other residents and living situations prior re-location. In addition, participants pointed to the appealing nature of environment outside the resident blocks (wards) which provide them with sense of serenity and a venue for socialisation.

Contentment and acceptance are strategies to help elderly people to transcend the restrictions of their condition, feel happy, and appreciate their quality of life in spite of the losses and difficulties related to later life such as having heart disease or stroke (Ekman, Ehnfors and Norberg, 2000; Kvigne, Kirkevold and Gjengedal, 2004), illness such as cancer and AIDS (Lindsey, 1996; Sahlberg-Blom, Ternested and Johansson, 2001; Ho, Twinn and Cheng, 2010), pain (Blomqvist and Edberg, 2002), disability (Kulla, Sarvimaki and Fagerstrom, 2006) and living in a nursing home (Bickerstaff, Grasser and McCabe, 2003). This perceived quality of life in spite of disabilities, chronic illness or distress is a situation known as disability paradox (Albercht and Devlieger, 1999; Carr and Higginson, 2001; Ubel et al. 2005).
Disability paradox exists amongst elderly people in institution (Bickerstaff, Grasser and McCabe, 2003; Rai et al. 1995; Guse and Measesar, 1999; Cole, 2007; Drageset et al. 2008) and people with musculoskeletal disorder, heart disease, cancer and depression (Malterud and Hollnagel, 2004). Bickerstaff, Grasser and McCabe (2003) conducted face to face interview with 95 residents in long term care through open ended questions about the residents’ life in the institution. Their findings indicated that they accepted their lot and were contented with their past, present and future life which contribute to quality of life.

Disability paradox is possible when elderly people have a high sense of coherence between mind, body and spirits in the context of their physical and social environment and their transcendence over their losses in life (Bickerstaff, Grasser and McCabe, 2003; Johansson, 2003; Cole, 2007; Eriksson and Lindstrom, 2007; Becker et al, 2010). Subsequently, they are able to successfully adjust and adapt to the situation and attained high levels of quality in life (Kulla, Sarvimaki and Fagerstrom, 2006). Adjustment and adaptation were described by the participants in the focus groups. This indicated that the disability paradox existed in the institution under study.
9.2 Quantitative and qualitative data post 3LP

This section will initially present the quantitative data followed by the qualitative findings obtained post 3LP for participants in the experimental and control groups. Both data will be integrated in the discussion section.

9.2.1 Post intervention quantitative results

Post intervention quantitative results will involve analysis of question 1 and 2, followed by analysis of all domains in WHOQoL-Bref.

9.2.1.1 Analysis of question 1: How do you rate your quality of life?.

Descriptive analysis of this question for post intervention indicated that 84.8% (n=39) of the participants in the experimental group rated their quality of life as good or very good, whilst 66.7% (n=24) participants in control group rated their quality of life as either poor or neither poor or nor good as indicated in Table 9.5. Mann-Whitney U test indicated that there is significant difference between responses from participants in the experimental group and the control group as shown in Table 9.6.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E (n = 42) n(%)</td>
</tr>
<tr>
<td>Very poor</td>
<td>-</td>
</tr>
<tr>
<td>Poor</td>
<td>-</td>
</tr>
<tr>
<td>Neither poor nor good</td>
<td>3 (6.50)</td>
</tr>
<tr>
<td>Good</td>
<td>31 (67.40)</td>
</tr>
<tr>
<td>Very good</td>
<td>8 (17.40)</td>
</tr>
</tbody>
</table>

E = experimental group, C = control group, B = experimental and control groups
n = number of participants

Table 9.5 - descriptive analysis of the question 1- post experimental
Question 1: How do you rate your quality of life?

<table>
<thead>
<tr>
<th>Groups</th>
<th>Md (IQR)</th>
<th>(n)</th>
<th>u</th>
<th>z</th>
<th>p</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>4.00 (4.00-4.00)</td>
<td>42</td>
<td>236.00</td>
<td>-5.51</td>
<td>0.00</td>
<td>0.63</td>
</tr>
<tr>
<td>C</td>
<td>3.00 (3.00-4.00)</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Question 2: How satisfied are you with your health?

<table>
<thead>
<tr>
<th>Groups</th>
<th>Md (IQR)</th>
<th>(n)</th>
<th>u</th>
<th>z</th>
<th>p</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>4.00 (4.00-4.00)</td>
<td>42</td>
<td>284.00</td>
<td>-4.96</td>
<td>0.00</td>
<td>0.57</td>
</tr>
<tr>
<td>C</td>
<td>3.00 (3.00-4.00)</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

G = Groups, E = Experimental group, C = Control group, n = Number of participants, Md = Median, IQR = Interquartile range.

Table 9.6: Mann-Whitney U Test for Question 1 and 2 of the WHOQoL-Bref post experimental for experimental group and control group

The Wilcoxon signed rank test revealed statistical significant differences in how the participants rate their quality of life following participation in 3LP, z = -4.39, p < 0.01, with large effect size (r = 0.50). The median scores of the rated quality of life increased from pre 3LP (md = 3.00) to post 3LP (Md = 4.00) as compared with control group, z = -1.41, p > 0.05, with small effect size (r = 0.17). There is no change in median scores for control group as shown in Table 9.7.

Therefore, it is concluded that participation in 3LP facilitated changes in the rating of quality of life amongst participants in the experimental group.
**WHOQoL Questions** | **Baseline (IQR)** | **After 6 months (IQR)** | **Z score** | **p value** | **Effect size (d)**
---|---|---|---|---|---
**Q1** | | | | | |
- EG | 3.00 (3.00-4.00) | 4.00 (3.00-4.00) | -4.39 | 0.00 | 0.50 |
- CG | 3.00 (3.00-4.00) | 3.00 (3.00-4.00) | -1.41 | 0.16 | 0.17 |
**Q2** | | | | | |
- EG | 3.00 (3.00-4.00) | 4.00 (3.00-4.00) | -3.99 | 0.00 | 0.43 |
- CG | 3.00 (3.00-4.00) | 3.00 (3.00-4.00) | -0.51 | 0.61 | 0.06 |

IQR = interquartile range. Q1 = Question 1 in WHOQoL – How do you rate your quality of life, Q2 = Question 2 in WHOQoL – How satisfied are you with your health.

Table 9.7 - Wilcoxon Signed rank Test for question 1 and 2 WHOQoL between experimental group and control group

### 9.2.1.2 Analysis of question 2 - How satisfied are you with your health?

Descriptive analysis of this question indicated that 88.08 % (n=37) of the participants in experimental group indicated that they are either satisfied or very satisfied with their life, whilst 67.64% (n=23) of the participants in control group indicated that they are dissatisfied and neither satisfied or dissatisfied with their health conditions as indicated in Table 9.8.

<table>
<thead>
<tr>
<th>Scale</th>
<th>E (n = 42)</th>
<th>C (n = 34)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n(%)</td>
<td>n(%)</td>
<td></td>
</tr>
<tr>
<td>Very dissatisfied</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>-</td>
<td>7 (20.60)</td>
</tr>
<tr>
<td>Neither poor or good</td>
<td>5 (11.90)</td>
<td>16 (47.10)</td>
</tr>
<tr>
<td>Satisfied</td>
<td>31 (73.80)</td>
<td>10 (29.40)</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>6 (14.30)</td>
<td>1 (2.90)</td>
</tr>
</tbody>
</table>

E = experimental group, C = control group, B = experimental and control groups n = number of participants

Table 9.8 – descriptive analysis of the question 2 - posts experimental
Mann-Whitney U test indicated that there is significant difference between response from participants in experimental group and control group as shown in Table 9.6. Wilcoxon signed rank test revealed statistical significant differences in satisfaction with health status following participation in 3LP, whilst there is no change in median scores for control group as shown in Table 9.7.

Therefore, it is concluded that participation in 3LP facilitated changes in satisfaction with health amongst participants in the experimental group.

### 9.2.1.3 Analysis of all domains in WHOQoL for post intervention for experimental group and control group

Mean scores for all domains in WHOQoL for post intervention is presented in Table 9.9. The Mann Whitney U test shows that there is significant difference in scores between experimental group and control group (p<0.05).

Figure 9.3 shows post intervention box plots for all domains in WHOQoL for both groups. The box plots indicate that there are four positive outliers in the experimental group, whilst there is positive and negative outlier for the control group. Participant number 3 in the experimental group obtained extreme values in physical health domain and participants number 6, 18 and 24 in social health domain. Participant number 56 in the control group showed negative outliers and participant number 79 showed positive outliers in environment domain of WHOQoL. Positive outliers for participants in the experimental group can be explained by changes in physical status and social relationships experienced in participating in 3LP. Further information about these participants is in Appendix 9.1.
<table>
<thead>
<tr>
<th>WHOQoL Questions</th>
<th>Groups</th>
<th>Md (IQR)</th>
<th>(n)</th>
<th>u</th>
<th>Z score</th>
<th>P value</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain 1: Physical Health</td>
<td>E</td>
<td>14.87 (14.29-16.14)</td>
<td>42</td>
<td>152.0</td>
<td>-5.90</td>
<td>0.00</td>
<td>0.67</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>12.57 (12.00-13.86)</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domain 2: Psycho. health</td>
<td>E</td>
<td>14.00 (13.33-15.33)</td>
<td>42</td>
<td>131.5</td>
<td>-6.13</td>
<td>0.00</td>
<td>0.69</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>12.00 (10.67-12.67)</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domain 3: Social relationship</td>
<td>E</td>
<td>16.00 (14.00-16.33)</td>
<td>42</td>
<td>257.5</td>
<td>-4.86</td>
<td>0.00</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>12.00 (10.50-14.17)</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domain 4: Environment</td>
<td>E</td>
<td>13.24 (121.50-14.50)</td>
<td>42</td>
<td>483.5</td>
<td>-2.89</td>
<td>0.00</td>
<td>0.33</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>12.00 (11.50-13.50)</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total scores</td>
<td>E</td>
<td>58.45 (55.57-60.76)</td>
<td>42</td>
<td>119.0</td>
<td>-6.22</td>
<td>0.00</td>
<td>0.71</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>49.73 (45.29-53.69)</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

G = Groups, E = Experimental group, C = Control group, n = Number of participants, Md = Median, IQR = Interquartile range.

Table 9.9: WHOQoL scores and Mann-Whitney U Test for all domains post experimental study for experimental and control groups.
Figure 9.3: Box plots for all domains in WHOQoL post experimental study for experimental and control groups

9.2.1.4 Differences pre and post intervention for all domains in WHOQoL

Wilcoxon signed rank test revealed that there are significant changes in all domains of WHOQoL after six months participating in 3LP (p<0.05) with small to large effect size, whilst there is no significant differences in control group pre and post intervention as shown in Table 9.11.

Therefore, it is concluded that participating in 3LP significantly increased the ratings in the physical, psychological, social and environment domains of WHOQoL.
### Table 9.10: Wilcoxon Signed rank Test for all domains in WHOQoL pre and post for experimental group and control group

<table>
<thead>
<tr>
<th>Domain in WHOQoL Bref</th>
<th>Baseline (Median (IQR))</th>
<th>After 6 months (Median (IQR))</th>
<th>Z score</th>
<th>p value</th>
<th>Effect size (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical health</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- EG</td>
<td>13.34 (12.00-14.23)</td>
<td>14.87 (14.29-16.14)</td>
<td>-5.08</td>
<td>0.00</td>
<td>0.58</td>
</tr>
<tr>
<td>- CG</td>
<td>12.57 (12.00-14.29)</td>
<td>12.57 (12.00-13.86)</td>
<td>-0.04</td>
<td>0.97</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Psychological health</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- EG</td>
<td>12.66 (11.33-14.00)</td>
<td>14.00 (13.33-15.33)</td>
<td>-4.04</td>
<td>0.00</td>
<td>0.46</td>
</tr>
<tr>
<td>- CG</td>
<td>12.00 (11.33-13.17)</td>
<td>12.00 (10.67-12.67)</td>
<td>-1.23</td>
<td>0.22</td>
<td>0.14</td>
</tr>
<tr>
<td><strong>Social relationship</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- EG</td>
<td>12.00 (11.67-16.00)</td>
<td>16.00 (14.00-16.33)</td>
<td>-3.71</td>
<td>0.00</td>
<td>0.43</td>
</tr>
<tr>
<td>- CG</td>
<td>12.00 (11.00-14.67)</td>
<td>12.00 (10.50-14.17)</td>
<td>-1.12</td>
<td>0.26</td>
<td>0.13</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- EG</td>
<td>12.75 (11.00-14.00)</td>
<td>13.24 (121.50-14.50)</td>
<td>-2.47</td>
<td>0.01</td>
<td>0.28</td>
</tr>
<tr>
<td>- CG</td>
<td>12.00 (11.13-14.00)</td>
<td>12.00 (11.50-13.50)</td>
<td>-1.09</td>
<td>0.28</td>
<td>0.13</td>
</tr>
<tr>
<td><strong>Total scores</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- EG</td>
<td>51.44 (48.07-55.91)</td>
<td>58.45 (55.57-60.76)</td>
<td>-4.98</td>
<td>0.00</td>
<td>0.57</td>
</tr>
<tr>
<td>- CG</td>
<td>51.50 (45.75-54.51)</td>
<td>49.73 (45.29-53.69)</td>
<td>-1.13</td>
<td>0.26</td>
<td>0.26</td>
</tr>
</tbody>
</table>

IQR = interquartile range, WHOQoL-Bref = Brief version of World Health Organisation Quality of Life.

9.2.2 Post intervention qualitative findings

One super-ordinate theme emerged from the analysis of the post intervention focus groups; ‘Being able to’ (changes in life). The participants described their experience in relation to the changes in their life after participating in 3LP as being able to engage in various occupations. Five master themes emerged from the super-ordinate theme that relates to the experience of being able to; i.e. master theme 1: ‘I am busy’,...
master theme 2: ‘I can’ and master theme 3: ‘I have’, master theme 4: ‘next week’, master theme 5: ‘I feel’ as shown in Figure 9.4.

Super-ordinate Theme: ‘Being able to’ (Changes in life)

Master theme 2: ‘I can’
- Variations of occupations in daily life.
- Meaningful occupations (like home)

Master theme 3: ‘I know / I have’
- ‘Tak sangka’ (unexpected). Changes in physical abilities and connection with other people.
- Sense of freedom
- Better sleeping pattern
- Independent
- Helping other residents.

Master theme 4: ‘Next week’
- Plan for future
- Direction in life
- Purpose in life

Master theme 5: ‘I feel’
- Positive affect – happy, loved, satisfied, great (like young man again!)
- ‘Syukoor’ (Contentment)
- Sense of security.
- In control

QoL = Quality of life.

Figure 9.4 – Themes for post experimental focus groups

9.2.2.1 Master theme 1: ‘I am busy’

Experiencing the opportunity to perform various preferred occupations provided a sense of quality in life. Analysis of the transcripts of the focus groups indicated that the participants had a sense of ‘good life’ as there were occupational variations and changes in daily occupation patterns after the intervention.

The occupational variation theme emerged from the question regarding daily occupations performed by the participants. Participants’ narratives indicated the variations of occupations such as engagement in activities of daily living, recreational activities and paid occupations or work. For example, Mrs Nooraini, explain her busy daily schedule filled with various occupations. She described;
‘I feel good because I have many things to do every day, I wake up very early in the morning [pause] just like she said (referring to another participant), I seldom do the exercise, ... I feel lazy, my body is in pain [pause] after morning tea, [pause] I go to the kitchen to help in lunch preparation, cutting, cleaning the vegetables and fish, then I help to clean-up the kitchen and the dining hall [pause] I get some money, I didn’t have any work before this [pause] just sat around, not doing anything [pause]’ (As shown in picture below).

Mr Dud shared his view on the quality of life by explaining the changes of his daily occupations which had similarities with Mrs. Moraine. In addition, the changes divert his attention and fill up his time. He said,

‘for me, now there are many changes in my life, because there is lots of work to do after I wake up in the morning ... time is filled with occupations that I like to do and I don’t feel bored ... so I feel that time is not wasted ... I feel good,'
Mr Shoo, a 72 year old Chinese man described his quality of life in terms of various opportunities for occupation engagement and possible complications as a result of occupation deprivation. He stated;

‘... there are many things (I) can do ... (my) time is not wasted just like that ..., opportunity to learn, there is entertainment, exercise classes, gardening’

In addition, he said

‘...there must be some work, if there is no work ... (I) feel tired and bored, I become crazy, think about lots of things ...

The opportunity to perform occupations which have similar characteristics like occupations previously performed at home provided a good life. For example Mrs Kalona explains her good life as being able to engage in occupations just as at home. She said;

‘I can do gardening, flower potting, looking after the cleanliness of the ward ... just like at home ...

Mrs Surinam who was a housewife and mother explains her constructs in the good life in terms of performing domestic activities. She explained

‘... once a week, I have the opportunity to cook (a meal) with my friends, then we have the meal (together) .. I like to cook; at home I often cooked for my children, so I use to do this ...

9.2.2.2 Master theme 2: ‘I can’

A good physical condition enabled participants to perform daily occupation without assistance and provided a sense of quality in life. The participants explained ‘good life’ as being able to engage in daily occupations independently. For example, Mr Baharuddin, a 79 year old man described the good health conditions which enabled him to be independent. He said:
‘I am old, I can’t go anywhere else, but I am still able to do many things on my own, nobody helps me... I don’t hope for other people to assist me ’

Senses of altruism towards other inmates who are physically disabled provided a sense of satisfaction and established good relationships. For example, Mr Samir, a 62 year old male explained;

‘I can help (other people) ...I feel honoured to be able to help others in the ward at this age. I want to help other people even though no one pays me ... I feel proud’

He further explained;

‘...I use to help people when I was in my home town ... now I don’t have to think about anything else, so I help with whatever I can ... helping people is a virtue, right?

A sense of autonomy and control in life was mentioned by many participants. Most of the references to senses of autonomy are embedded in the answer regarding daily occupations amongst the participants after the intervention. For example, Mr. Samir described his experience of autonomy in conducting his occupations that makes him ‘feel at home’. He said;

I can go out at any time I want to if I want to get something from the shops, to buy fertilizer for my garden, or just walk around the shops, I feel very free [pause], I feel like at home. Alhamdullah [pause].

In addition, Mrs Dinah explains her autonomy and the variations in her occupation performance in daily life. She explained;

‘early in the morning, after morning prayer, I do some exercise until breakfast. After that, I help in watering the flowers, clean the ward, flower planting ... flower planting is my hobby. ... they didn’t allow us to do that before, I am not sure why ...but now, I am able to do that, so that’s what I do until morning tea ...
Discovering changes in physical abilities are unexpected outcomes after participating in the programme and this brought a sense of happiness to the participants. As stated by Mr Jacob, a 68 years old Malay man who walks with walking sticks. He said

‘... it is unexpected that can walk up to 7 Eleven, that is quite far, I can go to the post office ... I did not imagine I could do that too, I can stop if I am tired ... it depends on my mood too.’

9.2.2.3 Master theme 3: ‘I have’

Good social relationships exist between the staff and the participants in pre and post intervention periods. The relationship is based on mutual understanding, respect and personal bonds which contribute to the elements of quality of life living in the institute. In addition, the participants describe their tolerance and acceptance of the behaviour of other residents which facilitate a harmonious social environment.

Close relations between the staff in the ward and the residents provide special meaning and life quality to the residents. This was describe by Mr Tamping, as he stated

*The staffs in here are all good, they respect us as old people, they always sit down with us and just chat with us, I feel like I am accepted to live here. I think there is a bond between them and us, just like family*

Developing a relationship with other people outside the institute provides a sense of good life to the participants. For example; Mr. Abu, a 78 year old man said;

*People in the food stalls are good to me, they often give me discount when I buy food from them, and sometimes I go there just to chat with them.*

In addition, developing a close relationship with people outside the institution provides some hopes to establish future intimate relationships. This experience was illustrated by Ms. Fatimah, a 70 yr old female when she was asked about her social relationship. She said:
‘When I go out, there is a man that wants to know me’.

Opportunity to reconnect with children provides a sense of happiness amongst the participants. The relationship that was re-established in 3LP provides them with a meaningful connection. This was described by Mrs. Manama. She said;

“I am glad I could contact my children. At least I know they are in good condition, my grandchildren are in good condition, I know they don’t abandon me here”

The descriptions of experience as above indicates participants have meaningful relationships after attending the 3LP; with the staff, the community outside the institution and their children, which subsequently contributed to QoL.

9.2.2.4 Master theme 4: ‘Next week’

The changes in the occupation pattern and the variety of preferred occupation options available helped in creating a sense of aim, direction and purpose in life for the participants. For example, the opportunity to learn religious practices provided hope for the afterlife is described by Mrs. Fatimah Ali:

‘I am not too bored. I have aim in life [pause], even if I died, I can enter heaven, I get to learn about religious knowledge, ustazah (spiritual leader) come to teach us

Another younger participant, Mr Yaacob, 68 years old, expressing his excitement to an opportunity to participate in a trip to a recreational centre said;

‘...next week we are going to Sagil (a recreational centre), ... that is exciting ...

The excitement of participating in occupations was shared by Mrs Manama, an 86 years old Indian lady who said
‘...I am excited to get to see movie once a week ...I want to see one every week ... if would be great if they have 2 – 3 per week ...’

Domestic activities which are the preferred occupation of female participants provide a sense of happiness and anticipation. This is clearly seen with Mrs Micah, a 64 yrs. old Malay lady;

‘but I am not happy that I can cook once a week only, ... If would be great if I could cook more often ... we can take the ingredients from the kitchen .. we don’t need to buy

9.2.2.5 Master theme 5 : ‘I feel’

Participants in the experimental group described experiencing of positive effect of having opportunities to engage in religious related occupations that provide them with sense of direction and purpose in life. For example, Mrs. Mariam Kumis described her experience in engaging in religious related occupations that facilitate life satisfaction. She said;

*I go to religious talks once a week with my friends, he [the spiritual leader], teaches me how to pray, to recite when praying in a proper way, I feel at peace, if I die, will go to heaven, alhamdullilah [pause] that’s all what I want*

Opportunity to perform various preferred occupations contribute to a sense of happiness and changes in physiological function for the female participants. Mrs Tariam, a 64 year old female stated that

‘...I am happy, I get to eat the dishes that I cooked, I can attend religious talks, watch movies once a week, I feel satisfied, I feel happy ... I can’t get something like this (living) outside.’

For participants who engage in paid occupations, the occupations provide them with sense of financial security, a sense of self-esteem and acknowledgement. For example, Mr Baharuddin described his self-esteem as below;
‘My hobby is vegetable cultivation, sometimes the clerks come and ask me whether I want to sell it?, I just give it to them, sometime they give me RM2 ... I feel happy to get some money, I feel proud, I feel satisfied to see the vegetable grow

9.2.3 Discussion and data integration for post 3LP

This section will discuss the data obtained from quantitative results and qualitative findings for post 3LP. Both data will be integrated to provide an overall and broader picture regarding QoL amongst participants after the intervention. The qualitative findings will be used to complement and expand the quantitative results; this is in alignment with the concurrent embedded experimental mixed model design of the study.

9.2.3.1 Introduction

Post intervention results indicated that there are statistical significant changes in perception towards QoL (Question 1), satisfaction with health (Question 2) and changes in all domains in WHOQOL-Bref – physical health, psychological, social relationship and environment domains with small to large effect size. The scores are comparable with the norms for international elderly people (Skevington et al. 2004; Hawthorne, et al., 2006) and elderly people in the community in Taiwan and Turkey (Hwang et al. 2003; Arskantas et al. 2009), but slightly lower than elderly people in Australia (Ikin et al. 2009). Participating in 3LP significantly increased perceptions of QoL, health status and all domains in the WHOQOL-Bref scale with highest changes in the physical domain, followed by psychological domain of WHOQOL-Bref.
9.2.3.2 Data integration

More significant changes in physical domain than other domains in WHOQoL were expected. The programme provides opportunity for participants to engage in a variety of meaningful occupations. The changes in having variations in daily life was illustrated in the post experimental focus groups where the participants described the changes in daily life as being able to engage in meaningful and valued various occupations. Focus groups indicated that the participants engaged in various meaningful occupations such as ADL, work related occupations and leisure activities.

There are three possible mechanisms that could contribute to changes in the quantitative results as below and the possible mechanisms were identified through analysis of post experimental focus groups transcripts. The possible mechanisms are similar to possible mechanisms that contribute to the changes in life satisfaction scores. The mechanisms are;

a. The changes in functions
b. The characteristics of occupations in 3LP.
c. The attributes of participants and the institution.

a. The changes in functions

There are three important changes that are inter related and contribute to increase in perceived quality of life; changes in physiological, psychological and psychosocial functions.

The impact of changes in physiological function

Previous studies indicate that elderly people in institution are deprived of occupations (Perrin, 1997; French, 2002; Atwal et al. 2003; Wenborn, 2005; Hancock et al. 2006; O’Sullivan and Hocking, 2006; Haslam, 2008) and in need of
engagement in occupations (Jirovec and Kasno, 1990; Bowling and Fromby, 1992; Aller and Coeling, 1995; Geiger and Miko, 1995; Nolan et al. 1995; Zimmerer-Branum and Nelson, 1995; Perrin, 1997; Guse and Masesar, 1999; de Veer and Kerkstra, 2001; Kane, 2001; French, 2002; Ice, 2002; Van’T Leven and Jonsson, 2002; Bergland and Kirkevold, 2006; O’Sullivan and Hocking, 2006; Wadensten, 2006; Berglund, 2007; Brooker, 2008; Marshall and Mackenzie, 2008; Chen, 2010).

The need was illustrated in this study during pre-experimental focus groups.

However, previous literature points out that the occupations conducted in elderly institutions are incidental type of occupations, infrequent and unnecessary (Hancock et al. 2006; Harmer and Orrell, 2008). The activities are often conducted by non-professionals and purely for passing time (College of Occupational Therapy, 1998; Van’T Leven and Jonsson, 2002; Kolanowski and Litaker, 2006), which cause lack of motivation for the residents to participate (Stanley, 1995; Geiger and Miko, 1995; Hasseskus, 2002; Van’T Leven and Jonsson, 2002; Atwal et al. 2003; Vernooij-Dassen, 2007; Chaudhury and O’Connor, 2007; Pereira and Stagnitti, 2008).

Evidence from various studies indicates that engagement in occupation facilitates a sense of quality of life (Raynes, 1998; Gause and Masesar, 1999; Duncan-Myers and Huebner, 2000; Kane et al. 2003; Bond and Corner, 2004; Elavsky et al. 2005; Tu et al. 2006; Ball, et al, 2007; Howel and Kimbely, 2007; Murphy et al. 2007; Nimroad, 2007; Lobo et al. 2008; Cooney et al. 2009; Justine et al. 2010; Tse, 2010).

Analysis of occupations engaged by participants in the experimental group indicated 61.9% (n=24) participants engaged in physical related activities such as individual and group exercise programmes, 50% (n=21) work related activities such as paid occupations, gardening or volunteering, 64.3% (n=27) leisure related occupations and 90.5% (n=38) ADL which include daily walking around the institution or outside the institution during the day. These occupations require physical movement which contributed to increase in musculoskeletal functions, such as strength, endurance, balance and coordination.
For example, physical related activities such as walking and gardening require a certain degree of muscular skeletal involvement such as lifting, carrying, stooping, crouching and kneeling. Difficulty in these movements is associated with decreased muscular strength in the trunk and lower limbs which often occurs amongst elderly people (Hernandes, Goldberg and Alexander, 2008). Previous RCT’s and longitudinal studies indicate that engagement in physical related activities such as gardening and walking improved physical related functions such as muscular strength, balance and range of movement (Resnick et al. 2009; Egan and Mantes, 2010), increased physical function and fitness (McRea et al. 1996; Bo et al. 2006; Brown et al. 2004; Ozcan et al. 2005; Kato et al. 2006; Thelander et al. 2008; Littbrand et al. 2009; Resnick et al. 2009; Shin et al. 2009; Justine and Hamid, 2010; Lee, Lee and Woo, 2010) and increased psychological function such as relief from stress, prevention of loneliness and increased social network (Tse, 2010), improved quality of life and life satisfaction (Raynes, 1998; Gause and Masesar, 1999; Duncan-Myers and Huebner, 2000; Kane et al. 2003; Bond and Corner, 2004; Elavsky et al. 2005; Tu et al. 2006; Ball, et al, 2007; Howel and Kimbely, 2007; Murphy et al. 2007; Nimroad, 2007; Lobo et al. 2008; Cooney et al. 2009; Justine et al. 2010; Tse, 2010).

Increase in perceive physical function enabled participants to provide help to other residents. Previous literature indicates that one of the factors that contribute to QoL amongst institutionalised elderly people is ability to help other residents (Aller and Coeling, 1995; Bower and Greene, 1995; Guse and Masesar, 1999; Cottrell and Gallant, 2003; Yuen, 2003; Cipriani et al. 2006; Yuen et al. 2008; Cook and Stanley, 2009). Similarly, this study shows that nine participants (21.4%) in the experimental group engaged in voluntary activities, such as helping to clean the wards, helping the staff, pushing the trolley at mealtimes and helping dependent residents to engage in ADLs. In addition, this shows that the participants have high self-efficacy towards their physical abilities. Although no physical benefits were seen the participants are perceived to have received psychological benefits, such as increased self-esteem and feeling involved with everyday tasks. This finding supports previous findings that indicate helping others serves as a way to compensate for lost roles in life, increased

The changes in psychological function

The second largest effect of the intervention is towards the psychological domain in WHOQOL-Bref (medium effect, r = 0.46, median increment from 12.66 to 14.00). Questions in this domain inquire about the experience of enjoyment and meaning of life, ability to concentrate, satisfaction towards self and frequency of having negative feelings.

Experience of enjoyment in life was obtained through engagement with varieties of meaningful occupations such as recreational activities like bingo, movies, indoor and outdoor activities, shopping at the mall etc. The experience of enjoyment with life emerged from the post intervention focus groups. Opportunity to engage in meaningful occupations as planned in 3LP provides a sense of enjoyment. Previous studies show that engagement in occupations facilitates positive affect, such as feelings of happiness (Elavsky et al. 2005; Schreiner, et al., 2005; Meeks, et al., 2007), fun and contentment with life (Geifer and Miko, 1995; Harmer and Orrell, 2008; Pereira and Stagnitti, 2008) and reduction in depression (Marcolina, 2007; Mozley et al. 2007; Cripps, 2008; Resnick et al. 2008; Tsang, et al., 2008; Shin et al. 2009)

In relation to this study, participants related experience of happiness (positive affect) arising from the process of engaging in occupations. Positive affect may come from internal or external sources such as feedback from others. Positive feedback such as praise from staff, researcher (through SEEP), other residents and visitors and obtaining material reinforcement on the occupation engaged such as gardening, craftwork, education session, indoor activities and volunteer activities provides a sense of happiness and self-esteem. This finding supports the work of Tse (2008) who found that the practice of the activity provided positive affect which contributes
to life satisfaction. Repeated positive feedback and material reinforcement will produce a repeated sense of happiness. The repeated sense of happiness may alter cognitive judgement of life satisfaction (Rejeski and Mihalko, 2001).

Positive reinforcement also helps to facilitate adherence (Gorski et al. 2005; Pinto et al. 2005; Hacker, 2009) which eventually will facilitate more positive affect. Furthermore, respect obtained from community outside associated with the cultural value of filial piety and ‘adab’ (mannerism) received during engagement with occupations outside the institute could also alter the cognitive judgment towards life satisfaction and quality of life.

Another psychological change that posits to contribute to QoL and life satisfaction is the sense of freedom when engaging in occupations. Previous studies indicate that a sense of control enhance life satisfaction (Ashley and Lemay, 2001; Sparks et al. 2004; Abu-Baden, Rogers and Barusch, 2002). The sense of freedom while engaging in occupations outside the institute was communicated by the participants during post intervention focus groups.

Another psychological change exhibited by the participants in post experimental focus groups is that they had made a variety of future plans, either short or long term; for example going to market, planning to cook favourite meals or planning to go on pilgrimage with their children. This finding shows that engagement in occupations facilitates a sense of hope, future direction and purpose in life. Previous studies indicate that engagement in occupations foster a sense of hope and purpose in life (Herth, 1993; Borell et al. 2001; Elavsky et al. 2005; Duggleby and Wright, 2005; la Cour, Josephsson and Lubrosky, 2005; Low and Molzahn, 2007; Mozley et al. 2007; Eakman et al. 2010).

**Changes in psycho-social function**

Although relationships with staff and residents was perceived as more important than support from family members as a result of the nature of contact (Mosher-Ashley and
Lemay, 2001; Jonas-Simpson, 2006; Cheng et al. 2010) literature often shows that the relationship between staff and residents are less meaningful and have a low level of emotional involvement (Shattell, 2004; Berglund and Kirkvold, 2007; Sormunen et al. 2007; Wilson and Davies, 2009). However, this was not true in this study. The study found that the relationship between staff and residents was a resident-centred type of relationships pre and post intervention. Resident-centred relationships provide opportunity for elderly people to be listened to; which provides feelings of being valued, positive affect, intimacy, sense of involvement, provides genuine connection and nurtures a sense of contentment with the institution (Nichols, 1995; Koch et al. 1995; Liu and Shin, 1997; Mosher-Ashley and Lemay, 2001; Jonas-Simpson et al. 2006).

Thus, the changes in scores in the social relationship domain in WHOQOL-Bref post intervention could be due to the relationships with other people, such as relationships with people in the community outside the institution and meaningful relationships through re-connection with children. Participants welcomed the experience of being able to connect with people outside the institution and having a meaningful relationship with family members. These changes brought a sense of greater satisfaction, through positive affect, feeling more vigorous (like a young man again), feeling loved and their future plans with their children.

Studies investigating life satisfaction in Eastern countries also indicate the significant aspect of meaningful relationships from family members, peers and grandchildren with an improved sense of satisfaction with life (Lou et al. 2008, Lou and Chi, 2008), improved psychological function such as relief from stress, reduced loneliness and increased social network (Tse, 2010). Western literature focuses largely on social relationships as the main factor that contributes to life satisfaction (Lau et al. 1998; Chan et al. 2000; Silverman et al. 2000; Lou et al. 2008, Lou, 2010). The importance of maintaining social relationships with family members is embedded strongly within the Malaysia culture and this was illustrated in proverbs such as:
“air di cincang tak akan putus” (no sword can cut through water - which means family ties cannot be separated)  
- Old Malaysian proverbs –

“Sebusuk-busuk daging, dikincah dimakan juga” (as rotten as meat may be, it can be ground, chopped and can be eaten – which means how bad the behaviour of a family member, they still are relatives).  
- Old Malaysian proverbs –

“to forget one’s ancestors is to be a brook without a source, a tree without roots”  
- Chinese proverbs-

3LP provides opportunities for participants to re-engage relationships with children, connecting with community outside the institution and establishing relationship with other participants in the group sessions. This could offer an explanation for the medium effects of the intervention within the social relationship domain in WHOQOL-Bref.

The changes in physiological, psycho-social and psychological functions illustrated by the participants in post experimental focus groups enhance QoL, as shown by the significant changes in WHOQoL-Bref post experiment. It is speculated that the benefits of changes in various functions are interrelated; in which one benefit could facilitate enhancement in other benefits. For example, changes in musculoskeletal function (i.e.; increased endurance) could provide enhancement in psychological function (i.e.; feeling happy, increased self-esteem and having future direction in life) and the changes in musculoskeletal function could also encourage participants to engage in occupation outside the institute (which will facilitate benefits associated with psychosocial function).

In addition, there are other variables in the 3LP that could contribute to life satisfaction such as the characteristics of the occupations in 3LP.
b. Characteristics of occupations 3LP

The characteristic of occupations engaged in 3LP is individualised occupation as indicated in Chapter 4. Individualised occupations require participants to develop their own objectives (individualised goals) which encourages development of self-regulated skills (Rejeski and Mihalko, 2001). Individualised occupations motivates engagement (Muse, 2005) and more responsiveness in institutionalised elderly people (Kolanowski and Buettner, 2008; Cohen-Mansfield et al. 2010), increased adherence (Findoff, Wyman and Gross, 2009), reduced anxiety in relation to participation (Sung et al. 2010), enables the development of feelings of proficiency and success (Rudman et al. 1996; Holthe et al. 2007) that will create superior occupation outcomes (Clark et al. 1997; Jackson et al. 1998; Dorresteein, 2006). Furthermore, based on systematic review, it is found that tailored intervention is more effective than ‘blanket’ programmes or control programme (Richards et al. 2007; Suhonen et al. 2008).

Previous literature indicates that there are internal barriers (such as physical and mental status) and external factors (such as facilities, resource available, regulations and relationship with other people) (Kolt et al. 2006; McNeil, et al., 2006; Kowal and Fortier, 2007; Haslam, 2008; Chen, 2010) which affect the need and ability to engage in occupations in institutionalised elderly people. Internal barriers that were identified through focus groups are; fear of the consequences of engagement, lack of knowledge regarding the importance of engagement in occupations or diminished self-efficacy as result of prolonged disengagement, in addition to external barriers, such as lack of facilities and resources in the institution. All these barriers are addressed during 3LP which enables participants to engage in preferred and meaningful occupations with greater control. Furthermore, SEEP provides motivation components for 3LP. Eliminating barriers to engagement and motivation facilitates further engagement in occupations which can contribute to QoL.
c. The attributes of the participants in the study

The characteristics of participants in this study also contributed to life satisfaction. Pre experimental focus group indicated that participants were deprived of occupation due to constraints, lack of resources and opportunities which are mirrored in previous studies and as discussed in the literature review. The need to engage in occupations was fulfilled through 3LP. Based on the Unmet Need Model (Cohan-Mansfield, 2001) specific inappropriate behaviour caused by unmet needs can be prevented by simply fulfilling the needs. Providing unmet need is the basis of non-pharmacological intervention and includes providing occupation, sensory stimulation and social activities (Cohan-Mansfield, 2001). The focus groups indicated that the needs could not be met because of constraints (e.g. regulations, lack of opportunity and resources) and these constraints were minimised through 3LP. Meeting needs for occupation facilitates a sense of satisfaction with life.

9.2.3.3 Conclusion for post 3LP

Post intervention results indicate that the 3LP facilitates significant changes in perceptions towards quality of life (Question 1) and satisfaction with health status (Question 2) amongst participants in the experimental group with large effect size for rate on quality of life and medium effect on perception towards health. Analysis in all domains of QoL indicated that the changes were noted especially in the physical health domain but also in psychological health and social relationships with large and medium effect size in the experimental group. However, there was no significant difference in rating in all domains of the WHOQoL amongst participants in the control group.

The results indicated that participating in 3LP facilitates positive perception of health status and quality of life and this was seen by changes in all domains in WHOQoL. However, participation in activities conducted by the institution by participants in the control group did not facilitate significant changes in the domains of WHOQoL.
Significant changes and large effect size in physical health domain as identified in quantitative data was manifested also in the qualitative findings in master theme 1 (I’m busy) and 2 (I have) in post experimental focus groups. Changes in the physical health domain enabled the participants to engage in various occupations that are meaningful to them, provided opportunities to have variation and changes in their pattern of life, enabled the participants to be independent in daily life and to have the physical capacity to help other residents. The findings show that the master themes are inter-related. Being able to engage in these occupations could offer an explanation towards large effect size in the physical health domain as shown in quantitative results.

9.3 Overall Conclusion

To date, there are no norms for QoL amongst elderly people in Malaysia, thus comparison can only be made with other countries that have similar cultural characteristics; Eastern countries like Hong Kong, Indonesia and Taiwan. Results of the pre and post intervention assessments indicated that the perceived health status, satisfaction with health and level of QoL in four domains in QoL amongst the participants in the study was relatively high and comparable with elderly people who live alone in Eastern countries. These results indicated that disability paradox exists in the institution. Participants perceived high QoL is spite of various constraints in the institution. They exhibited contentment and acceptance of the situations. Transcendence over the losses in life was illustrated through themes developed in focus groups. Furthermore, the demographic factors of the participants and the social relationship that existed in the institution could also contribute to QoL. This finding suggested that there is cultural factor and cohort effect influencing the QoL. Significant changes in all domains in WHOQOL-Bref with large effect size were observed in the experimental group post intervention. Significant changes were observed especially in physical and psychological domains. Skevington (2002) describes QoL as an individual construct and it is about the meaning that people derive from their life. Thus, being able to engage in valued and individualised
occupations as planned in 3LP provided meaning to the participants’ lives which subsequently facilitated enhancement of QoL amongst participants in the experimental group.

Participating in 3LP enabled participants in the experimental group to have variation in daily life, have more capacity to engage in occupations, perform ADLs and engage in recreational activities which provided physical and psychological benefits to the participants which subsequently improved QoL.

The integration between quantitative and qualitative data obtained pre and post intervention is presented in Figure 9.5. Integration of both data provides an overall and broader picture regarding QoL pre and post intervention in relation to the constructs that constitute QoL amongst participants in the study. Qualitative data obtained complemented and expanded the quantitative results (Tashakkori and Teddlie, 1998; Creswell, 2003; Onwuegbuzie and Teddlie, 2003).
Quantitative results

**QoL Pre Intervention**
- Median (IQR) for total scores in all domains of WHOQoL-Bref = 51.44 (48.07-55.91)

**QoL Post Intervention**
- Median (IQR) for total scores in all domains in WHOQoL-Bref = 58.45(55.57-60.76), significant differences between pre and post 3LP, z = -4.98, p= 0.00, r = 0.57

Qualitative findings

**Contentment (Syukoor)**
- Health function
- Benefits & opportunities
- Social environment
- Hospitality, health and safety

**Acceptance (Redha)**
- 'tak apalah' (it is ok)
- 'dah biasa' (I am used to it)

**Adjustment and adaptation**
- Engaged in variations of meaningful occupations (I’m busy)
- Changes in functions, Independence, altruism (I can)
- Meaningful relationship (I have)
- Plan for future, purpose in life (Next week)
- Positive affect (I feel)

IQR = Inter quartile range, WHOQOL-Bref = Bref version of WHO QOL.

**Figure 9.5:** Integration of quantitative results and qualitative findings, pre and post intervention, for the experimental group
9.4 Summary points for Chapter 9

- The QoL amongst participants was evaluated using the short form of World Health Organisation Quality of Life (WHOQoL-Bref) scale. The form consists of 2 general questions. Question 1 is in regard to QoL and Question 2 is in regard to satisfaction with health with 24 facets (questions) that cover four main domains; physical health (7 facets), psychological (6 facets), social relationship (3 facets) and environment (8 facets).

- Prior to the intervention no significant difference was found between the control group and the experimental group in all of the questions and all of the domains; which shows that the groups are comparable.

- Pre intervention results showed that more than 50% of participants in both groups rated their QoL and health status (Question 1 and 2) as neither poor nor good or neither satisfied or dissatisfied.

- Analysis of the domain ratings indicated that the physical health domain is the highest scoring domain in both groups, followed by the social relationship domain for the experimental group and the psychological domain in the control group. This shows that physical health contributed to high quality in life.

- The scores in all domains are low when compared with elderly people in Western countries. However, the scores are comparable with elderly people in institutions and elderly people who live alone in Taiwan.

- These results show that disability paradox exists in the institution. Disability paradox is possible when elderly people have a high sense of coherence between mind, body and spirit within the context of their physical and social
environment. Subsequently, they were able to successfully adjust and adapt to their situation, had a positive outlook towards the institution and attained high scores in quality in life

- Therefore, the high scores that were obtained were hypothesised to be the result of adjustment and adaptations, a sense of contentment and acceptance with situations and these constructs were identified during pre-intervention focus groups.

- A sense of contentment and acceptance enabled the participants to transcend the issues in the institution and achieve high QoL. Contentment was achieved through personal comparison with other residents and living environments prior to re-location. This adjustment mechanism helped participants to reframe their mind to deal with various losses and depersonalisations resulting from living in the institution.

- Another possible explanation for the high scores is related to the demographic profile of the participants and the relationships that exist in the institution. The participants are from rural areas and faced various adversities in life, thus moving to a place that provided free daily requirements, security and comfort could contribute to QoL. Furthermore, it was found that there was a good relationship with the staff that arose from the doctrine of filial piety.

- Post intervention results indicated that there are statistically significant changes in all domains in WHOQOL-Bref. The scores are comparable with the norms for international elderly, elderly people in the community in Taiwan and Turkey, but slightly lower than elderly people in Australia.

- Significant changes with large effect size were observed in the physical health domain and medium effect size in the psychological domain.
- Focus groups identified the experience of the participants being able to engage in a variety of meaningful occupations that provided variation in life, opportunities to help other residents and have a meaningful relationship with children and people outside the institution.

- Opportunity and ability to engage in valued and individualised occupations as planned in 3LP provided meaning to the participant’s life which subsequently facilitated enhancement in QoL amongst participants in the experimental group.
CHAPTER 10:

CONCLUSION

AND

FUTURE DIRECTION
10.0 Introduction

This section will provide a discussion regarding the contribution of the findings to theory and practice in occupational therapy. In addition, it will explore the limitations of the study, provide recommendations for future research and recommendations for occupational therapy practice with elderly people.

10.1 Contribution of the findings to occupational therapy (OT)

Findings from this clinical trial and the users’ perspectives study indicate that engagement in occupations as predicated in 3LP facilitate enhancement of ERA, GSE and QoL. This study therefore contributes to evidence based practice in OT. This lifestyle redesign programme validates two successful lifestyle redesign programmes previously conducted for older people in the community in Western countries; i.e. The Lifestyle Redesign Programme (Clark et al. 1997) and Lifestyle Matters Programme (Craig and Mountain; 2007; Mountain et al., 2008; Mountain and Craig, 2011).

In addition, because the study was conducted for older people in an institutionalised setting and was conducted in an Eastern country it expands previous work in relation to the participants and venue of the study. This demonstrates that a lifestyle redesign programme based on occupational therapy can be successfully transferred to a different setting and across cultures with different values and philosophies in life. Furthermore, this study is the first study in OT that has looked at the impact of engagement in occupations in relation to ERA and GSE.

Other contributions of this study can be related to findings that support theory and practice in OT. In addition, the findings will also question or challenge some areas in OT and will add new knowledge to theory and practice in OT in the following areas:
- The characteristics and process of occupational engagement.
- Benefits of engagement in occupations.
- The issues of institutions for elderly people.

A summary of the contribution is presented in Table 10.1 below and is explained in sections 10.1.1 to 10.1.3.

<table>
<thead>
<tr>
<th>Contribution to</th>
<th>Supports</th>
<th>New</th>
<th>Question / Challenge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• The value of individualised and meaningful occupations.</td>
<td>• The feasibility of a lifestyle redesign programme for elderly people in institutions.</td>
<td>• The duration of lifestyle redesign programmes.</td>
</tr>
<tr>
<td></td>
<td>• The importance of eliminating barriers to engagement.</td>
<td>• The need to identify ERA prior to OT intervention.</td>
<td>• Independence vs. inter-dependence.</td>
</tr>
<tr>
<td></td>
<td>• The value of individual and group approaches during the process of engagement.</td>
<td>• Identification of GSE rather than specific self-efficacy for older people in institutions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Types of occupations engaged for institutionalised older people.</td>
<td>• The importance of autonomy for institutionalised elderly people in Eastern countries.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The importance of an educational component in a lifestyle redesign programme.</td>
<td>• The importance of providing a motivational component during the OT process.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The importance of occupational analysis and occupational reflection to provide insight.</td>
<td>• Contentment as a factor contributing to QoL.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The importance of autonomy for institutionalised elderly people in Eastern countries.</td>
<td>• The importance of</td>
<td></td>
</tr>
</tbody>
</table>

375
recognising the impact of culture in OT process. | meaningful social relationships.

<table>
<thead>
<tr>
<th>Benefits of engagement in occupations</th>
<th>Increase in QoL.</th>
<th>Engagement in occupation facilitates an increase in GSE and ERA.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Increase in physiological, psychological and psycho-social functions.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Issues in elderly institutions.</th>
<th>The presence of occupational deprivation in elderly institutions.</th>
<th>The effect of prolonged disengagement in occupations on hopes.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Common reasons for relocation in Eastern countries.</td>
<td>Social relationships in institution.</td>
</tr>
</tbody>
</table>

Table 10.1 Key contributions to OT

10.1.1 Process in occupational engagement

Findings from this thesis support previous findings regarding the process of engagement in occupations, question the current state of knowledge in OT and make a contribution to knowledge regarding the process of engagement in occupations as stated in occupational therapy theory, research and practice.

10.1.1.1 Previous findings supported

a. Individualised and meaningful occupations

Previous studies indicate that individualised and meaningful occupations are more responsive to need and more effective than ‘blanket’ programmes for older people in
institutions (Richards et al. 2007; Kolanowski and Buettner, 2008; Suhonen et al. 2008; Cohen-Mansfield et al. 2010). This is because individualised occupations motivate engagement (Muse, 2005), increase adherence (Findoff, Wyman and Gross, 2009), reduce anxiety in relation to participation (Sung et al. 2010), enable the development of feelings of proficiency and success (Rudman et al. Holthe et al. Harle et al. 2005) thus encouraging the development of self-regulated skills (Rejeski and Mihalko, 2001).

In relation to this study, the occupations conducted by participants show various inter-related characteristics, such as individualised, meaningful occupations and multi-layered core content. The occupations conducted are interesting and challenging for the participant, yet do not exceed the participant’s ability level, they are related to previous roles in life and self-identity and belong to the regular pattern of life prior to relocation.

Engagement in individualised occupations provide positive affect and previous studies indicate that positive affect facilitates a sense of satisfaction with life (Abu-Baden, et al., 2002; Fakouri and Lyon, 2005; Clare et al. 2008; Sok, 2010; Onishi et al. 2010). In addition, engagement in occupations related to life roles facilitate a sense of well-being (Trombly and Ma, 2002; Stevens-Ratchford, 2005; McKenna, et al., 2007; Harmer and Orrell, 2008) and provide a sense of connection between past and present (la Cour et al. 2005). Furthermore, the sense of autonomy gained when engaging in occupations will also facilitate a sense of life satisfaction (Foster, 1993; Ashley and Lemay, 2001; Abu-Baden, et al., 2002; Sparks et al. 2004; Clare et al. 2008). These characteristics are postulated to operate as mediating factors in enhanced QoL as evaluated by WHOQoL-Bref.

Thus, the findings of this study support the importance of a client centred approach in OT, confirm the theory regarding the importance of engaging in individualised and meaningful occupations and also support the activity theory (Havinghurst, 1957) that stresses the importance of continued engagement in occupations to maintain wellbeing.
b. The importance of eliminating barriers in occupation engagement

Previous studies pointed out that external (extrinsic) barriers to engagement in occupations are the environment, facilities, resources and regulations (Kolt et al. 2006; Kowal and Fortier, 2007; Haslam, 2008; Chen, 2010; McNeil, Kreuter and Subramaniam, 2010). The institutional environment that encourages dependency shapes the behaviour of elderly people (Newson, 2010) and encourages a sedentary lifestyle. In addition, lack of encouragement and reinforcement from staff, expectations of staff for the residents to be passive, and lack of close companionship could also be perceived as barriers to engagement (Aller and Coeling, 1995; McKee et al. 1999; Resnick, 1999; O’Sullivan and Hocking, 2006). In relation to this study, the external barriers include the rules and regulations of the institution, lack of resources and expectations from the staff which subsequently produced apprehension and distress in the participants.

Previous studies also indicate that there are internal barriers to engagement such as lack of knowledge, information and awareness of the benefits of engagement in occupations and lack of confidence in personal ability (Dergance et al. 2003; Hearle et al. 2005; O’Sullivan and Hocking, 2006; Berglund, 2007; Kowal and Fortier, 2007; Lee, et al. 2008).

Internal and external barriers were minimised through various strategies integrated into the core components and strategy of 3LP. Cognitive strategies (providing theoretical and practical knowledge to increase efficacy and decrease stress), increased autonomy, a self-efficacy enhancement programme, provision of facilities and individual opportunities for engagement were all used.

This thesis supports the need for occupational therapists to identify, negotiate and minimise external and internal barriers prior to participation with a lifestyle redesign programme based on engagement in occupation.
c. The value of individual and group approaches

Previous successful occupational therapy lifestyle redesign programmes (Clark et al. 1997; Mountain and Craig, 2007; Mountain et al., 2008; Mountain and Craig, 2011) have integrated individual and group approaches to achieve their objectives. Similarly, this study has a combined individual and group approach. Although individual and group approaches have different sets of objectives, they complement each other and ensure that the 3LP objectives are met (as presented in the Manual). Furthermore, individual sessions provide a venue for ventilation of issues and challenges associated with engagement in the occupations and the group sessions provide opportunity to share experience in a supportive environment. Group sessions also provide opportunities for participants to observe other participants. ‘Successful’ participants will provide motivation through upward social comparison and stimulate self-efficacy (Bandura, 1997; Diener et al. 1999; Pajares, 2002; Dewar, 2003), whilst less successful participants will provide contentment through downward social comparison (Michalos, 1985; Bearon, 1989; Michalos, 1996; Diener et al. 1999; Dewar, 2003).

Thus, in view of the benefits, this thesis supports existing theory and practice regarding the importance of individual and group approaches in OT intervention.

d. Types of occupation for institutionalised elderly people

Meaningful occupations that are often engaged in by ‘healthy’ institutionalised elderly people are occupations that provide a sense of continuity, purpose in life, familiarity, satisfy personal interests, encourage self-determination, autonomy and provide opportunities to have social contact with relatives, friends and family (Green and Cooper, 2000; Van’T Leven and Jonsson, 2002; Scott and Debrew, 2009; Eakman et al., 2010). In addition, meaningful occupations required physical, mental and social effort and address issues pertaining to physical and psycho-social needs (Kitwood, 1997; Phinney et al. 2007; Harmer and Orrell, 2008). Examples of
meaningful occupations engaged in by institutionalised elderly people are, reminiscence activities, family and social related activities and individual activities, such as reading, knitting, and musical activities (Legarth et al. 2005; Vernooij-Dassen, 2007; Harmer and Orrell, 2008).

Participants in this study are ‘healthy’ elderly people and the occupations engaged in were occupations that had personal meaning, such as ADL and recreational activities. In addition, the occupations also related to previous roles in life such as a friend, worker and/or caregiver. Thus, this supports existing research regarding meaningful occupations often engaged in by ‘healthy’ institutionalised elderly people.

e. Educational components of a lifestyle redesign programme

This thesis supports existing evidence regarding the importance of integrating cognitive components in OT practice. Previous occupational therapy lifestyle redesign programmes (e.g. Clark et al. 1997; Mountain et al; 2008; Mountain and Craig, 2011) integrated educational components provided through didactic presentations aimed at empowering elderly people by providing theoretical and practical aspects of OT intervention. They were based on theories regarding the need for and benefits of engagement in occupations and provided opportunities for participants to practice individualised occupations.

Previous studies indicate that one of the internal barriers towards engagement in occupation is lack of knowledge, information and awareness regarding the benefits of engagement in occupations (Dergance et al. 2003; Berglund, 2007; Kowal and Fortier, 2007; Lee, et al. 2008) this results in negative perceptions towards engaging in occupations and lack of confidence (Kowal and Fortier, 2007; Lee, et al. 2008). Furthermore, prolonged disengagement (as experienced by participants in this study) could cause apprehension regarding personal skills (Hearle et al. 2005; O’Sullivan and Hocking, 2006). However, previous studies also show the effect of knowledge in increasing confidence and decreased stress associated with completion of tasks related to physical and ADL activities amongst elderly people (Easom, 2003; Lee,
Lim and Lee, 2004; Sanford et al. 2006; Chang et al. 2007; Gary, 2008; Murrock and Madigan, 2008; Francis, et al. 2009; Shin et al. 2009).

Thus, this thesis supports existing theory and practice regarding the importance of providing educational components prior to OT intervention.

**f. The importance of occupational analysis and reflection**

Previous successful lifestyle redesign programmes such as the Lifestyle Redesign programme (Clark and Richardson., 1996; Clark et al. 1997; Jackson et al. 1998; Mandel et al. 1999) and the Lifestyle Matters programme (Craig and Mountain, 2007; Mountain et al., 2008; Mountain and Craig, 2011) conducted occupational analysis and occupation reflection. Clark and Richardson (1996) and Craig and Mountain (2007) describe occupational reflection as occupational storytelling. Occupation analysis and occupation reflection can be used to identify types of occupation engaged in and level of interest and will provide awareness and insight for the participants regarding their feelings about engagement in occupations and their physical, psychological and psycho-social components (Clark and Richardson, 1996; Craig and Mountain, 2007). This thesis supports the work of previous authors regarding the importance of occupational analysis and occupational reflection in providing insight, information and awareness regarding the value of engagement in occupations.

**g. The importance of recognising the impact of culture and individual characteristics in the OT process**

Previous studies stress the importance of OT being sensitive towards clients’ cultural backgrounds (e.g. Awaad, 2003). Findings from this study indicate that there are cultural differences in relation to reasons for relocation to institutions, reasons for engagement, the nature of relationships with staff, issues pertaining to autonomy which subsequently affect the factors that contribute to QoL. For example, factors
that contribute to QoL amongst Eastern elderly people are religious activities, altruism, close / meaningful relationships with family, fulfilment of basic needs (Fry and Ghosh, 1980; Lau et al. 1998; Chan et al. 2000; Lau et al. 2000; Silverman et al. 2000; Lou et al. 2008; Jung, et al., 2010; Lou, 2010) whilst QoL factors for Western older people are more commonly associated with autonomy, hard work, personal abilities, health and social status, fulfilment of individual needs, travel and recreation (Fry and Ghosh, 1980; Lau et al. 2008). In addition, Western culture stresses individuality, thus people seek happiness and pleasure by engagement in occupation for the fulfilment of individual needs (Nimrod, 2007; Pereira and Karen Stagnitti, 2008), however, people in Eastern countries, engage in occupations to fulfil responsibilities towards family and community, for example engagement in socialisation activities (Diener et al. 1995).

Thus, to ensure the effectiveness of OT intervention, it is import for OT to be sensitive to the cultural perspectives of the clients. This is supported by previous authors who suggest that the philosophy in OT should be re-examined for non-western cultures (e.g. Iwama, 2004; Awaad, 2003; Whiteford and Wilcock, 2000; Black, 2002). Whiteford and Hocking (1995) state that “to deliver effective occupational therapy, therapists will need to step outside Western assumptions” (p.172).

10.1.1.2 New contribution

a. Lifestyle redesign in elderly institutions

To the researcher’s knowledge, this is the first lifestyle redesign programme based on occupational therapy to be successfully conducted in an elderly institution and in an Eastern culture. Previous lifestyle redesign programmes with a similar approach were conducted in Western countries or / and were conducted in community dwelling elderly people, such as the Lifestyle Redesign programme (Clark et al. 1997; Jackson et al. 1998; Mandel et al. 1999) and the Lifestyle Matters programme (Mountain et al., 2008; Mountain and Craig, 2011) and other health programmes
conducted by Lipschutz (2002); Matuska et al. (2003); Horowitz and Chang (2004) and Barnes, et al. (2008).

Findings from this study validate and expand the current state of knowledge regarding the effectiveness of lifestyle redesign programmes.

This study provides information and evidence based practice regarding the effectiveness of a health promotion programme through lifestyle redesign based on occupational therapy for elderly people in institutions. In addition, this lifestyle redesign programme has demonstrated that an OT lifestyle redesign programme can be successfully transferred to different cultures and transcend cultural barriers.

b. **The need to identify ERA**

Low ERA is associated with low involvement in health related behaviours amongst elderly people e.g. engaging in physical activities and taking preventative care (Rakowski and Hickey, 1992; Goodwin et al, 1999; Levy et al, 2002; Sarkisian et al, 2002; Levy and Myers, 2004; Levy and Myers, 2005; Sarkisian et al, 2005), thus they are likely to experience conditions such as arthritis, hearing loss, and difficulty in sleeping, heart conditions and respiratory problems (Williamson and Fried, 1996; Goodwin et al. 1999; Levy and Myers, 2005). In addition they may perceive the deterioration as a ‘normal’ part of the ageing process and inevitable (Keller et al, 1989; Williamson and Fried, 1996; Goodwin et al, 1999; Sarkisian et al. 2001; Victor et al. 2004) and determined by ‘fate’ and ‘powerful others’ thus they have to accept their condition (Perrig-Chiello et al. 1999; Wu et al. 2004; Armer and Radina, 2006; Hsin and Macer, 2006; Rodriguez and Young, 2006; Tsai and Tsai, 2007).

High ERA is associated with better physical and mental functions, thus contributing to longevity (Levy et al. 2002; Levy and Myers, 2004; Sarkisian et al. 2005; Km, 2009). The mechanism through which high expectations cause better health status is postulated to be mediated through behaviour pathways and planned behaviour (Ajzen, 2005; Wurm et al, 2007; Blazer, 2008; Zysberg and Zisberg, 2008). Illness,
disability and physical loss cause psychological reactions such as depression, anxiety and stress. There is substantial evidence that shows the relationship between psychological stress and deterioration in immune function especially for older people which subsequently leads to deterioration of health (Kiecolt-Glaser et al, 2002; Cass, 2006; Graham et al. 2006). On the other hand, having positive expectations has a protective effect on physiological health (Sarkisian, 2002, Sarkisian, 2005, Tylor et al, 2000)

The theory in behaviourist terms states that there is an association between expectation (or belief, view, perceptions) and performance (when it is combined with other factors such as perceived control / control beliefs and subjective norms). Expectations, when combined with other factors facilitate behaviour intention, thus facilitating performance in the actual behaviour (Ajzen, 2005; Martin, 2007; Ajzen, 2009). In addition, high expectations have positive impact by increase in immune system efficiency (Sarkisian, 2002, Sarkisian, 2005, Tylor et al, 2000) and greater likelihood of engaging in health promoting behaviour.

Occupational therapy is involved in encouraging health promoting behaviour and facilitating independence in daily life through engagement in meaningful occupations. To assist in promoting health related behaviour, healthy ageing and success in OT intervention, expectation regarding future orientation in life should be identified and understood by the occupational therapist.

To the researcher’s knowledge, this is the first study to investigate the effect of engagement in occupation on ERA and the use of the ERA scale in occupational therapy.

Without positive orientation towards future life it is unlikely that clients will be change their behaviour and adhere to OT intervention and a health promotion programme. This thesis adds a new area in the theory and practice in OT in relation to the importance of identifying future expectations and success in OT intervention.
c. GSE vs. specific self-efficacy

The literature review indicated that there are various issues in elderly institution, such as occupational and social deprivation (Nolan et al. 1995; Abbot et al. 2000; de Veer and Kerkstra, 2000; Ice, 2002, Borroker, 2008; Chen, 2010), lack of autonomy and individuality (Lee, 1997; Lee, 1999; Fressman and Lesster, 2000; Lee, 2001; Barkey and Tabak, 2002; Brooker, 2008; Choi et al. 2008) and psychological complications such as depression as a result of social isolation and loneliness (Brown et al, 2002; Jones et al, 2003; Lin et al. 2005; Choi et al, 2008; Kim et al. 2009). These interrelated issues have an effect on global confidence and competence in personal coping abilities in dealing effectively with a wide range of stressful issues. These cannot be accurately evaluated by domain specific self-efficacy. However, the effect of the multiple stressful issues can be evaluated using a scale that evaluates general coping ability, and the sense of global confidence and optimism in dealing effectively with a wide range of issues (Schwarzer, 1992; Scholz et al. 2002; Luszczynska et al. 2005).

To the researcher’s knowledge, this is the first study that investigates the effect of engagement in meaningful occupations on GSE and the use of GSES in occupational therapy. The findings indicate that there were changes in GSE amongst participants in the experimental group which shed light on the importance of engagement in meaningful occupations in facilitating a higher sense of GSE in dealing with various issues in institutions.

Thus, aligned with the findings in GSE, this thesis proposes acknowledgement of three important issues concerning theory and practice in OT. Firstly, OT theory should acknowledge the effect of GSE on wellbeing, secondly the suitability of GSES in evaluating overall self-efficacy in elderly institutions and thirdly the effect of engagement in meaningful occupations in facilitating changes in perceived GSE.
d. The importance of motivational components in the OT process

This thesis adds to research and practice in OT regarding methods of enhancing participation, motivation and adherence to OT programmes. The Self Efficacy Enhancement Programme (SEEP) used in 3LP, based on Bandura’s social cognitive theory, was designed to facilitate motivation and engagement amongst participants in the study.

The use of social cognitive theory to influence self-efficacy and to enhance engagement and adherence has been used in many rehabilitation programmes, such as the health promotional activities to redesign the lifestyle and adherence to exercise for nursing home residents (Resnick et al. 2009), to increase self-care activities amongst nursing home residents (Chang et al. 2007) and exercise programmes for elderly people (Lee et al. 2008; Resnick et al. 2008; Shin et al. 2009). Self-efficacy theory and self-efficacy enhancement programmes can be used to overcome psychological barriers, increase confidence, initiate and maintain physical activity and to increase engagement and enhance perception of physical activity (Lee et al. 2008).

Furthermore, evidence from various interventions that promote lifestyle changes with the use of cognitive-behavioural strategy indicated that they were more effective than programmes that used health education, prescription and instruction alone (Resnick et al. 2008; Brawley et al. 2000). Thus, this theory can facilitate adherence and motivation and should be integrated in OT theory and practice.

Literature from Western and Eastern countries indicates that there are a number of key factors that can contribute to QoL; these are autonomy, meaningful social relationships and engagement in occupation.

Findings from this study indicate two reasons for the achievement of high QoL by participants; a resulting sense of contentment achieved through a process of ‘fine tuning’ what most matters in life and downward social comparison.
Achieving high QoL is possible when the participants tuned and shifted their values, aspirations, needs and priorities to match with the realities and obtained what was perceived as important to them. Pre experimental findings indicated that basic needs such as food, shelter and health care were the most important things in participants’ lives. This is understandable in view of participants’ social and demographic characteristics and economic status prior to relocation.

In addition the process of fine tuning and shifting values, participants’ use of downward social comparison by comparing themselves with other residents suffering from chronic medical conditions, their improvised living conditions and the removal of the difficulties in fulfilling daily basic needs prior to relocation to the institution. Participants were willing to trade-off their autonomy for something that they perceived as more important in life (i.e. basic needs and safety). Obtaining what was perceived the most important and what mattered most in life devalued the advantages of living outside the institution and this facilitated a sense of contentment and acceptance amongst the participants with subsequent effect on life satisfaction and QoL. Contentment with basic needs as a factor contributing to satisfaction was also described in previous studies (Diener and Oishi, 2002; Chu and Leasure, 2010; Dahlan et al. 2011).

Downward comparison based on Multiple Discrepancy Theory (MDT- Michalos, 1985) is a way to cope with distress with changes in life amongst people in both Eastern and Western countries (Jelicic and Kempen, 1999; Chou and Chi, 2001; Bekhet et al. 2008; Windsor, 2009) as it can be used to reduce negative affects (Blazer, 2002; Dibb and Yardley, 2006; Uotinen et al. 2006; Cheng, Fung and Chan, 2008), and increase self-esteem (Bearon, 1989; Dewar, 2003). Downward comparison can facilitate a sense of life satisfaction, quality of life and expectations towards future (Jelicic and Kempen, 1999; Chou and Chi, 2001; Mehlsen, Platz and Fromholt, 2003; Frieswijk et al. 2004; Dibb and Yardley, 2006; Cheng, Fung and Chan, 2008) and the quality of life amongst elderly people in institutions (Beaumont and Kenealy, 2004; Kenealy, Beaumont, and Murrell, 2006; Michinov, 2007).
Contentment was achieved through downward social comparison and re-prioritisation of needs amongst participants in this study. Thus, besides meeting the client’s needs, occupational therapy could instil a sense of contentment, prior to or in conjunction with fulfilling needs and hopes in life. This will operate as a method to enhance life satisfaction and QoL in the ways described below.

There are many instances where rehabilitation has not been able to achieve its objectives, e.g. due to permanent physiological changes, constraints, limited resources and circumstances. This will caused depression, decrease in life satisfaction and QoL which ultimately causes deterioration in health and wellbeing. However, if a sense of contentment and acceptance are available within their psychological domain, they could be less depressed and disappointed if needs are not achieved, and will have less impact on life satisfaction and QoL. Thus, this thesis sheds light on the importance of integrating a sense of contentment and acceptance into occupational therapy theory and practice.

To the researcher’s knowledge there is no occupational therapy literature that discusses the use of MDT in occupational therapy theory and practice. Thus, the findings from this study can provide new insight into methods that could reduce negative affect, facilitate self-esteem, life satisfaction and quality of life.

In addition, this thesis proposes that theory and practice in occupational therapy should consider identifying individual constructs of QoL and facilitating what are the most important things to the individual in order to increase QoL for elderly people in institutions.

e. The importance of establishing meaningful social relationships

Previous studies indicate that meaningful social relationships are important to QoL. This thesis proposes that occupational therapy theory and practice should place a stronger emphasis on maintaining and establishing meaningful social relationships
for residents in Eastern institutions for the elderly rather than concentrating on the preservation of autonomy as in Western countries.

In addition, this thesis proposes that the word ‘meaningful’ be placed before the phrase ‘social relationship’ so as to indicate the nature of the relationship. This is aligned with Carstensen’s socio-emotional selective theory (Carstensen, 1992) which states that as people become older, they tend to reduce the size of their social networks and social preferences but increase the quality of established relationships through the process of selective pruning and emphasis on people that can provide greatest personal emotional benefit (Vandervoot, 1999; Lockenhoff and Carstensen, 2004). The addition of the word ‘meaningful’ to relationships is similar to the words ‘meaningful’ or ‘individualised’ that are placed before the word ‘occupation(s)’.

10.1.1.3 Challenge

a. The duration of the lifestyle redesign programme

Previous successful lifestyle redesign programmes were conducted over a longer period than this study. For example, the Lifestyle Redesign programme (Clark et al. 1997; Jackson et al. 1998; Mandel et al. 1999) was conducted for nine months and the Lifestyle Matters programme (Mountain et al., 2008; Mountain and Craig, 2011) was conducted for eight months. The 3LP was conducted over six months. This indicates that there is no specific time frame for achievement of the aims and objectives in lifestyle redesign. Thus, it is postulated that the differences in arising from dissimilar durations may be due to other variables, such as location and characteristics of the participants. It is well known that occupational deprivation and disfranchisement often occurs in elderly institutions and seldom affects elderly people in the community. This thesis poses the question of how to determine an appropriate duration for lifestyle redesign programme.
b. Dependency vs. interdependency

Occupational therapy philosophy promotes independence and this is translated in occupational therapy theory, practice and research (e.g. Schmelz, 2000; Newson, 2010). Independence is often associated with autonomy in Western ideology. Previous studies in Eastern countries such as Taiwan and Hong Kong indicate that preserving autonomy is less important and institutionalised elderly people perceive rules and regulations as important and necessary to preserve and maintain harmony (Lee, 1997; Lee, 1999, Lee, 2001; Lee, 2010). Furthermore, literature indicates that elderly people in Eastern countries such as Singapore and Hong Kong do not expect to be independent, as they expected to be cared for by their children (Yang et al. 2006). This is also noted by Stuifbergen and Van Delden (2011). Such an attitude is associated with religious, moral and core cultural values and beliefs common in Eastern societies (Jang, 1995; Mastor et al. 2000; Odawara, 2005; Yang et al. 2006; Yusaini, 2008; Zawawi, 2008; Mansor, 2010) and expressed in many old proverbs describing expected behaviour towards elderly parents (Kaplan, 2001). This suggests the need for interdependency amongst people in Eastern countries.

Subsequently, there are difficulties in promoting independence in Eastern countries because the interdependency between client and their family members are conflicted with the promotion of independence (Jang, 1995; Odawara, 2005, Yang et al., 2006). Similar issues were also recounted by occupational therapists working with minority groups in Denmark (Kinebanian and Stomph, 1992) and in United Kingdom (Visram et al. 2007). Furthermore, independence is questioned in much OT literature (e.g. Whiteford and Wilcock, 2000; Awaad, 2003).

Interdependency is defined as interconnection and bonding between more than two entities aimed at maximising potential abilities, receiving and offering various levels of relationship such as support, love, admiration and value (Condelucia, 1995; Beeber, 2008; White et al. 2010).
In relation to this study, it was found that the participants exemplified interdependence with other residents, staff and family members for the purpose of receiving and offering social and emotional support. These interdependencies promote socialization and establishment of a meaningful relationship (Meeks and Looney, 2011). Meaningful relationships increase participation in activity, produces positive affect, provide feelings of being valued, intimacy and develop a sense of involvement and contentment (Shattell, 2004; Pearson and Fitzgerald, 2003; Stabell et al. 2004; Berglund and Kirkvold, 2007; Wilson and Davies, 2009) and assist in the process of thriving within the institution (Abbott et al. 2000; de Veer and Kerkstra, 2000; Kane, 2001; Berglund and Kirkevold, 2007; Dupuis-Blanchard et al. 2009; Wilson and Davies, 2009). Furthermore, interdependency between family members such as children, grandchildren as well as former friends contributes to QoL amongst elderly people in Eastern countries (Tseng and Wang, 2001; Lee, 1997; Lee, 1999; Tu et al. 2006; Lau et al. 2008; Lau and Chi, 2008; Lee, 2010; Tse, 2010; Berg, 2011).

Previous studies indicate that interdependency as a life-style approach increases productivity and life satisfaction amongst people with disability (Carnaby, 1998; Gooden-Ledbetter et al. 2007; White et al. 2010), decreases depression amongst older people (Ko and Lewis, 2011), increases communication and closeness (Kashy et al. 2004; Uskul et al. 2004) and facilitates QoL amongst the residents in care homes (Furness, 2007). Interdependency is also promoted amongst elderly people in UK (Bowers, 2001; Audit Commission for local authorities and the National Health Service in England and Wales, 2004)

In view of the benefits of interdependency, the needs of elderly people themselves, the inconsequential nature of autonomy in the Eastern setting, cultural values, religious beliefs and norms which are strongly embedded in the life of many people in Eastern countries such as Malaysia this thesis challenges the philosophy of promoting independence amongst elderly people especially for elderly people in Eastern countries.
The ultimate aim of care for elderly people is to achieve the highest level of QoL. Being independent is only one element of what contributes to QoL. Furthermore, what is the benefit of being independent but not having a good, happy and meaningful life that could be enhanced as a result of interdependency? In relation to this, Fox (2010) stresses;

“For people to experience a truly integrated response to their needs, professionals must be able to achieve integration not only across service boundaries, but also across their responses to inter-linked individuals”

(Fox: p. 41).

In view of the benefits and appropriateness of interdependency aligned with cultural values in Malaysia, this thesis would like to propose an alternative term to independence; interdependence, as part of the philosophy of care for the occupational therapy profession for elderly people in Eastern countries.

However, interdependency as a factor to be encouraged in occupational therapy warrants further investigation in order to establish definitive and conclusive evidence regarding its specific benefits.

10.1.2 Benefits of engagement in occupations

This thesis supports the findings of previous studies regarding the benefits of engagement in occupations in relation to QoL associated with changes in physiological, psychological and psycho-social functions. In addition, this thesis makes a new contribution to the benefits of engagement in occupations in relation to increase in ERA and GSE.

10.1.2.1 Previous finding supported

a. 
Increased QoL, changes in physiological, psychological and psycho-social functions.

This thesis has supported the findings of previous studies (e.g. Cook and Stanley, 2009; Higgins and Mansell, 2009; Lee et al. 2009) regarding the effect of
engagement in occupations and its contributions towards facilitating improved QoL. Results from WHOQoL-Bref indicate that compared to those measured prior to the intervention there are statistical significant changes in scores after the intervention.

In addition, based on the findings from post intervention focus groups, this study supports previous findings regarding the benefits of engagement in occupations. Post intervention focus groups indicated that there are changes in physiological function, such as increase in functional abilities, improvement in sleeping patterns and changes in patterns of daily life, changes in psychological function such as positive affect, increase in self-esteem, increase in self-efficacy and in hopes and purpose in life. In addition, post intervention focus groups also indicated changes in psycho-social components, such as having meaningful social relationships.

It is postulated that the changes are not mutually exclusive but are inter-related, in which changes in one aspect may contribute to changes in another aspect of life.

10.1.2.2 New contribution

a. Engagement in occupation increases GSE and ERA

To the researcher’s knowledge, this is the first study to investigate the effect of engagement in occupations on ERA and GSE.

Although there are studies that investigate the effect of engagement in occupation in specific domains of self-efficacy such as ADL (Chang et al. 2007; Chang et al. 2010) and functional activities (Resnick et al. 2009), this study’s investigation regarding GSE is important as there are many interdependent issues that have an impact on occupation deprivation in institutions. The quantitative results post intervention indicated that engagement in occupations facilitates changes in all domains in the ERA scale, but especially in the physical and mental domains. The changes in scores are postulated to be a result of the ‘unexpected’ changes in the physical, mental and social domains which were illustrated by participants in the post
intervention focus groups. Opportunity to engage in occupations with greater autonomy and the re-establishment of meaningful relationships with family members facilitated the changes in ERA.

Furthermore, reengagement provides positive affect, fosters hopes, meaning and purpose in life. These findings support previous findings that stress the effect of engagement in occupation in fostering hope and meaning in life (Borell et al. 2001; Elavsky et al. 2005; Meeks et al. 2007; Low and Molzahn, 2007; Mozley et al. 2007; Eakman et al. 2010). Having hopes and meaning in life contributes to high expectation towards ageing (Fobes, 1994).

**10.1.3 The issues in the elderly institution**

This thesis supports previous findings regarding three main issues in elderly institutions and contributes to new issues as described below.

**10.1.3.1 Supported**

- **Occupational deprivation and its effect on elderly people in institutions**

Reviewed studies from 1997 to 2011 indicate that there is occupational deprivation in elderly institutions (e.g. Perrin, 1997; Morgan-Brown et al. 2011). Findings from this study draw attention to the marked occupational deprivation amongst participants. Thus, the findings support previous studies which indicate that the occupational deprivation still exists in elderly institutions.

Previous findings also indicate that prolonged disengagement contributes to deterioration in musculoskeletal function and sensory deprivation (Rabiner et al. 1996; Sviden and Borrell, 1998; O’Sullivan and Hocking, 2006; Wagner et al. 2008) and decrease in occupational performance skills (Hearle et al. 2005; O’Sullivan and Hocking, 2006) which ultimately decrease self-efficacy. This thesis supports these findings.
Results and findings in this study indicated a low level of GSE amongst participants and pre intervention focus groups elicited apprehension amongst participants as a result of external and internal issues which included doubts about personal ability to engage in occupations. Therefore, this thesis supports the theory in occupational therapy with regard to the impact of prolonged disengagement in occupations and occupational deprivation in relation to occupation skills and self-efficacy.

b. Reasons for relocation

Literature in the early 70’s in Eastern countries such as Hong Kong indicates that the reason for using institutionalised services is related to the ‘three Ns’, i.e. elderly people who have; No children, No stable sources of income or financial support and No relatives (Kwok, et al. 1998; Liu and Tinker, 2001; Shyu and Lee, 2002; Zhan, Feng, Luo, 2008). However, the reasons for using institutionalised services changed in the 80’s; now the reasons are more related to changes in demographic characteristics as a result of the industrialization and modernisation of the country (Lee, 1999; Tse, 2007; Zhan, et al., 2008; Wu et al. 2009). In Western developed countries like the United Kingdom, a systematic review indicates that the main factors related to placement were low health status, impairment of functional ability and cognitive functions and lack of support (Luppa, et al., 2010).

This study indicates that the main reason for relocation is similar to the reasons indicated in literature in the early 70’s in Eastern countries. It is predicted that the trend for relocating elderly people will be similar to Eastern developed and industrialized countries in the not so distance future. This thesis has supports the findings regarding the reasons for relocation of elderly people from community to an institutionalised setting.
10.1.3.2 New contribution

a. The effect of prolonged disengagement in occupation on hopes

Pre intervention findings indicated that hopes for engagement in occupations engaged in prior to relocation in institutions are preserved even after long periods of disengagement and occupational deprivation. Participants may have demonstrated a low ERA but they have high future hopes. Hopes and desires still exist in spite of adversity and an impoverished living environment. Hopes are one of the coping resources amongst elderly people who live in an impoverished environment (Touhy, 2001; Westburg, 2003; Duggleby and Wrignt, 2005). This adds strength to the theory regarding the need for engagement in occupations, human responses in relation to engagement in occupation and resilience amongst elderly people in institutions. In addition, the hopes can be utilised in OT as a way of facilitating health and wellbeing in institutionalised elderly people.

b. Social relationships in institutions

There are many studies that indicate lack of meaningful relationships between staff and residents (e.g. Kolanowski and Litaker, 2006; Wadensten, 2010). However, the findings indicated that there is a good relationship with staff and other residents in this study. Good relationships were illustrated by participants in the focus groups in the way they addressed each other indicating respect associated with the doctrine of filial piety and ‘adab’ (mannerism) towards elderly people which ultimately increases perceived QoL.

This thesis provides new information regarding the relationship between staff and residents in elderly institutions.
10.2 Limitation of the study

One of the limitations of the study is the sample size. Based on prior methods of sample calculation, a sample size of 368 is needed to obtain a power equivalent to 80% with effect size of 0.3 or greater. However, it was impossible for a single researcher to conduct individual and group sessions for 368 participants within the time frame. In addition, there were 82 participants in the institution who were eligible and consented to the study. A further study involving more participants is warranted to provide stronger and more conclusive evidence regarding the effectiveness of the 3LP in facilitating enhancement in ERA, GSE and QoL.

Another limitation is related to the living arrangements in the institution. Participants in this study are living together in a communal environment. This may raise issues and threats to internal validity through contamination, thus favouring the acceptance of the null hypothesis (Howe et al., 2007, Keogh-Brown et al., 2007). To avoid ‘contamination’, participants in the experimental group were asked not to discuss anything pertaining to 3LP with other participants (as discussed in Chapter 3: Methodology and design of the study). In addition, the researcher took an active role by not allowing participants from the control group to participate in any group activity. However, Galbraith (2007) stressed that the researcher should be less concerned about bias from contamination if differences in study measures were found between groups which provide evidence for rejecting the null hypothesis. In addition he stresses:

‘If there is too much concern about contamination, many potentially useful trials in medical education may never be carried out. Yet those that achieve statistical significance may still strengthen the evidence base.’

(p. 915).

The sustainability and the long term effect of the 3LP are unknown. As there is no occupational therapist working in the institution, the institutional environment may influence engagement in meaningful and individualised occupations, participants may have difficulty in engaging in meaningful occupations, for example obtaining items needed for domestic activities, going to the mall and re-establishing contact.
with family members. Furthermore, there is an issue of safety whilst conducting the occupations. Consequently, the sustainability of the individualised occupation and the long term impact of the 3LP are in question. However, previous lifestyle redesign programme that were conducted in the community, i.e. Lifestyle Redesign programme from Well Elderly Study (Clark et al. 1997) indicated the effect of the programme on health, functions and quality of life was maintained for 6 months following completion of the programme (Clark et al., 2001). Further investigation into the long term effects of 3LP is warranted.

Previous studies indicate that there are various factors that could influence the provision of occupational opportunities such as involvement by management (Green and Cooper, 2000). Furthermore, positive social environments e.g. social relationships with family members, other residents and staff will influence engagement (McNeil et al, 2006; Lou, 2010). Meaningful social relationships were important in this group of people as shown in the results and as indicated by previous findings. However, 3LP did not directly involve family members during the engagement in individual occupations, such as organising outings with participants and their family were not directly involved with staff in the institution. However, 3LP facilitated a process of communication with family members. It is possible that direct involvement from the staff could change the institutional policy and the pattern of communication between participants and the staff which eventually may affect the result.

Another limitation to the study relates to the quantitative study measures used. The study measures used are based on self-reported measurement. This close ended type of study measure has several limitations such as lack of properties to elicit further elaboration and in-depth answers. In view of the level of education amongst the participants; it is difficult to determine whether the participants understood the questions properly. However, various procedures were taken to minimise the limitation, such as the use of a short type of questionnaires, a translated version of the questionnaires, training for the assessors and specific protocols for scoring the
study measures. In addition, the focus groups were used to elicit in-depth understanding regarding the issues under study.

Finally, specific occupational therapy study measures could be conducted to identify the changes in occupational functions, for example; musculoskeletal assessment, instrumental activities of daily living (IADL), occupational participation. Specific study measure will provide information regarding the effect of the 3LP towards changes in these functions. However, various study measure will not be suitable for the following reasons. Firstly, conducting some study measures will add stress to the participants, thus they are less likely to participate. Secondly, the aim of this study is to identify the changes in ERA, GSE and QoL, and not specific study measures. In addition, all of the changes, for example changes in physiological function, psychological function and psycho-social function will contribute to QoL. Thus, it is perceived that changes in function are a proxy to changes in QoL.

10.3 Recommendation for future research

In view of the limitation as above, it would be valuable if the study were extended to elderly people in the community using the prepared manual, with a sufficient number of therapists conducting the programme and sufficient number of participants involved. The differences would provide valuable information regarding the applicability of 3LP amongst elderly people in the community who were culturally different from elderly people in communities elsewhere as in previous lifestyle redesign studies (e.g. Clark et al. 1997; Mountain et al., 2008; Mountain and Craig, 2011). Furthermore, in order to determine the effectiveness of the programme from a quantitative perspective, specific study measures that detect changes as a result of attending the programme should be added to the assessment process. For example, identification of the changes in relation to physiological function i.e. changes in strength, balance, mobility and occupational functions; changes in participation in occupations, psychological and psycho-social functions such as self-esteem, life satisfaction and specific self-efficacy that may result from engagement in occupations as planned in 3LP.
Previous studies stress the importance of meaningful relationships towards participation in occupations, cognitive function and QoL. It would be of interest to investigate the effects of direct involvement of staff and family members on engagement; this could involve family members in planning and engaging in the occupations with their elderly relative in the institution.

It would be interesting to identify the cost effectiveness of the 3LP through a cost effectiveness study. Previous occupational therapy lifestyle redesign programmes; Lifestyle Redesign from the Well Elderly Study (Clark et al. 1997) indicated that there is a trend in the reduction of the cost of the medical care (Hay et al., 2002). Furthermore, the monetary cost of an OT programme is considered a modest amount in comparison to the cost of living in an elderly institution (Schneider et al. 2007).

**10.4 Practice recommendation from the findings**

Findings from this study provide some practice recommendation for occupational therapists working with elderly people, especially elderly people who live in institutions. The recommendations are as follow:

a. Occupational therapists working in institutionalised settings for elderly people should consider 3LP for their clients to facilitate enhancement in GSE, ERA and QoL.

b. Occupation reflexion and occupational analysis could be conducted to provide insight to the therapist and clients regarding current engagement in occupations, benefits and effect of disengagement from occupations. The ‘story telling’ method (Mandel et al., 2007; Craig and Mountain, 2007) of conveying reflexion and analysis should be considered. This serves as a method for the participants to reflect upon their life, thus help them to readjust their life style (Craig & Mountain, 2007).
e. To ensure participation in occupations, occupational therapy should encourage clients to engage in meaningful and individualised occupations. In other words, a client centred approach should be used. The choice of occupations must be determined by the client. Occupational therapy can assist by ensuring that the client functions and abilities match with the demands of the occupation and personal interests (Kolanowski, et al., 2001, Van’T Leven and Jonsson, 2002; Kolanowski and Buettner, 2008; Chen, 2010; Hill, 2010).

d. Occupational therapists should identify internal and external barriers to engagement in occupations. Alternative methods or strategies to eliminate or minimise barriers should be discussed with clients. Occupational therapists could act as mediators to minimise external barriers, such as rules and regulations. This will encourage self-directed and self-regulated skills, and autonomous occupations which will eventually facilitate successful engagement with the occupations.

e. To encourage engagement in occupation, Occupational therapists could provide theoretical and practical information regarding the occupation. As discussed before, the information obtained will empower them and alleviate stress associated with engagement in occupations which will eventually facilitate further engagement. Methods of delivering the information could be through individual or group approaches, didactic presentation, experiential learning, self-exploration or sharing experiences with other participants as was conducted in 3LP. This method of delivery also stresses the important of conducting individual and group approaches to facilitate engagement in occupations.

f. Occupational therapists could implement the self-efficacy enhancing programme (SEEP) to facilitate motivation amongst the elderly people. The programme which is based on social cognitive theory (Bandura, 1997) will provide sources of self-efficacy through performance accomplishment,
vicarious experience and verbal persuasion as discussed in Chapter 4: The intervention and in the 3LP manual.

g. Occupational therapists should consider facilitating means to re-establish a meaningful relationship with former friends and family members through the use of technology; such as email and videoconferencing as was conducted in previous studies (Cook and Clarke, 2010; Tsai and Tsai, 2010). As discussed before, meaningful relationships with former friends and family members which include intergeneration relationships provide social support, a sense of meaning in life, life enrichment, a sense of integrity, a sense of inclusion and interdependency, all of which assist in the process of adjustment and acceptance of life in the institute.

h. Previous studies indicate that elderly people who have low expectations regarding ageing are often associated with low involvement in health related behaviour (Rakowski and Hickey, 1992; Goodwin et al, 1999; Levy et al, 2002; Sarkisian et al, 2002; Levy and Myers, 2004; Levy and Myers, 2005; Sarkisian et al, 2005) and are likely to experience deterioration in health status (Williamson and Fried, 1996; Goodwin et al. 1999; Levy and Myers, 2005; Kim, 2009). Occupational therapists who use health promotion as one of the strategies to facilitate increment in health status amongst elderly people should identify the elderly person’s expectations regarding ageing, prior to the health promotional activities. Identifying and addressing the issues regarding expectations will help to encourage involvement amongst the elderly people.

i. Occupational therapists should consider encouraging a sense of acceptance and contentment with life through the use of downward social comparison base on MDT (Michalos, 1985) and reorganising priorities is life as shown by the participants in this study. As discussed before, downwards social comparison, acceptance and contentment provide can be used to reduce
negative affect, increase self-esteem, facilitate a sense of life satisfaction and quality of life.

10.5 Policy implications from the findings

This study provides strong evidence regarding the benefits of occupational therapy programmes for institutionalised elderly people in Malaysia. It is predicted that there will be an increased in the number of older people in Malaysia and inevitably, older people who need institutionalised services. However, there were only 489 occupational therapists working in public hospitals serving 26 million people in Malaysia (Ministry of Health, Malaysia, 2009). With the changes in demographic characteristics, increased numbers of older people in Malaysia and shortage of occupational therapists, it is clear that there is a need to change the human resources policy in Malaysia. The finding from this study which shows that the 3LP facilitates enhancement in ERA, GSE and QoL amongst institutionalised elderly people provides strong evidence for policy revision and the provision of more training for occupational therapists in Malaysia in the future.
10.6 Summary of points for Chapter 10.

- The aim of this thesis is to determine the effect of an occupational therapy intervention programme known as The Lively Later Life Programme (3LP) and to explore the ideographic experience of elderly people who live in elderly institutions on ERA, GSE and QoL before and after the implementation of 3LP.

- Post intervention results indicate that there are statistical significant changes in all of the domains investigated and findings from post experimental focus groups illustrated the changes in life after participating in 3LP. Qualitative findings supplement the quantitative results and provide a broader picture of the domains under study. This has contributed to evidence based practice in OT. Furthermore, the findings validate and expand previous lifestyle redesign programmes which were conducted for community dwelling elderly people in Western countries. This demonstrates that lifestyle redesigns that were developed in Western countries can be successfully transferred to a different setting and can transcend cultural barriers.

- Findings from this study have supported findings from previous studies, provide new information and question or challenge the characteristics and process of engagement, the benefits of engagement in occupations and the issues that exist in institutions for elderly people.

- Several limitations have been identified from the study including inadequate sample size, issues of contamination, the long term sustainability of 3LP, the nature of the study measures, lack of direct involvement from staff and family members and lack of quantitative study measures that may evaluate the impact of 3LP on occupational functions. The limitations identified provide for the future direction of the study.
Findings from this study also provide practice recommendation for OT working with older people and policy recommendations for further OT training in Malaysia.