An Activity Program for Older People

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Abstract

Older people in an institution live in a sedentary lifestyle. They lose their autonomy, seldom engage in activities and did not have a meaningful social relationship. These issues lead to decreased in quality of life (QoL). The aim of this randomised trial is to determine the effectiveness of a lifestyle redesign programme, i.e. the Lively Later Life Programme (3LP) on QoL. Eighty-two older people who fit the inclusion criteria were randomly assigned to the 3LP group and the control group. At the end of six months, there is a significant change in physical, psychological and social domains of QoL.

Keywords: Older people; quality of life; activities; lifestyle.

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1.0 Introduction

There are increasing numbers of older people in Malaysia who are seeking care from private or public elderly institutions. Previous studies show that older people who live in the institution faced with various issues that lead to decreased in quality of life (QoL). There are various health programmes that have been conducted to prevent the issues, for example, programmes that redesign a lifestyle through re-engagement in individualised, meaningful, valued and self-directed activities. However, such programmes have only been conducted in developed countries and were designed for older people who live in community settings (Mountain et al. 2008; Frandin, et.al, 2013). There is no substantial work exploring the applicability and the effectiveness of such programmes for institutionalised older people in Malaysia. Hence, the aim of this study is to evaluate the effect of a programme that modifies older people lifestyle in institutions through a lifestyle redesign programme known as The Lively Later Life Programme (3LP).

2.0 Literature Review

Older people in the institution live in a sedentary lifestyle and seldom engage in activities (Haslam, 2008; Dahlan & Ibrahim, 2014). They spend a high proportion of their daily life being inactive, alone or immobile (Ice, 2002), spend many hours in bed and frequently taking a nap during the day (Neikrug & Ancoli-Israel, 2010). Ice (2002) investigated the daily life of older people in a nursing home found that the resident spends 56% of their time doing nothing. The majority of them spent their time in their room, sitting alone, not doing anything and contemplating the past. Chung (2004) found institutionalised older people spent 90% of their time engaged in passive activities. The older people stated that '… every day is the same' (Chuang and Abbey 2009: p.1644), and they felt '[the] time stands still' (Cook and Stanley (2009: p. 397)

Furthermore, the relationship between residents in institutions is seldom a meaningful type of relationship. It is often for adjustment (Chuang & Abbey, 2009) a compromised relationship to ensure harmony (Lee, 2010), in-frequent, non-intimate and a fragile type of relationship (Spilsbury, et al., 2011). The relationships with staff are often formal in the manner (Spilsbury, et al., 2011) which subsequently leaves the resident alone and doing nothing. Visits from family members and friends often decline over time (Fukahori, et al., 2007; Cheng et al. 2010). They also experiencing institutionalised syndrome as a result of erosion in personal autonomy, lack of internal locus of control, loss of personal space, loss of meaning and sense of belonging in life (Choi, et al., 2008; Custers, et.al., 2012). Subsequently, there are many older residents who feel powerless, depressed, low self-efficacy, low self-esteem and decreased general well-being (Choi, et al., 2008; Boyce, et al., 2012), which subsequently affected their QoL (Hedberg, et al., 2010).

3.0 Methodology

The study conducted in a public funded elderly institution in Malaysia that houses elderly people, 60 years old and above. A Pre-test-Post-test parallel experimental study design with a control group was chosen to investigate the effect of 3LP on QoL. To be included in this study, the participants had to meet the following criteria (I) aged 60 years or older; (II) independent in basic self-care skills; (III) able to speak in either in Bahasa or English, (IV) have scores of 22 or above in Malay Mini-Mental State Examination (MMSE); (V) have scores below seven in the translated version Geriatric Depression Scale (GDS). A compromise power analysis based on the G*Power calculation analysis was conducted to determine the sample size. All of the participants were randomly allocated using random allocation software (Saghaei, 2004). The post-test conducted by independent researchers who were blinded to the aim, theoretical framework, participation allocation and the nature of the 3LP.

Data regarding QoL was collected using Malay version of the brief version of World Health Organisation Quality of Life (WHOQOL-Bref) (The WHOQOL Group, 1995; Hasanah et al., 2003). It covers four 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, 1995). The study was approved by the Research Ethics Committee of Universiti Teknologi MARA and the Department of Social Welfare in Malaysia. Informed consent was obtained and collected from all of the participants.

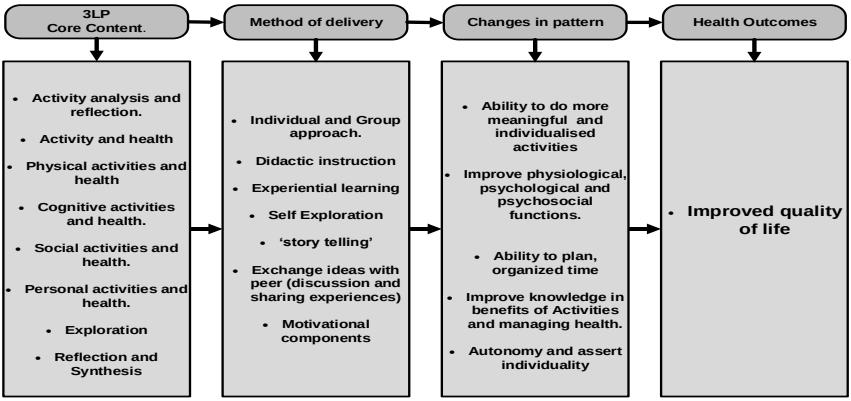

Figure 1: 3LP Programme model.

Participants in the control group received programme conducted by the staff of the institution. The programme is an ad-hoc programme, comprising mainly of recreational and social types of activities aimed at occupying the residents' time. Participants in the experimental group received lifestyle redesign programme (i.e. the 3LP) for six months conducted by occupational therapists. Each participant in the experimental group received

2 hours of group sessions and one hour of an individual session per week. The model of the programme is shown in Figure 1. The programme was inspired by a successful lifestyles re-design programme; the Lifestyle Matters programme (Mountain et al., 2008).

Data was analysed using SPSS Version 12. The Mann-Whitney U test was conducted to determine compatibility between the experimental and control group pre-test scores on the demographic variables and the WHOQoL-Bref. Wilcoxon Signed Rank test was used to accept or reject the null hypothesis. An alpha level of 0.5 was used to determine whether there was any significant difference between the pre-test and post-test values. Acceptance or rejection of the hypothesis were based on a 95% confidence interval (CI) ($p<0.05$). In addition, standard mean differences were identified based on Cohen's effect size (Cohen, 1988).

4.0 Results and Discussions

The total numbers of residents who participated in the study were 82 (Figure 2).

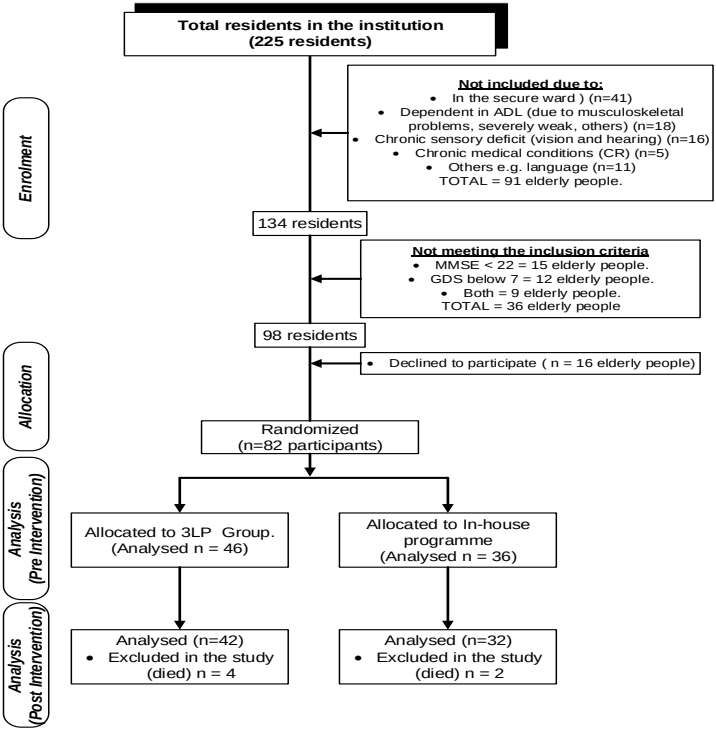

Figure 2: 3LP Programme model.

Table 1: Socio-demographic characteristic of the participants

Variables / Group	Experiment N (%)	Control N (%)	(u)	Z scores	p-value
Gender					
Male	28 (60.9)	28 (77.8)	688.0	-1.62	0.11
Female	18 (39.1)	8(22.2)			
Total	46 (100)	36(100)			
Age					
60 to 75 years old	25 (54.3)	20 (55.6)	782.0	-0.43	0.66
above 75 years old	21 (45.7)	16 (44.4)			
Median age (IQR) :	74.0 (68.25-80.0)	74.50 (67.25-80.0)			
Race					
Malay	33 (71.7)	23 (63.9)	774.0	-0.62	0.54
Chinese	9 (19.6)	11 (30.6)			
Indian	4 (8.7)	1 (2.8)			
Others	-	1 (2.8)			
Duration in institution					
1 to 36 months	41 (89.1)	29 (80.6)	774.0	-0.51	0.61
37 to 72 months	4 (8.7)	5 (13.9)			
73 to 180 months	1 (2.2)				
181 to 144 months	0	1 (2.8)			
145 to 180 months	0	1 (2.8)			
Duration median (IQR)	26.0 (13.50-45.25)	32.0 (12.25-58.75)			
WHOQoL – Bref					
Domain 1: Physical Health Median (IQR)	13.10 (12.0-14.4)	13.40 (12.0-14.3)	755.0	-0.61	0.54
Domain 2 : Psychological Median (IQR)	13.80 (11.3-14.0)	13.40 (11.3-13.2)	763.5	-0.61	0.54
Domain 3: Social relationship Median (IQR)	12.00 (11.7-16.0)	12.00 (11.0-14.7)	790.5	-0.36	0.72
Domain 4: Environment Median (IQR)	12.80 (11.0-14.0)	12.00 (11.1-14.0)	797.0	-0.29	0.77
Total scores WHOQOL-Bref Median (IQR)	51.44 (48.1-55.9)	51.50 (45.7-54.5)	731.0	-0.91	0.37

Abbreviations: N = number of participants, IQR = Inter quartile range, WHOQOL-Bref = Brief version of World Health Organisation Quality of Life,

There is no statistically significant difference between experimental group and control group ($p > 0.05$) on demographic variables and pre-test scores of the WHOQoL-Bref (Table 1). After six months of the intervention, 76 participants completed the 3LP programmes. The post-test results indicated that there are statistically significant differences for participants in the experimental group in all domains of the WHOQoL-Bref as shown in Table 2. The scores are comparable with the norms of an 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) but slightly lower than elderly people in Australia (Ikin et al. 2009).

Table 2: Socio-demographic characteristic of the participants

WHOQoL – Bref Domain		Baseline Median (IQR)	After six months Median (IQR)	Z score	p value	d
Domain 1: Physical health						
	Exp. Group	13.34 (12.00-14.23)	14.87 (14.29-16.14)	-5.08	0.02	0.58
	Control Group	12.57 (12.00-14.29)	12.57 (12.00-13.86)	-0.04	0.97	0.00
Domain 2: Psychological health						
	Exp. Group	12.66 (11.33-14.00)	14.00 (13.33-15.33)	-4.04	0.03	0.46
	Control Group	12.00 (11.33-13.17)	12.00 (10.67-12.67)	-1.23	0.22	0.14
Domain 3: Social relationship						
	Exp. Group	12.00 (11.67-16.00)	16.00 (14.00-16.33)	-3.71	0.02	0.43
	Control Group	12.00 (11.00-14.67)	12.00 (10.50-14.17)	-1.12	0.26	0.13
Domain 4: Environment						
	Exp. Group	12.75 (11.00-14.00)	13.24 (121.50-14.50)	-2.47	0.05	0.28
	Control Group	12.00 (11.13-14.00)	12.00 (11.50-13.50)	-1.09	0.28	0.13
Total scores						
	Exp. Group	51.44 (48.07-55.91)	58.45 (55.57-60.76)	-4.98	0.02	0.57
	Control Group	51.50 (45.75-54.51)	49.73 (45.29-53.69)	-1.13	0.26	0.26

IQR = interquartile range, d = effect size, WHOQoL-Bref = Brief version of World Health Organisation Quality of Life, Exp = Experimental gr

An increased in the physical domain in WHOQoL is postulated to have been contributed from engagement in activities that requires physical movement. These activities contributed to increasing in musculoskeletal functions, such as strength, endurance, balance and

coordination. Previous RCT's and longitudinal studies indicates 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; Frandin, et, al, 2013), increased physical function and fitness (Shin et al. 2009; Lee, Lee and Woo, 2010, Frandin, et, al, 2013).

The second largest effect of the 3LP is towards the psychological domain in WHOQOL-Bref (medium effect, r = 0.46, the median increment from 12.66 to 14.00). The experience of enjoyment in life was obtained through engagement with varieties of meaningful activities as planned in 3LP. Previous studies show that engagement in activities facilitates positive affect, such as feelings of happiness (Elavsky et al. 2005; Meeks, et al., 2007), fun and contentment with life (Harmer and Orrell, 2008) and reduction in depression (Resnick et al. 2008; Shin et al. 2009; Cheng, et al., 2012) and improved quality of life (Guallar-Castillón, 2014) and as stressed in many occupational therapy literatures (Egan and Mantes, 2010; Lee et al., 2010, Frandin, et, al. 2013).

It is speculated that the benefits of changes in physiological, psycho-social and psychological functions are interrelated; in which one benefit could facilitate enhancement in other benefits. For example, changes in musculoskeletal function (i.e.; increased walking endurance) could provide enhancement in psychological function (i.e.; feeling happy, increased self-esteem and had future direction in life) and the changes in musculoskeletal function could also encourage participants to engage in activities outside the institute.

Statistical significant changes in QoL scores could also be mediated by the unique characteristics of the core content of the 3LP. The 3LP provides opportunities for the participants to engage in activities that are individualised and meaningful to them, minimised barriers and providing motivations. Individualised activities motivates participation and facilitate quality of life (Vriendt, et.al., 2014) and more responsiveness to institutionalised older people (Cohen-Mansfield, et al., 2010; Kolanowski & Buettner, 2008), increased adherence (Findoff, Wyman & Gross, 2009), reduced anxiety in relation to participation (Sung, Chang & Lee, 2010), enables the development of feelings of proficiency and success (Holthe, et al., 2007). Eliminating barriers to engagement and provide motivation facilitates enhancement in self-efficacy and confidence through a reduction in stress which eventually facilitate success in engagement in activities (Shin et al., 2009). Furthermore, based on a systematic review, it is found that individualised intervention is more effective than 'blanket' programmes or control programme (Suhonen, et al., 2008).

Another characteristic of individualised activity in 3LP is that the activity conducted are interesting and challenging, yet not exceeding participants physical capacity, related to previous roles in life, self-identity and belong to a regular pattern of life as prior life before relocation to the institution. For example, gardening, craft, cooking, indoor and outdoor activities. Engagement in activities related to life roles facilitate a sense of well-being and provide a sense of connection between past and present (Harmer & Orrell, 2008; Frandin, et.al, 2013).

One of the limitations of the study is its limited sample size. Further studies that enrol a greater number of participants are, therefore, warranted to provide stronger and conclusive evidence regarding the effectiveness of the 3LP in facilitating enhancement in QoL.

5.0 Conclusion

Our results indicated that 3LP, a lifestyle redesign programme which is similar to lifestyle redesign programme that was conducted for community-dwelling older people in Western countries facilitate improvement in QoL amongst older people in the institution. Therefore, we suggest that lifestyle redesign programme which focuses on active engagement or re-engagement in meaningful, individualised, self-directed and valued activities should be a part of the rehabilitation programme for older people in institutions.

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