

EFFECTIVENESS OF APPLIED FOLK ART PLONG STICK EXERCISE AND SOCIAL SUPPORT TOWARDS SELF - CARE BEHAVIORS OF ELDERLY

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ABSTRACT

The purpose of the research were to study effectiveness of applied folk art plong stick exercise and social support towards self - care behaviors of elderly. The sample group consisted of 100 elderly were purposive sampling, who had lived in Dusit district, Bangkok Thailand. The instrument of the research was the questionnaire. The questionnaire consisted of 2 aspects: 45 items. An applied folk art pole stick exercise and social support program was taught by a master for 45 minutes, at least three times weekly, for two months. The statistical analysis were percentage, average, standard deviation and paired samples t-test. Effectiveness of applied folk art pole stick exercise, social support and self - care behaviors were measured at the beginning of the program as a baseline, and at three months of training. The result found that the socio-demographic characteristic majority 78% were female and Divorce (68%). Average the social support increased from the baseline (mean = 3.33, SD = .07) were statistic significantly at .05 level and average of self - care behaviors on health status increased from the baseline (mean = 3.01, SD = .02) were statistic significantly at .05 level.

Keywords-applied folk art, pole stick exercise, elderly, social support, self - care behaviors

INTRODUCTION

Thailand is currently ranked the third most rapidly aging population in the world. (HelpAge international global network, 2016). Statistics show that the proportion of persons aged over 60 years in Thailand now accounts for 13 percent of the total population. In the next 20 years, the aging population is expected to account for 25% of the population. (The Government Public Relations Department, 2014). This means that out of every four Thais, one will be a senior citizen. Globalization Nowadays is changes in economic and social structure. The elderly were abandoned lot alone. Meanwhile, the change in family size from the large family to a single family then they no time to take care of the elderly. Neither the elderly be effected by economic and social culture nor physical problem.

The aging process is associated with the onset of chronic conditions so that two thirds of elderly citizens in Europe suffer from multimorbidity, defined as the presence of at least two co-occurring conditions. European Union (2012)., The aging may suffer from the multiple health disorders due to the vulnerability for many physical and mental disturbances. Self - care behavior and Quality of life in elderly population can be affected by many environmental factors. Chronic, non-communicable diseases are the biggest cause of death in high-income countries; responsible for more than 70% of deaths in 2008. Costs associated with chronic conditions have been estimated at 75% of total health expenditure, which is related to a wide range of health services such

as hospitalization, medication, physician consultation, transportation, rehabilitation or long-term care. (Nagel A, et al., 2012).

Social support as part of the factors that influence in elderly. The peer support response the needs and emotionally. Elderly need friends when anxiety or loneliness. Friends, family, social supporters as well as the emotional and as part of society. In crisis situations friends, family, social support can help each other, although the social structure and family have changed most seniors still live with their family, which is an important source of social support base. Especially in Thai culture providing care for parent show their gratitude. Strong social support is a key role in promoting self - care behaviors of elderly. According to Boen H., Dalgard. O. S. and Bjertness. E. (2012). The research Found that lack of social support and somatic health problems were associated with psychological distress in elderly. The combination of poor social support, poor somatic health and economic problems may represent a vulnerable situation with respect to the mental health of older persons. interventions suggested that highlight social support should be considered in mental health promotion.

Exercise is particularly important for the elderly, which main aim of the exercise is Making the body more healthy. then it will slow down the degeneration of physical exercise with a pole application form to the elderly. This exercise continued for about 20 -30 minutes to help increase metabolism 90-120 calories and weight control, improvement Trunk muscles, back and legs, stretching more. Prevent and reduce back pain. Balance and gait, the function of various organs Better coordination. According to Collins. E. G. et al., (2012). This study showed that traditional walking was superior to walking with poles in increasing walking endurance on a constant work rate treadmill test for patients with peripheral arterial disease. A short time to 10 minutes several times. A pole exercise can adjust the strength or speed to suit the elderly individual and force the weak increase of pulse, weight and body mass index decreased, corresponding to the typical physical fitness of the elderly. Exercise with a pole is healthy to a physical, mental, and social relationships. Not only the absence of disease or disability but also build the relationship between their friend and their family.

Previous research has not studied the psychological and social relations of the elderly. Therefore, in this study, the researchers are interested to learn that the elderly have increased as well. Faced with the changes of the physical, psychological and social make elderly exercise and when social support to help motivate exercise affects self-care behaviors of the elderly, however. The findings will be used as key information in promoting health care behavior. And provide social support to the elderly in order to have a better quality of life in the further.

METHODOLOGY

Study design.

This study was a Quasi - experimental research, One group, pretest-posttest design and the sample were random. The purpose of this research were compared pre -post test of the elderly's self -care behaviors. This applied folk art plong stick exercise and social support programmed was taught by a master for 45 minutes, at least three times weekly, for two months. The study was approved by the Ethics in Research Committee of the institution.

Subjects.

The sample of this study consisted of 100 elderly who aged 60 years and older with independent ADL who did not have risk for fall and were not under physical activity restrictions from their physicians, were living in the community in Urban area such as Dusit District in Bangkok Metropolitan Thailand. They were voluntarily to take part in the study. Setting this study is Dusit District in Bangkok Metropolitan Thailand, between January 5, 2016 and April 10, 2016.

Exclusion criteria.

Subjects were excluded under the following circumstances: individuals with Alzheimer disease and other cognitive disorders who had no ability to answer the questions and no took part in the interview.

Applied Folk Art Plong Stick Exercises with social support program.

Subjects voluntarily participated in a three month for applied folk art plong stick exercises training program. They practiced with family or the neighborhood at least three times a week, in the evening, within a Fitness center in community by Community volunteers. A plong stick exercise applied folk art program consisted of the following 3 sessions: Session 1, "warming up"; Session 2 "practice" Session 3 "cool-down exercise": Session 1 included 10 minutes of warm-up exercises, Session 2 included 30 minutes of a pole stick exercise applied folk art program practice and 5 minutes of cool-down exercise in Session 3. Session 2 included 14 postures within folk art posture such as Thai standard dance, thum-na posture, thor-pha-mai posture with some repeated movements during the exercise. Sessions 3 included 8 postures, subjects were led by an instructor, and they imitated the movement and postures at the same speed.

Measurement.

Measurement the regional Ethics Committee in Suan Sunandha Rajabhat University, Thailand approved the protocol of the study. After explaining the whole protocol of study, a written informed consent taken from the eligible participants. measurement instruments were divided into four separate parts: sociodemographic data, health history (number of illnesses, medication used and fall accident), health behaviors and social support. Questionnaires were distributed and filled in individually by physically active elderly during group sessions with the supervision of a research assistant. This instrument contains 2 domains with a total of 45 items. Demographic characteristics of subjects (age, gender, diseases background) were collected through face-to-face interview. Subjects of both genders, apparently and healthy, independent, mobile, and were able to communicate verbally defined as inclusion criteria. Validity and reliability of questionnaire were approved in other study according to the confirmation of panel of experts and the score of alpha Cronbach up to 0.8.

Statistical Analysis.

Statistically of SPSS was used for data analysis. Standard statistical methods were used to calculate means and standard deviations. The normality of the continuous data was checked using the mean and standard deviations. To determine the elderly 's self-care behavior and social support of physical activity of the applied folk art plong stick exercise. An dependent t - test for repeated measures was used to compare before - after of the self-care behavior and social support of the subjects. Statistical significance was set at 5%.

RESULT

Demographic characteristics of the subjects are shown Majority 55% were in the Middle Old group (70 – 79 years), 78% were in the female, Divorce (68%), Graduate primary education level (48%), low income (45%), chronic morbid conditions such as Hypertension (53.3%), Diabetic mellitus (60%) and Cardiovascular disease (94.2%) respectively. The social support mean score of the subjects increased after receiving the applied folk art Pole stick exercise and social support program (mean = 3.33, SD = .07). (Table 1). The mean score of the self - care behaviors after receiving the applied folk art plong stick exercise program were increasing (mean = 3.01, SD = .02) statistically higher ($p < .05$) (Table 2)

Table 1

Compared Social support Score of study population (N=100)

Social support	x	SD	t	p - value
Pre-Program	3.07	0.09		
			.011	.01
Post -Program	3.33	0.07		

Table 2

Compared Self - Care Behaviors Score of study population (N=100)

Self - Care Behaviors	x	SD	t	p - value
Pre-Program	2.69	0.23		
			.015	.01
Post -Program	3.01	0.02		

DISCUSSION

Hypotheses the elderly who attend the program with the plong stick of applied folk art with social support can improved self - care behaviors than previous experiments Significant statistically. 05. The results from this study reveal two themes of self - care behaviors and social support mean score of the both theme increased after receiving the applied folk art plong stick exercise and social support program. The first theme is self - care behaviors is increased after receiving the applied folk art plong stick exercise especially item of increase of frequency of exercise. According to Yokoi K., et al., (2015). The conclusion of their research revealed that the effects of short stick exercise (SSEs) appeared effective for fall prevention and improvement of physical function in older adults. Effects gained by performing the short stick exercises, such as static balance, flexibility and agility may last for six months. The short stick exercises were found to be easy for older adults to practice continuously in residential care facilities. Sukaya Boonvarasatit, (2016). Factor influencing health is health responsibility, physical activity, nutrition, and self - management and factors predicted health promotion behaviors were perceived self - efficacy and social support. The concept and the factors mentioned earlier would affect the behavior of self - health care of the elderly was good as well. Regular physical activity remains the most effective way of maintaining and improving vascular health status and caution should be taken regarding potential interference of supplements on training adaptations. (Gliemann L., Nyberg M., Hellsten Y., 2016). According to Yokoyama. S, Gamada. K, and Sugino S., (2012). The post-intervention values of the Core Conditioning with the stretch pole (SP group) were higher than the Core Conditioning exercises without Stretch Pole group (CC group) at both the axillary and 10th rib levels. These results indicate that CC using the Stretch Pole improves thoracic mobility. The second theme is social support increased after receiving the applied folk art plong stick exercise especially family support for health status.

According to study the result of their research revealed that life quality of the elderly is in a high level as the result of high personal interaction, social organization, positive emotion and positive health condition orderly. Suttipong Boonphadung, (2011). This study showed that there is a need for actions to control factor associated complications with the purpose of self - care behavior towards improving QOL.

CONCLUSION

The study findings may help provide guidance for understanding the association of factors influencing self-care behaviors of Elderly and the interventions that are responsive to the needs of the elderly and help in improving the Quality of life (QOL) among the Elderly population. Health education with regard to activity and environmental changes and increase in social relationship may help in improving the QOL among the elderly population. Planning the policies and programs that improve and promote quality of life and decrease burden of elderly's diseases and establish information services for educating elderly people regarding healthy diet and doing regular exercise can be effective.

SUGGESTION

This study finding, it is suggested that presence of social support and other complications is an important factor to be considered during the assessment of self-care behavior among the elderly. Health promotion is necessary in adult population before reach to the aging population because it is Prevent morbidities and its complications in future and improve QOL among elderly.

LIMITATION

The study sample was composed of primarily elderly. Thus, our results cannot necessarily be generalized to adult populations. Additionally, our sample size may not have been large enough to detect other factor differences between male and female groups.

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REFERENCES

- Boen H., Dalgard O. S. and Bjertness E. (2012). The importance of social support in the associations between psychological distress and somatic health problems and socio-economic factors among older adults living at home: a cross sectional study. *BMC Geriatrics*. 27: 1-12.
- Collins. E. G. et al., (2012). Comparison of Walking with Poles and Traditional Walking for Peripheral Arterial Disease Rehabilitation. *Journal Cardiopulmonary Rehabilitation Preview*.32(4): 210-218.
- European Union. (2012). Health Policy Forum. Answer to DG SANCO consultation on chronic diseases. European Commission website. Available: http://ec.europa.eu/health/interest_groups/docs/euhpf_answer_consultationjan2012_en.pdf. Last retrieved March 14, 2016.
- Gliemann L., Nyberg M., Hellsten Y., (2016). Effects of exercise training and resveratrol on vascular health in aging. *Free Radical Biology and Medicine*. 98: 165-176.
- HelpAge international global network. (2016). News and resources to improve the lives of older people in East Asia and the Pacific. <http://ageingasia.org/ageing-population-thailand1/> Last retrieved on February 5, 2016.
- K. Yokoi, K. Yoshimasu, S. Takemura, J. Fukumoto, S. Kurasawa, and K. Miyashita, (2015). Short stick exercises for fall prevention among older adults: a cluster randomized trial. *Disability Rehabilitation*. 37(14): 1268-1276.
- Kurasawa. S., Yokoi. K., Miyai N., Yoshimasu. K., Takemura K., and Miyashita. K., (2015). Assessment of the Exercise Intensity of Short Stick Exercises in Elderly Individuals. *Rehabilitation Research and Practice*. <http://dx.doi.org/10.1155/2015/20936>. Last retrieved on April 25, 2016
- Lehnert T, Heider D, Leicht H, Heinrich S, Corrieri S, et al. (2011) Review: health care utilization and costs of elderly persons with multiple chronic conditions. *Med Care Res Rev*. 68(4): 387-420.
- Nagel A, Witte J, Hodek J. M, Greiner W. (2012) Relationship between multimorbidity and direct healthcare costs in an advanced elderly population. *Journal of Gerontology Geriatric*. 45(2): 146-154.

- M. R. de Oliveira, R.A. Da. Silva, J.B. Dascal, D.C. Teixeira. (2014). effect of different types of exercise on postural balance in elderly women: a randomized controlled trial. *Archives Gerontology Geriatrics*. 59(3):506-514.
- N. M. de Vries, C. D. van Ravensberg, J. S. M. Hobbelen, M. G. M. Olde Rikkert, J. B. Staal, and M. W. G. Nijhuis-vander Sanden. (2012). Effects of physical exercise therapy on mobility, physical functioning, physical activity and quality of life in community-dwelling older adults with impaired mobility, physical disability and/or multi-morbidity: a meta-analysis. *Ageing Research Reviews*. 11(1): 136-149.
- Sukaya Boonvarasatit, (2016). Factor influencing health - promoting behaviors among prison officer in department of corrections, Nakhonratchasima province. *The Public health journal of Burapha University*. 11(1): 45 - 52.
- Suttipong Boonphadung. (2011). *Developing the Life Quality of the Elderly by Applying Sufficiency Economy-Based Schooling (Phase I)*. Suan Sunandha Rajabhat University, Bangkok, Thailand. The Government Public Relations Department. (2014). Thailand Prepares for Becoming an Aging Society. http://thailand.prd.go.th/ewt_news.php?nid=1268&filename=index. Last retrieved on March 5, 2016
- United Nations, Department of Economic and Social Affairs, Population Division (2012). Population Ageing and Development 2012. United Nations website. Available: http://www.un.org/esa/population/publications/2012_World_Pop_Ageing_Dev_Chart/2012_Pop_Ageing_and_Dev_WallChart.pdf. Last retrieved on March 1, 2016.
- Yokoyama, S, Gamada, K, and Sugino S. (2012). The effect of “the core conditioning exercises” using the stretch pole on thoracic expansion difference in healthy middle-aged and elderly persons. *Journal of Bodywork & Movement Therapies*. (16): 326-329.
- Y. Watanabe, H. Madarame, R. Ogasawara, K. Nakazato, and N. Ishii. (2014). Effect of very low-intensity resistance training with slow movement on muscle size and strength in healthy older adults. *Clinical Physiology and Functional Imaging*. 34(6): 463-470.