ASSOCIATION BETWEEN SELF-EFFICACY, FAMILY SUPPORT AND PHYSICAL-SOCIAL FUNCTIONING ACTIVITY AMONG THE ELDERLY IN COMMUNITY QOL PROGRAM, KANCHANABURI PROVINCE, THAILAND

BIPNA SHRESTHA

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PRIMARY HEALTH CARE MANAGEMENT FACULTY OF GRADUATE STUDIES MAHIDOL UNIVERSITY 2012

Thesis
entitled

ASSOCIATION BETWEEN SELF-EFFICACY, FAMILY SUPPORT AND PHYSICAL-SOCIAL FUNCTIONING ACTIVITY AMONG THE ELDERLY IN COMMUNITY QOL PROGRAM, KANCHANABURI PROVINCE, THAILAND

.....
Ms. Bipna Shrestha
Candidate

.....
Prof.(Emeritus) Santhat Sermsri,
Ph.D.
Major advisor

.....
Asst. Prof. (Hon.) Nate Hongkrailert,
Ph.D.
Co-advisor

.....
Prof. Banchong Mahaisavariya,
M.D., Dip. Thai Board of Orthopedics
Dean
Faculty of Graduate Studies
Mahidol University

.....
Lect. Supattra Srivanichakorn,
M.D., M.P.H.(Health Development),
Dip. Thai Board of Preventive Medicine
(Epidemiology)
Program Director
Master of Primary Health Care
Management
ASEAN Institute for Health Development
Mahidol University

Thesis
entitled

ASSOCIATION BETWEEN SELF-EFFICACY, FAMILY SUPPORT AND PHYSICAL-SOCIAL FUNCTIONING ACTIVITY AMONG THE ELDERLY IN COMMUNITY QOL PROGRAM, KANCHANABURI PROVINCE, THAILAND

was submitted to the Faculty of Graduate Studies, Mahidol University
for the degree of Master of Primary Health Care Management
on
May 3, 2012

.....
Ms. Bipna Shrestha
Candidate

.....
Assoc. Prof. Sithichai Egoramaiphol, Ph.D.
Chair

.....
Asst. Prof. (Hon.) Nate Hongkrailert, Ph.D.
Member

.....
Prof. (Emeritus) Santhat Sermsri, Ph.D.
Member

.....
Prof. Banchong Mahaisavariya, M.D., Dip. Thai Board of Orthopedics
Dean
Faculty of Graduate Studies
Mahidol University

.....
Lect. Supattra Srivanichakorn, M.D., M.P.H.(Health Development), Dip. Thai Board of Preventive Medicine (Epidemiology)
Director
ASEAN Institute for Health Development
Mahidol University

ACKNOWLEDGEMENTS

The completion of this study is the product of cooperation and support of several helping hands. This has not been done by my individual attempt. First and foremost, my deep appreciation goes to my major advisor Prof Santhat Sermsri whose inputs proved valuable throughout the course of this study and for its completion. Furthermore, I would like to thank to my co-advisor Asst. Prof. Nate Hongkrailert for his sole support. My sincere thanks also goes to Assoc .Prof. Sithichai Egoramaiphol, an external examiner for his suggestions.

I would like to acknowledge all the respected professors and lecturers of AIHD, especially Assoc. Prof. Jiraporn Chompikul, and Dr. Jutatip Sillabutra for their continuous support in statistical analysis of the study. I recall with great pleasure and express my heartiest thanks to Mr. Somchai Viripiromgool and Mr. Sanan Chaiyasen who always helped me by providing the relevant information to shape this study.Also my special thanks go to Mrs. Penpimol Siriphachote and Mr. Poramin Boonnak for their constant assistance during data collection period.I am also indebted to various organizations such as Elderly Club Association Kanchanaburi province, Provincial health office and Muang district health office for their valuable suggestions and providing materials throughout the study period.

Special appreciation goes to my respondents, who spend their time for filling the questionnaire and shared their personal experiences to bring the study to this form. Moreover, warm thanks deserve to all staffof MPHM office and my classmates for their extreme and significant contribution to the successful completion of this study.Finally yet, importantly, I extend my appreciation in deepest respect to my parents and all of them who have helped directly and indirectly during the preparation of this report.

Bipna Shrestha

ASSOCIATION BETWEEN SELF-EFFICACY, FAMILY SUPPORT AND PHYSICAL-SOCIAL FUNCTIONING ACTIVITY AMONG THEELDERLY IN COMMUNITY QOL PROGRAM, KANCHANABURI PROVINCE, THAILAND

BIPNA SHRESTHA 5438177 ADPM/M

M.P.H.M.

THESIS ADVISORY COMMITTEE: SANTHAT SERMSRI, Ph.D., NATE HONGKRAILERT, Ph.D.

ABSTRACT

This cross-sectional study was conducted to describe the physical-social functioning activity of the elderly and to examine the relationship between self-efficacy, family support and physical-social functioning activity among the elderly living in a community QOL program in Kanchanaburi province. A total of 289 self-administered questionnaires were used to collect data using stratified sampling.

The result showed that individuals with high self-efficacy and high family support were more likely to perform physical-social functioning activity than those with lower self-efficacy and family support. About 48% of the elderly studied had good physical-social functioning activity.However, household-activity and leisure time activity were commonly performed more than regular exercise. Over half (60%) had either high or moderate self-efficacy while 51.9% had high family support. Self-efficacy and family support were positively correlated with the physical-social functioning activity of the elderly. Multiple linear regression predicted self-efficacy and family support as significant predictors ($p<0.001$, R-sq (adj) =43%) when adjusted with other factors.

Physical and social activities ensure the well-being and welfare of the elderly. Several interventions to increase self-efficacy and family support for health promoting behavior targeting the elderly should be strengthened and continued.

KEY WORDS: SELF-EFFICACY / FAMILY SUPPORT / PHYSICAL-SOCIAL FUNCTIONING ACTIVITY/ ELDERLY IN QOL PROGRAM

98 pages

CONTENTS

CONTENTS (cont.)

LIST OF TABLES

LIST OF TABLES (cont.)

LIST OF FIGURES

LIST OF ABBREVIATIONS

AIHD	Asean Institute for Health Development
aOR	Adjusted Odds Ratio
HQRL	Health related Quality of Life
MDG	Millennium Development Goal
NCD	Non Communicable Diseases
PA	Physical Activity
QOL	Quality of Life
SCT	Social Cognitive Theory
SES	Socio-economic Status
LTPA	Leisure Time Physical Activity

CHAPTER I
INTRODUCTION

1.1 Rationale and Justification of the Study

Population ageing is defined as the increasing proportion of older persons (60 years and above) in the total population. The increasing proportion of older people and its influence on quality of life is a growing concern worldwide. Ageing is increasing not only in western society where a sedentary lifestyle is appreciated as a luxury but is also rapidly expanding in Asia. The evidence in the context of South-East Asia, particularly in, Thailand can be seen, as it has been said that Thailand's population is ageing faster than others in South-East Asia. The facts and figures showed that the population aged 60 years and above in 1950 was five percent of Thailand's population and it has now become the second most aged country in the region (next to Singapore) with the older population constituting more than 10 percent of the total. Thailand ranked as the seventh most aged country among the eleven countries in South-East Asia. An improvement in longevity and a decline in fertility have resulted in a relatively higher rate of increase in the older population (1).

Total Fertility Rate of Thailand (average number of children per woman) dropped from 6.4 in 1950-55 to 1.7 in 2005 and is projected to decline marginally to 1.5 during the next 20 years. Life expectancy at birth increased from 52 years in 1950-55 to nearly 71 years in 2000-2005. It is projected to increase further to 76.8 years in 2025-2030 and 79.1 years by 2050. On average, Thai women are expected to outlive men by about nine years. The proportion of older persons in the total population of Thailand will increase to 14.0 per cent in 2015, 19.8 per cent in 2025 and nearly 30 per cent by 2050. The population of older persons in Thailand will exceed the population of children (aged below 15 years) around 2020 (1).

Such a demographic transition will essentially have an effect on two levels: the economic level (such as a reduction in income per capita, savings and investments, as well as an increase in public expenditures on social security, health

care and welfare of older persons) and at the social level the changing family structures will also imply a decline in family support to the elderly. Moreover, the potential support ratio in Thailand, currently estimated at 10.0 is projected to decline to 7.8 by 2015 and further to 5.2 by 2025. This means that the number of working age adults potentially available to contribute to the support of the population aged 65 years or more will be reduced by half (1). This will pose a challenge to sustain the success achieved in reducing poverty as per MDG-1 which aims at halving poverty levels.

In addition, Thailand is a signatory to the International Plan of Action on Ageing adopted at the Second World Assembly on Ageing held in Madrid in 2002. The Plan calls for a better understanding on the part of Government, civil society and the community of the ageing situation and its consequences so that older persons can be fully integrated into society and assured a life of dignity and good health (1).

Healthy Thailand: National Agenda

Ministry of Public Health, Thailand has announced the National Agenda on 'Healthy Thailand', in 2005 which emphasizes that every Thai citizen should have greater opportunity to develop their potentiality physically, mentally socially and spiritually to actively participate in the process of national development. Every Thai citizens should have adequate access to quality health care at all stages of life for their well being (2).

'Healthy Thailand' indicates that older persons should spend their later years peacefully with families and being cared for; they also could take part actively in community activities and join in clubs for the elderly in their communities. In accordance with the announcement of Healthy Thailand as a national agenda in 2005, the Ministry of Public Health began to support the establishment of elderly clubs, providing a wide range of health promotion activities (aerobics, lectures on health and mental health care, cultural activities), in every sub-district, with the target of a minimum of 50% of older persons in each sub-district becoming members of elderly clubs in their communities. Elderly clubs have been established in almost all sub-districts in all provinces (97%; 12,000 clubs), with nearly 4,000,000 older persons as members (64% of the total older population). Each year the Ministry of Public Health

holds a conference to promote elderly health, and representatives from elderly clubs and networks throughout the country are invited to attend (2, 3).

On the other hand, the growing ageing population is posing a burden on public health. Due to modernization, people do not live in extended families anymore. The increasing number of lonely elderly is another problem threatening physical-social functioning status including the health and QOL of the elderly people. Quality of life (QOL) has long been accepted as the goal of the ageing population and it is recognized as having numerous aspects, including health and psycho-social well-being. A strong sense of personal efficacy so called "self-efficacy" is related to better health, higher achievement, and more social integration. This concept has been applied to such diverse areas as school achievement, emotional disorders, mental and physical health, career choice and socio-political change (4, 5). There are several psycho-social factors increasing the likelihood of participating in physical exercise: strong motivation, emotional support from peers and frequent repetition of a particular behavior for a long time. For example, the longer a person follows a heavy physical exercise, the higher in confidence of continuing to exercise (6). Also, the quality of interactions with family members, whether positive or negative, is of crucial importance in the daily living of older people (7).

Today, many QOL program are implemented within the communities and villages throughout the country. Available data reveal that in every province throughout Thailand all health service facilities (general hospitals, community hospitals and health centers, either in urban or rural areas have established at least one community-based organization for the Elderly (CBOE); these organizations, named "Chromrom Phoo Soong Ayu" in Thai, are responsible for the health welfare of the elderly. Kanchanaburi province is a place where several supporting program and projects targeting to elderly have been launched. AIHD, Mahidol University, has also conducted several programs to enhance the capacity of the elderly and quality of life among the elderly people such as "the Integrated Planning and Strengthening Partnership Approach for Community Based Quality of Life Development for Thai Elderly", which supports community-based QOL development in Kanchanaburi province. This project aims to develop sustainability of clubs for the elderly by developing the skills of self-management and mobilization for members of the club.

The objective is to support community-based elderly organizations by training well organized and competent elderly volunteer groups in both needs assessment and intervention processes through participatory action research (8).

The community-based QOL program for the elderly is still active and functioning in Kanchanburi province unlike some others. Limited physical and social functioning among the elderly will affect their daily life and which ultimately affect their QOL. Physical activity and social activity are important components of QOL (9-12). QOL is a person's subjective sense of well-being. This means that social exchanges/support from family members are highly associated with well-being (13).

Self-efficacy is recognized as a determinant for participation in physical and social functioning activities among the elderly; in turn, self-efficacy can also be a predictor of the quality of life of elderly. It has also been found that individuals with a high degree of family support are more likely to participate and derive benefit from QOL programs than are those with a low degree of support (14).

Therefore, to improve QOL, physical and social activities of the elderly are importantly required. So, factors affecting these physical and social functioning activities include two important independent domains, i.e., personal self-efficacy and family support, which need to be addressed in order to structure effective interventions targeting groups of the elderly, thereby raising their quality of life.

1.2 Research question

Is there an association between self-efficacy, family support and physical-social functioning activity among the elderly in community QOL program, Kanchanaburi, Thailand?

1.3 Objectives of the Study

1.3.1 General Objective:

To assess the self-efficacy level and family support for physical-social functioning activity among the elderly in a community QOL program Kanchanaburi, Thailand.

1.3.2 Specific Objectives

- To examine the physical-social functioning activities of the elderly in community QOL program in Kanchanaburi.
- To find the personal socio-demographic characteristics of the elderly in the community studied.
- To assess the level of self-efficacy of the elderly in the community studied.
- To identify family support provided to the elderly for physical-social activity.
- To identify the relationships between self-efficacy, family support and physical-social functioning activities among elderly Thais in Kanchanaburi.

1.4 Conceptual Framework

Independent variables

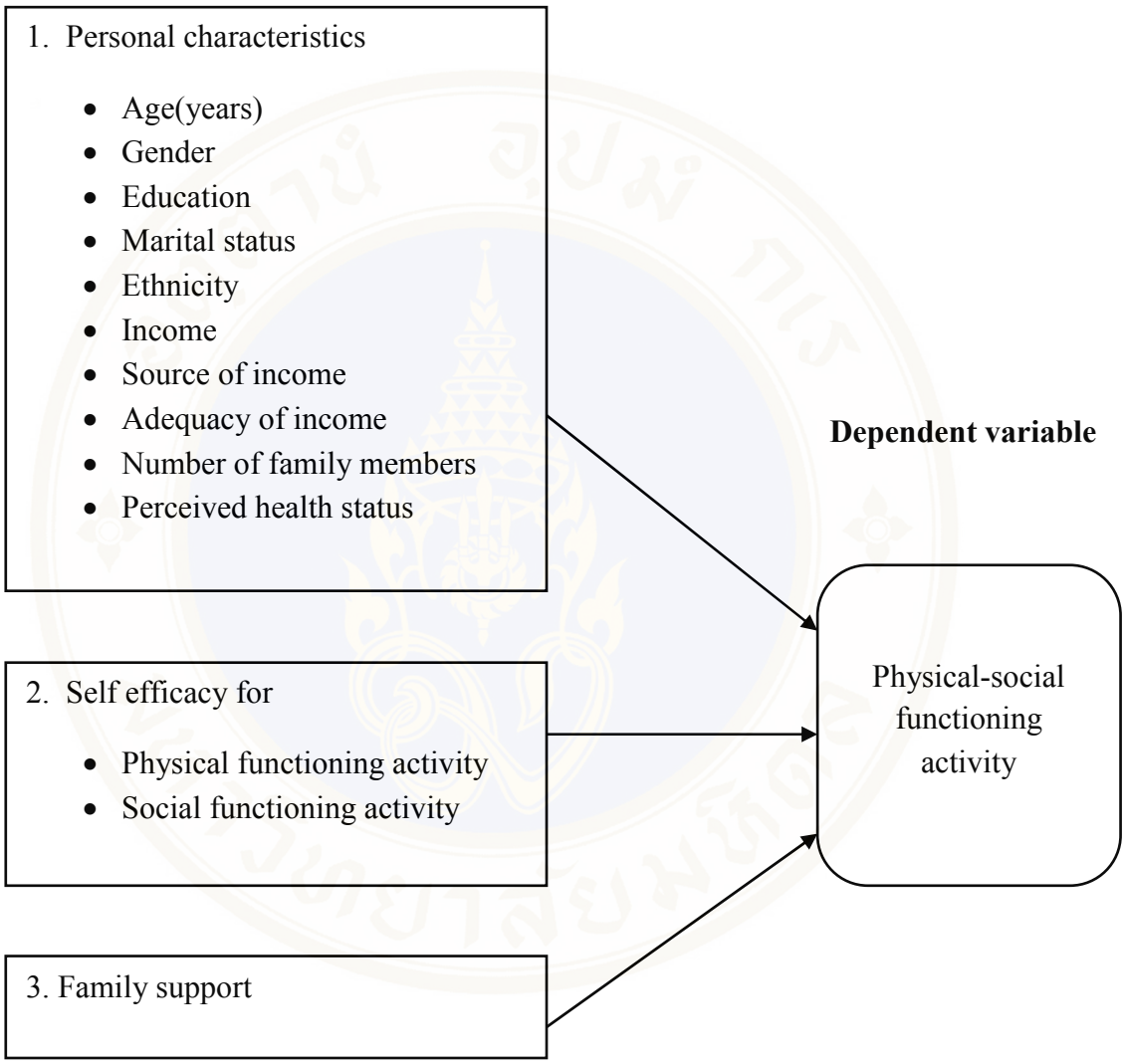

Figure 1.1 Conceptual framework

1.5 Operational Definition

- **Elderly**

In this study, elderly refers to the population aged 60 and over.

- **Physical functioning activity**

In this study, physical functioning activity refers to household activity, leisure time activity and exercise performed by the elderly. Household activity refers to daily routine activities of the elderly which include sweeping, laundry, cooking and grocery shopping. Leisure time activity refers to the recreational activities of elderly people in their free time such as watching TV, taking a nap, gardening, traveling and walking for pleasure. Exercise refers to walking, jogging/running, tai chi, bicycling, aerobics, and bamboo stick dancing.

- **Social functioning activity**

In this study, social functioning activity refers to getting together with friends, attending social functions, participating in occupational or social functions/roles, group recreation, church/temple attendance, participation in voluntary activities, participation in work whether paid or not paid, care giving, religious activities like ceremony/festivals, religious trips, participating in exercise/sports in community clubs for the elderly, and offering food to monks.

- **Self-Efficacy**

In this research, self-efficacy is the degree of confidence participants have in their ability to perform/participate in physical functioning activity and social functioning activity, managing their schedules, performing under unfavorable condition like stress, tired and overwork.

- **Family support**

In this research, family support refers to support from the elderly's family members in terms of contacts or visits and social interactions. It also includes

opportunities arranged by family members for the elderly, e.g., physical exercise, religious ceremonies, festivals and formal and informal meetings held for the elderly.

- **Personal socio-demographic characteristics**

  It refers to the following characteristics:

  - **Age** (years) refers to completed years of age of the respondents at time of the interview.
  - **Gender** refers to male or female.
  - **Education** refers to highest educational level attained by the respondents.
  - **Marital status** refers to the current marital status of the respondents, whether she/he is single, married, divorced or widowed/separated.
  - **Income** refers to the total amount of money that respondents earn or receive monthly.
  - **Source of income** refers to the source from which they get money for their daily lives.
  - **Occupation** refers to type of main work that respondent had before retirement.
  - **Adequacy of income** refers to whether the available income is adequate for daily life or not.
  - **Number of family member** refers to the total number of members in their family.

1.6 Expectations of the Study

Understanding the factors that explain physical-social activity behavior in older adults would help to structure interventions to motivate these individuals to initiate and adhere to a regular activity program. This has important health implications as it can prevent disease and disability, help older adults maintain and improve function, and improve overall quality of life.

1.7 Limitations of the study

- The study was conducted among the elderly who resided in Kanchanaburi Province and were under QOL program.
- Generalizations from the findings should be limited only to the particular province with similar population, social and cultural characteristics.
- The study was based only on the elderly who were willing to provide answers to the study questions.
- This study was focused to self-efficacy and family support as important factors that predict activity behavior among the elderly. However, there might be other factors that could have direct or indirect effect on it, which was not included in this study.

CHAPTER II
LITERATURE REVIEW

This chapter presents a review of the theoretical and empirical literatures that contributes to the concepts in the study. The purpose of the study is to find the association between self-efficacy, family support and physical-social functioning activity among the elderly in a community QOL program in Thailand. The theoretical background for the study comprises of social cognitive theory of Bandura (1977), the self-efficacy belief concept and also includes several studies that explore self-efficacy and family support as a factors affecting physical-social functioning activity among the elderly.

Older adults are likely to be hindered by a number of psychological factors in adopting and maintaining regular physical activity. To overcome these barriers and participate in regular physical social functioning activity, motivation is important and to increase both motivation and exercise behavior, it is crucial to consider a multidimensional framework as presented by social cognitive theory (SCT) (15).

SCT provides the theoretical foundation as documented in the literature discussion, correlations and determinants of health behavior change. The important determinants underlying SCT (i.e., self-efficacy, outcome expectations, goals, and facilitators) and how they are theorized to influence behavior have been clearly explained by Bandura. The “active agent” in SCT is self-efficacy. Self-efficacy expectations are beliefs regarding the individuals’ ability to successfully carry out a plan and may be considered as a situation-specific form of self-confidence (16).

2.1 Theoretical background of the Study

Social Cognitive Theory (SCT)

According to Social Cognitive Theory, (Bandura, 1977), human motivation and actions are regulated extensively by forethought. This theory is based on a model of reciprocal determinism in which behavior, cognition, and other personal factors and environmental influences all operate interactively as determinants of each other. SCT posits that human behavior is the product of the dynamic interplay of personal, behavioral, and environmental influences. SCT also explains that the psychological determinant of human behavior is based on outcome expectancies and self-efficacy; outcome expectancies are the beliefs that a certain results will be produced by personal action or the perceived value/benefit of the outcomes and self-efficacy, that is, people's beliefs in their capabilities to perform a specific action required to attain a desired outcome. SCT is composed of four processes of goal realization: self-observation, self-evaluation, self-reaction and self-efficacy. Moreover, SCT implies that self-efficacy is the crucial and proximal predictor of behavior (17)

Self-efficacy describes individuals' beliefs in their capabilities to exercise control over challenging demands and over their own functioning (18).

Self-efficacy belief (Bandura, 1997) is the concept for which SCT is most widely known and which has been integrated into several other models and theories. It consists of a person's beliefs about his/her capacity to influence the quality of functioning and the events that affect his/her life. Numerous studies have shown that the performance of much behaviour is determined both by outcome expectations and self-efficacy beliefs, with the latter becoming more important for behaviours of progressive complexity or difficulty.

Efficacy expectations are dynamic and enhanced by following four mechanisms: mastery experience; verbal persuasion (verbal encouragement given by a credible source that the individual is capable of performing the activity of interest); vicarious experience (seeking individuals who perform a specific activity) and physiological and affective states such as pain, fatigue or anxiety associated with a given activity. Hence, the theory of self-efficacy suggests that the stronger that individual's efficacy expectations (self efficacy and outcome expectations), the more

likely he or she is to engage in healthy behaviors, to maintain them, and to recover after setbacks. Both self-efficacy and outcome expectations play an influential role in the adoption and maintenance of exercise behavior in older adults (16,17). In addition, people with strong self-efficacy recognize that they are able to overcome obstacles and focus on opportunities.Perceived self-efficacy, defined as *"beliefs in one's capabilities to organize and execute the courses of action required for producing given attainments",* is one of the most widely researched concepts in health promotion.

The Elderly

The definition of ageing varies from society to society, depending upon the tradition and custom. Generally, ageing is defined according to the end of working ages or the retirement of work, which is the benchmark of social turning points. A number of countries define elderly as age 60 years and above but many use 65 years as cut off age. In Thailand context, as in other ASEAN countries, elderly is defined as persons who are 60 years and older because of the retirement age in Thailand both for government and private organizations (19). The elderly are divided into three groups: the young elderly (age 60-69), the middle elderly (age 70-79) and the old elderly (age 80 and over).

A total of 59.1% of Thai elderly persons belong to the young elderly group, 31.1% belong to the middle elderly group and 9.8% belong to the old elderly group (20).

2.2 Situation of the Thai elderly

Ageing is an unavoidable issue and the magnitude of demographic changes has important implications for the demand of health care and improvement in quality of life of the elderly.There is an increasing trend for the Thai elderly to be separated from their families due to rapid changes in socio-economic development and the population structure.

Thai people believe that assisting elderly is the duty of the children and grandchildren. Assisting elderly remains a social imperative. Almost three in four

older people live with their spouse, children, or other relatives. Slightly more than one in four live only with spouse, live alone or in some other arrangements such as in an old people's home. The older people living alone is small in number, however, this number is likely to rise gradually (20). According to a survey, conducted in 2002, elderly people living with a spouse accounted for 15.9% of the aged population, those living alone 6.3% and living with spouse, children and relatives 72.6% (21).

Support from children has a strong significant positive relationship with the satisfaction of the Thai elderly (22).

The participation of elderly in various activities have been increasing by the establishment of clubs for retired officials throughout the country. These clubs organize social activities, health promotion activities, and also help to enhance solidarity among elderly. They also conduct social meetings, exercise, religious ceremonies and household income generation activities (20). Thai people are becoming more involved in exercise due to encouragement from governmental and non-governmental sectors. The information explores the prevalence of six forms of exercise: running, jogging, aerobics , tai chi, sports and normal exercise (23).

A study by Henry et al., (2001) compared the physical activity levels in two contrasting communities: a residential home and a rural community of elderly subjects in Thailand. There was considerable variation in physical activity level (PAL) values which ranged from 1.21 to 1.73 in the residential home and from 1.21 to 3.08 in the rural community. This highlights the variation in activity within the rural community and between the communities. Also reported that opportunities for the elderly living in the residential home to have active lifestyles are limited (24).

A study done among the urban Thai elderly in Chiang Mai Province revealed that high and moderate level of leisure time activity led to double the level of health related quality of life. Also, a high level of household activity increased the level of health related quality of life (25). The study also mentioned that household activity can be an alternative way to enhance physical activity for the improvement of health-related quality of life among the Thai elderly in the urban areas. In this study, a physical activity scale was designed with reference to the Physical Activity Scale for the Elderly (PASE), in which physical activity was categorized into leisure time activity, household activity and work related activity. Household activity includes:

light household work like dusting, washing dishes, laundry, meal preparation, ironing, and grocery shopping. Heavy housework activity includes vacuuming, scrubbing floors, sweeping, washing cars, mopping floors, gardening and yard work. Leisure time activity includes watching TV, taking a nap, gardening, travelling, and walking for pleasure. While work related activity includes engagement in commerce, serving as a health volunteer or, religious assistant, and labor (25).

2.3 Literature related to personal characteristics

A study conducted using longitudinal data from a national sample aged 54-72years showed that physical activity rates significantly decline with increasing age (26,27). However, age-related decline in physical activity (PA) was also apparent among respondents with low levels of education. Also, lack of PA was evident in those who had poor health conditions and who were less involved in work, which in turn based on educational level. For example, the findings suggest that among the respondents with low levels of education, being without work was positively associated with physical activity but inversely associated with physical activity for highly educated respondents (27). In contrast, some studies in Asia showed that participation increases with age (28,29).

Gardner et al., (2008) compared exercise performance and leisure-time physical activity (LTPA) between two ethnic groups: older Caucasians and African-American. The study found that older African-Americans had poor exercise performance and lower LTPA compared to older Caucasians. Furthermore, racial differences were no longer existed after adjusting for differences in LTPA in exercise performance (30).

Provision for and accessibility to health services are unlikely to play a significant role in frailty among older adults; rather, lifestyle, socioeconomic status, and geographical location of residence directly and indirectly influence it (31) .

Family income (22,32) and sufficiency of income are related to the social functioning component of quality of life and the satisfaction of the elderly; they are important in responding to the social needs of elderly people (22,33). Marital status, education and

health status also have positive effects on the satisfaction of senior citizens in both rural and urban areas of Thailand (22).

Utz et al., (2002) showed that widowed persons had higher levels of informal social participation than non-widowed persons, whereas formal social participation levels were comparable between the two groups. Social participation levels decrease before the death of a spouse, primarily because of poor spousal health, and later again increase following the loss, because of increased support from friends and relatives (34).

A study in Myanmar by Naing (2010) using stepwise multiple regression analysis identified two factors: self-esteem and family participation predicted 53.3 percent of the quality of life with a p-value of less than 0.05. In addition, educational level and presence of chronic diseases had significant relationships to the QOL of elderly people with p-value 0.007 and 0.048 respectively. However, other variables such as gender (p-value = 0.117), marital status (p-value = 0.076), family type (p-value = 0.068), occupation of the elderly, were not seem to be associated with the QOL of elderly people (32).

A multivariate study (2011) to identify predictors for quality of life in older people in Chile found that more aged people with low education, minimal physical exercise and inadequate nutrition experienced lower functional ability over the years. Education level was found to be the topmost variable over all in context of unequal social opportunities. Additionally, the old people who had better living conditions of income and functional capacity, and high levels of self-efficacy and who were able to perform significant activities such as going outside the home or reading several times a week. People who had good social relations such as better family relations and greater availability of social support were found to be more satisfied with life. Life conditions (income and functional capacity) are related to well being of older people and self efficacy and quality of family relations are found be good predictors in explaining the QOL of elderly people well. Also, practice of physical and social activity was related to good functional capacity. (35).

2.4 Literature related to physical-social functioning activity

WHO reports physical inactivity as the fourth leading risk factor for global mortality(6% of deaths globally) (36). According to WHO, strong evidence demonstrates that compared to less active men and women, older adults who are physically active have lower rates of chronic diseases, higher levels of functional health and better cognitive function (37,38).

Global Recommendations on Physical Activity for Health for older adults(65 years and above): For adults in this age group, physical activity includes recreational or leisure-time physical activity, transportation (e.g. walking or cycling), occupational (if the person is still engaged in work), household chores, play, games, sports or planned exercise, in the context of daily, family, and community activities.
In order to improve cardio respiratory and muscular fitness, bone and functional health, and reduce the risk of NCDs, depression and cognitive decline, the following are recommended (37):

1. Adults aged 65 years and above should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week, or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week, or an equivalent combination of moderate- and vigorous-intensity activity.
2. Aerobic activity should be performed in bouts of at least 10 minutes duration.
3. For additional health benefits, adults aged 65 years and above should increase their moderate intensity aerobic physical activity to 300 minutes per week, or engage in 150 minutes of vigorous intensity aerobic physical activity per week, or an equivalent combination of moderate- and vigorous intensity activity.
4. Adults of this age group with poor mobility should perform physical activity to enhance balance and prevent falls on three or more days per week.
5. Muscle-strengthening activities should be done involving major muscle groups, on two or more days a week.
6. When adults of this age group cannot do the recommended amounts of physical activity due to health conditions, they should be as physically active as their abilities and conditions permit. At the recommended level of 150 minutes per week of

moderate intensity activity, musculoskeletal injury rates appear to be uncommon. In a population-based approach, in order to decrease the risks of musculoskeletal injuries, it would be appropriate to encourage a moderate start with gradual progress to higher levels of physical activity (37).

Similarly, American College of Sports Medicine and the American Heart Association (ASCM/AHA) describes the amount and types of physical activity that promote health and prevent disease. The recommendations and apply to all adults aged 65 years and above, and to adults aged 50–64 years with clinically\significant chronic conditions or functional limitations that affect movement ability, fitness, or physical activity (39):

Table 2.1 Recommendation for aerobic activity

Recommend ation	**Aerobic activity**		
	Frequency	**Intensity**	**Duration**
Older adults, 2007, ACSM/AHA	• A minimum of 5 days each week for moderate intensity, or a • minimum of 3 days each .week for vigorous intensity	• Moderate Intensity at 5 to 6 on a 10-point scale; • vigorous intensity at 7 to 8 on 10-point scale	• Accumulate at least 30 min. per day of moderate-intensity activity, in bouts of at least 10 min each; • continuous vigorous activity for at least 20 min per day

Table 2.2 Recommendation for muscle-strengthening activity

Recommendation	**Muscle-Strengthening Activity**			
	Frequency	**Number of Exercises Sets**	**Repetitions**	**Flexibility/Balance**
Older adults, 2007, ACSM/AHA	At least 2 days a week	8–10 exercises involving the major muscle groups	10–15 repetitions	At least 2 days a week; for those at risk for falls, include exercises to maintain or improve balance

Regular physical activity, including aerobic activity and muscle-strengthening activity, is essential for healthy ageing. This preventive recommendation specifies how older adults, by engaging in each recommended type of physical activity, can reduce the risk of chronic disease, premature mortality, functional limitations, and disability.

Aerobic activity

Moderate-intensity aerobic activity involves a moderate level of effort relative to an individual's aerobic fitness. On a 10-point scale, where sitting is 0 and all-out effort is 10, moderate-intensity activity is 5 or 6 points and produces noticeable increases in heart rate and breathing. On the same scale, vigorous-intensity activity is a 7 or 8 points and produces large increases in heart rate and breathing. For example, given the heterogeneity of fitness levels in older adults, for some older adults a moderate-intensity walk is a slow walk, and for others it is a brisk walk (39).

The recommended amount of aerobic activity is in addition to routine activities of daily living of light-intensity (e.g., self-care, cooking, casual walking or shopping) or moderate-intensity activities lasting less than 10 minutes in duration (e.g., walking around home or office, walking from the parking lot). Few activities in contemporary life are conducted routinely at a moderate intensity for at least 10 minutes in duration. However, moderate- or vigorous intensity activities performed as a part of daily life (e.g., brisk walking to work, gardening with a shovel, carpentry) performed in bouts of 10 minutes or more can be counted towards the recommendation. Moderate-intensity physical activity in shorter bouts(usually lasting 10 minutes) that are accumulated toward the 30-minute minimum can be as effective as single, longer bouts in affecting chronic disease risk factors (39).

Muscle-strengthening activity

It is recommended that 8–10 exercises be performed on two or more nonconsecutive days per week using the major muscle groups. To maximize strength development, a resistance (weight) should be used that allows 10–15 repetitions for each exercise. The level of effort for muscle-strengthening activities should be moderate to high. On a 10-point scale, where no movement is 0, and maximal effort of

a muscle group is 10, moderate-intensity effort is a 5 or 6 and high-intensity effort is a 7 or 8. Muscle strengthening activities include a progressive and resistance exercises that use the major muscle groups (39).

In addition, older people should have a plan for obtaining sufficient physical activity that addresses each recommended type of activity. Those with chronic conditions, for which activity is therapeutic, should have a single plan that integrates prevention and treatment. For older adults who are not active at recommended levels, plans should include a gradual (or stepwise) approach to increase physical activity over time. Older adults should also be encouraged to self-monitor their physical activity on a regular basis and to re-evaluate plans as their abilities improve or as their health status changes. Healthy, asymptomatic older adults without chronic conditions should also develop an activity plan, preferably in consultation with a health care provider or fitness professional, so as to take advantage of expertise and resources on physical activity and injury prevention (39).

The traditional, structured approach originally described by the ACSM and others involved rather specific recommendations regarding type, frequency, intensity, and duration of activity. Recommended activities typically included fast walking, running, cycling, swimming, or aerobics classes. More recently, physical activity recommendations have adopted a lifestyle enriching approach. This method involves common activities, such as brisk walking, climbing stairs (rather than taking the elevator), doing more house and yard work, and engaging in active recreational pursuits. Recent physical activity recommendations thus acknowledge both the structured and lifestyle approaches to increasing physical activity. Either approach can be beneficial for a sedentary person, and individual interests or opportunities should determine which is to be used (40).

Health status is also influenced by social network through promotion of social participation and social engagement. Participation and engagement results from the enactment of potential ties in real-life activity. Getting together with friends, attending social functions, participating in occupational or social functions, participating in occupational or social roles, group recreation and church attendance- are all instances of social engagement. Social networks contribute to social cohesion through contact with friends and family and participation in voluntary activities. Life

in these circumstances acquires a sense of coherence, meaningfulness and interdependence. Evidence indicates that social engagement and participation are related to maintenance of cognitive function in old age and to reductions in mortality, independent of level of emotional or instrumental support. Thus social engagement may activate physiologic systems which operate directly to enhance health as well as indirectly by contributing to a sense of coherence and identity which allow for a high level of well-being (41).

Thanakwang (2008) study among Thai elderly in Nan province emphasized four components of healthy ageing for the Thai elderly: physical functioning, active engagement with life, positive spirituality/religiosity and cognitive functioning. Physical functioning refers to the ability to take care of personal needs in daily life. These tasks range from basic activities related to independence to more complicated activities associated with social living. To assess the physical functioning components of healthy ageing focused on two common measures: Activities of Daily living (ADL) and Instrumental Activities of Daily Living (IDAL) (42).

Adelaide Activities Profile (AAP) provides measures of the lifestyle activities of elderly people on four scales: domestic chores, household maintenance, service to others, and social activities as follows (43):

- Domestic chores (preparing meals, washing clothes, light housework, making telephone calls)
- Household maintenance (heavy gardening, light gardening, house/car maintenance, driving car, daily walking, hobbies)
- Service to others (attending religious services, paid employment, caring for family members)
- Social activities (outdoor recreation, outdoor sport, social activities)

A comparative study of life style activities among the older people of urban and rural areas lifestyle activities were assessed with Adelaide Activities Profile (AAP). The study found that among the various categories of activity of daily living, in domestic chores category, both in urban and rural areas, mean ratings for women were significantly higher than for men, however, with oldest group(more or equal to 85 years) as exception. While, in the category of household maintenance activity, also except for group of more or equal to 85 years, men rated significantly higher than

women. In category, service to others activity, women scored higher than men. For the social activity category difference was found in between men and women involvement i.e., men younger than 80years were significantly more involved in social activities than women in rural areas whereas in urban areas both men and women rated same (44).

The widely accepted definition of successful ageing formulated by Rowe and Kahn (1997) contains three components: low risk of disease and disability; high mental and physical function; and active engagement with life. Rowe and Kahn defined maintaining high physical functioning as one component of successful ageing. Difficulty with physical functioning represented by an inability to perform the usual activities of everyday life, which can be a serious problem among older persons and can lead to negative consequences for health in older age. Active engagement with life is one of the aspects of healthy ageing that refers to a person's involvement in community life, social roles and social relationships or the contribution to others such as participation in work whether paid or not paid, care giving, volunteering and social participation ,including religious activities (45). These activities are also referred to as productive ageing (46).

Social activities may be especially important for older persons because they lead to social well-being, higher life satisfaction, happiness and better health than those who are inactive (34).

Studies have shown that physical activity has significant potential to influence HRQL (47). The most direct effects are likely in the areas of psychological wellbeing (e.g., self-concept, self-esteem, mood, and affect), perceived physical function (e.g., perceived ability to perform activities of daily living), physical well-being (e.g., perceived symptoms and perceived physical states, such as dyspnea, pain, fatigue, and energy), and, to a limited extent, cognitive function.

Acree et al., (2006) to determine if physical activity was related to HRQL (Health related quality of life) in apparently healthy older subjects, separated subjects into either a higher physically active group or a lower physically active group. They found that the HRQL scores in all domains (such as physical function, social functioning, vitality and bodily pain) were significantly higher in the group reporting

higher physical activity. Additionally, the more active group had fewer females than the low active group (48).

The study done in Korean immigrant women to examine relationships among leisure time physical activity(LTPA) behavior, background (age, SES status) and intrapersonal correlates of behavior (self-efficacy and decisional balance) reported lower rate of regular LTPA participation. Also, suggested that Korean immigrant women's lives are full of physical activities, although they may not be regular exercisers and the exclusive assessment of LTPA would underestimate overall physical activity in Korean immigrant women (49).

A cohort study done among Chinese women demonstrated that physical activity domains other than sports and exercise were important contributors to total energy expenditure. Also, reported correlates of physical activity were domain-specific (28) .

A study about participation in socially productive activities and quality of life in early old age conducted by SHARE (Survey of Health, Ageing and Retirement in Europe) was analyzed by Siegrist et al., (2009). They found that continued participation in socially productive activities, particularly those that provides opportunities of experiencing reciprocity in exchange (between effort and reward in activities), improve prospective quality of life in early old age. The study included three different types of socially productive activities: doing voluntary or charity work; caring for sick or disabled adult; providing help to family, friends or neighbors (informal help). Also the findings showed that there was larger variability in quality of life within the country than between countries based on socio-economic position (50).

2.5 Self-efficacy

McAuley (1993), examined the roles played by self efficacy, physiological (aerobic capacity, sex, body composition), and behavioral (past exercise frequency and intensity) parameters in the maintenance of exercise participation in a sample of previously sedentary middle-aged adults after a four-month program. Findings identified self-efficacy as a significant cognitive mediator in the maintenance of

exercise at follow-up when statistically controlling for previous exercise participation and aerobic capacity (51).

Potter et al., (2009) has shown that older adults with high confidence in their ability (high perceived self-efficacy) produced minor errors during cognitive performance tasks, whereas those with lower confidence produced extreme errors. An older adult's perceived self-efficacy may prove useful in identifying his or her risk of later functional limitations (52).

High self-efficacy of older adults lowers health risk behaviors such as exercise, dietary fat intake, weight control, alcohol intake and smoking and promotes better health. Therefore, self-efficacy predicts more HRQL which is detected by regression analysis in the study of Grembowski et al., (1993). The analysis demonstrated positive association between SES and HRQL at $p< 0.02$ but strength reduced at $p< 0.11$ after self-efficacy measures entered the model exhibiting self-efficacy predicts part of association between SES and health status (53).

The study examining influence of various forms of self-efficacy (i.e. barrier and scheduling) on exercise attendance of novice exercisers resulted that both forms of efficacy significantly predicted adherence to exercise program (R-square = 0.13 -0.26, $p< 0.2$) (54).

A study designed to test the utility of the social cognitive theory (SCT) model of physical activity behavior over an 18-month period in middle-aged and older adults (N = 321; Mean age = 63.8 years), results showed that changes in self-efficacy were significantly related to residual changes in outcome expectations, disability limitations, goals, and physical activity and indirectly related to residual changes in physical activity through changes in physical and social outcome expectations (13).

Middle aged and older adults who had stronger self-efficacy were found to engage more in physical activity and have fewer physical limitations. That tends to boost their ability to engage in physical activity, set higher goals and outcome expectations. Importantly, self–efficacy was also found to be indirectly linked with physical activity through physical outcome expectations. A study by White et al. (2011), reported that outcome expectations were directly related to physical activity participation beyond self efficacy in accordance with the social cognitive theory (SCT) model of physical activity behavior (55).

Morris et al., (2008) suggested that perceived neighborhood satisfaction (perceived environment) and functional limitations (individual factors) were associated with changes in physical activity behavior as these effects were, in part, mediated by self-efficacy. It means that older adults who reported higher neighborhood satisfaction and less low extremity limitations also had higher levels of efficacy to overcome barriers to exercise over time. In addition, neighborhood satisfaction was inversely associated with functional limitations, suggesting that older adults who experience less difficulty with mobility and balance are more likely than those with greater limitations to report greater levels of neighborhood satisfaction. Likewise, self-efficacy was directly associated with physical activity (56).

Self efficacy was a mediator for linking the relationship between physical activity and QOL (56,57). However, self efficacy was shown to play an important role both as an outcome of physical activity and a precursor of more distal QOL indicators (57).

The study done among Korean immigrant women to examine relationships among leisure time physical activity behavior, background (age, SES status, social support) and intrapersonal correlates of behavior (self-efficacy and decisional balance) reported lower rate of regular leisure time physical activity participation and there was no significant mediating effect of self-efficacy (49).

2.6 Social support (Family support)

Overall health can be influenced by multiple factors, including a person's psychological, behavioral, and social well-being. Studies have demonstrated an association between increased levels of social support and reduced risk for physical disease, mental illness, and mortality. Social support includes real or perceived resources provided by others that enable a person to feel cared for, valued, and part of a network of communication and mutual obligation. Social support can be critical for those older adults who rely on family, friends, or organizations to assist them with daily activities, provide companionship, and care for their well-being (47).

Social support is an intervention component geared towards: 1) directly supporting specific behavior changes; 2) creating an environment that is helpful to individuals in making behavior change and/or; 3) developing skills in building support. Social support is characterized by source, type, and mode. Sources of social support consist of professionals (e.g., trained counselors), peers, and family members. Peers can be strangers, or existing members of the same social network (17).

Generally, types of social support includes emotional support, instrumental support (i.e., providing tangible assistance, such as help with childcare/housekeeping, provision of transportation or money), information support, and appraisal support (e.g., assisting individuals in self-evaluation). Emotional, followed by informational, are the most common forms of social support used in health behavior change interventions. The majority of social support evaluations have focused primarily on emotional support. However, there is no evidence, due to limited evaluations, that any one type of social support is more effective than another. Social support can be provided on a one-to-one basis, through groups, or via existing social networks (17).

Meaningful contact, face-to-face or by telephone, with sons and daughters is important to older people for enjoyment, help and security (10).

Family networks did not directly influence health-promoting behaviors but rather had an indirect effect through family support. Health-promoting behaviors had a powerful influence on healthy ageing and play a significant role in mediating the relationship between family supports and healthy aging (58).

Family support, particularly in diet, is significantly associated with controlled glucose level in Korean immigrants with type 2 diabetes. That is, more perceived family support was associated with better glucose control. Interestingly, the positive impact of family support on the glucose outcome was stronger in men than in women (59).

Yuan et al., (2010) investigated how family support affects the PA middle-aged and elderly people engagement before and after they suffer from chronic disease. The study was conducted among middle-aged and elderly people, using a structured questionnaire to measure their aerobic PA. The study found a positive correlation between family support and participation in physical activity, mentioning that even sick elderly people were willing to engage in PA when supported and encouraged by

their family members. Finally, the spouse was found to be a good motivator in encouraging the elderly to engage in physical activity (5,60).

The U.S. Women's Determinants Study conducted in 1996 and 1997 to assess the association of physical activity-related social support(PASS) on several measures of physical activity (such as sedentary, regular exercise, cumulative exercise, and lifestyle activity) among minority women(Black, Hispanic, American Indian/Alaskan Native, and White) aged 40 and older. A separate analysis was done to distinguish PASS from friends versus PASS from relatives. The findings showed that Hispanic women were more likely to have high PASS scores than the other racial/ethnic groups. Even after adjusting for race/ethnicity, odds ratios signified that subjects with high levels of PASS in contrast to low support level were less likely to be active. There was no significant associations among levels of social support and the 'regular exercise' measure of physical activity. There was no significant difference between the contribution of ``friends'' support versus ``family'' support on any of the four measures on physical activity (60)

Paukert et al., (2010) reported that social support was significantly associated with depression (depressive symptoms and positive affect), and anxiety (worry). Social support also moderated the relationship between physical health and positive affect (61).

King et al., (2010) found that healthy eating patterns and physical activity (i.e. physical health self management) were related to behavioral specific self-efficacy and social-environmental support. Community support was independently related with diet and physical activity self-management variables; however, support from the health care team was not associated with behavioral or clinical outcomes (62).

Fiori et al., (2006) believed that individuals have different social networks and that each has a different effect on health. Their analysis of adults aged 60 and older, using data from the Americans' Changing Lives study identified five types of social networks based on the dominant characteristics of the network:

- Nonfamily-restricted—characterized by extremely limited social ties.
- Non-friends—characterized by infrequent contact with friends.
- Family—a network with frequent contact among family members.
- Friends—characterized by frequent contact with friends.

- Diverse—not dominated by any particular type of member.

This study found that membership in these different groups varied by age, education, income, and functional status. Older individuals were most likely to be in nonfamily-restricted networks, characterized by infrequent social contact with other. Therefore, an active social network of family and friends can promote healthy ageing through a variety of mechanisms including tangible and emotional support (63).

Another study that tracked changes in social relations over the course of life found that older people tend to focus the bulk of their social outreach and contact on their closest social networks, specifically family members (64).

Okabayashi and colleagues (2004) hypothesized that in Japan, a culture characterized by children's commitment to supporting their elderly parents, children are the most important source of social and emotional support. Using a national survey of Japanese over the age of 60, these researchers determined that support from one's children is more closely associated with positive mental health outcomes, than is support from other sources including spouses and friends (65).

This finding contrasts with the results from an earlier study of older persons in the United States and India, where emotional support from a spouse is more important in determining well-being than support from one's children (66). Evidence from these studies suggests that individuals in different cultural contexts have different expectations for social support.

Cornwell et al., (2008) investigated social networks and connectedness of older individuals from the National Social Life, Health and Ageing Project (NSHAP) data. In this study, the researchers described nine dimensions of social connectivity: network size, volume of contact with network members, emotional closeness to network members, network composition, network density, involvement with neighbors, attending religious services, volunteering, and involvement with organized groups. The outcomes from analysis of these dimensions showed that among older Americans, aged 75 to 85 have smaller social network and have less emotional closeness to network members. And also were more likely to socialize with their neighbors, attend church, and volunteer Interestingly, the frequency of contact with people fluctuated with age rather than declining steadily. Contact declined through the 50s and 60s, but increased in late 70s,which may be due to deteriorating health (67).

Religious social networks may also affect health. Krause (2002) explored the relationship between health and the spiritual and emotional support that church members provide to older people. The study found that attending church more regularly was positively correlated with feeling that the congregation was more cohesive and with feeling closer to God. Older persons who reported feeling closer to God were more optimistic and had better self-reported health outcomes (68).

A study by Ei (2009), found a statistically positive association between social support, self-efficacy and physical activity at a significant level of 0.05. Also mentioned that there was no correlation between perceived health status and physical activity (p-value = 0.671) (69).

Social support as a reinforcing factor was significantly associated with the QOL of elderly people at r=0.524, p-value < 0.001 (32). A study done among Korean immigrant women reported lower rate of regular LTPA participation despite of moderately high support from family and friends for physical activity. However, there was a weak association between social support and LTPA behavior (49).

To sum up, reviews of social support varied in their conclusions regarding the effectiveness of social support. Several reviews noted that social support can be a critical component of interventions targeting health behavior change. However, the diversity of ways that social support is conceptualized and implemented make its level of effectiveness difficult to evaluate. However, existing evidence suggests that social support is a promising technique for promoting health behavior change.

CHAPTER III
RESEARCH METHODOLOGY

3.1 Research Design

Thiscross-sectionalstudy aimed to assess the level of self efficacy and family support that affects physical-social functioning activity among the elderly involving in QOL program ofKanchanaburi province, Thailand. Also, it intended to find the relationship between self-efficacy, family support and physical-social functioning activity.

3.2 Study population and area

The study population waselderly who werein community QOL program in Kanchanaburi province, Thailand.Kanchanaburi is a large province located in the western part of Thailand. The province shares a long border with Myanmar and contains a variety of ethnic groups and migrants, both documented and undocumented, from Myanmar. This province reflects diversity in social, economic and ecological conditions found in the province. It is also the place where ASEAN Institute of Mahidol University has launchedseveral projects to make effective and uplift the QOL program for elderly(8, 70).

Participants were selected from the list of members of each elderly club in Muang district.

3.2.1 Inclusion criteria

- Elderly who aged 60-year old and above and were in QOL program living in Kanchanaburi province.
- Those who could communicate verbally and were willing to participate in the study.

3.3 Sample size

The sample size was calculated by using formula:

$$n = \frac{z^2 NP(1-P)}{z^2 P(1-P) + (N-1)E^2}$$

Where, n=estimated sample size=273

Z=standard normal score at 95% confidence interval=1.96

P= which is the proportion of elderly participating in QOL programmes=0.23[In reference to data available from Elderly survey, Kanchanaburi Provincial Chief Medical Office, December, 2010]

E=error between the population value and sample value that the researcher accepted equals to 0.05

N= study population size who are in community QOL program in Kanchanaburiprovince=25,682

3.4 Sampling technique

Kanchanaburi province is the district where QOL related programme for elderly was launched by ASEAN Institute for Health Development (AIHD) and other involved government agencies and are stillfunctioning throughout the province. This province is divided into thirteen districts. At first, one district was randomly selected which was to be Muang district.Muang district is further divided into thirteen sub-districts. In each sub-district there is at least one elderly club with similar functions. Stratified sampling technique was used to select elderly people from each elderly club located at each sub-district (Tumbon).Proportional to size method was applied for determining the number of sample from each elderly club. For the selection of participants, whoever met the inclusion criteria was invited for the study. There were altogether 13 elderly clubs located at 11 sub-districts of Muang. At one sub-district there were three clubs and at other two sub-districts there was no elderly club. However, from those two sub-districts elderly people were member of near adjoining club. Total number of members of elderly clubs of Muang district was equal to 3,955.Total number of members in each elderly club located one at each sub-districts of Muang district are as follows:

Elderly club 1- 400
Elderly club 2- 384
Elderly club 3- 1000
Elderly club 4- 381
Elderly club 5- 450
Elderly club 6- 91
Elderly club 7- 215
Elderly club 8- 485
Elderly club 9- 230
Elderly club 10- 70
Elderly club 11- 70
Elderly club 12- 125
Elderly club 13- 54

The numbers of sample drawn from each thirteen clubs are shown in figure below.

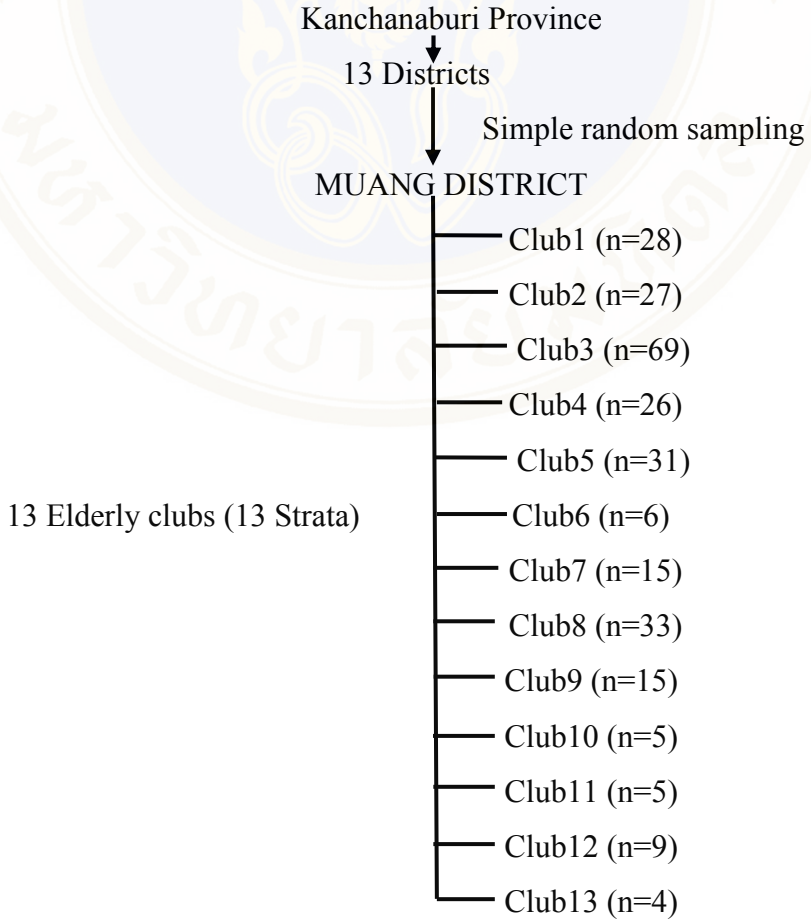

Figure 3.1: Sampling framework

3.5 Research instrument for data collection

The data was collected using structured self-administered questionnaire which was initially prepared in English language and later translated into Thai language.Most of the questions were close-ended questions, with only oneopen-ended question. The questionnaire comprised of 59(questions and statements) and divided into four parts:

- PART 1: Personal characteristics
- PART 2:Physical-social functioning activity
- PART 3:Self-efficay for physical-social activity
- PART 4: Family Support

PART 1: Personal characteristics

This part comprised of age, gender, educational level, marital status, occupation, income, source of income, adequacy of income, number of family membersand perceived health status of respondents. To measure the health status of the respondents in general, item Q2 of WHOQOL-BREF(Q2: “How satisfied are you with your health?”) was included with some modification(12).

PART 2: Physical-social functioning activity

Physical-social functioning activity consisted of four parts: Household activity, Leisure time activity, Exerciseand Social functioning activity comprising altogether 24 items.Questions were based on Community Healthy Activities Program for Seniors (CHAMP) questionnaire (71) and ACSM/AHA guideline(39)for physical activity for older adults. However, this study’s instrument was developed by using five point Likert scale: Never, Rarely, Sometimes, Often and Regularly to measure the frequency of activity carried out.A total physical-social functioning activity score was the summation of Household activity, Leisure time activity, Exercise and Social functioning activity. It ranged from 0 to 96.

The total scorewas grouped based on the mean score into two groups. If the score was higher and equal to mean, it was considered to be good level whereas if score was

lower than mean score, then was considered to be poor level. Scores were calculated using the following criteria:

Frequency	**Score**
Never	0
Rarely	1
Sometimes	2
Often	3
Regularly	4

PART 3: Self-efficacy for physical-social activity

A thirteen items self-efficacy scale was used to assess the degree of confidence participants has in their ability to perform/participate in specific physical-social functioning activity in different situations (e.g., when tired, when ill, when too busy, etc).The response was based on a 3-point Likert scale, ranging from 1 (not at all confident) to 3(highly confident). All the statements were positive.This measure has been used widely in the social cognitive literature in understanding physical activity (55,72,73). The score ranged from 13 to 39.

Statement	**Score**
Highly confident	3
Confident	2
Not at all confident	1

The total score of self-efficacy was classified into 3 categories:

High: if score ≥80% of total score

Moderate: if score 60 to79% of total score

Low: if score <60% of total score.

PART 4: Family Support

This section consisted of set of questions (8 items) to assess how often elders received emotional, tangible, and informational support from their from the members of his/her family for physical-social activity in terms of frequency (74) and Yes/No (59)from the work of Krause(1997) as well as some modifications were made in accordance with the study objectives and outcome variable .There were five items using five point frequency scales. The other items included Yes/No and also includeda question about social relationship from Older People's Quality of Life Questionnaire (OPQOL-35) (75) to understand about their feeling about companionship or contact with other people. Score was calculated using the following criteria:

Frequency	**Score**
Never	0
Once in a month	1
Twice in a month	2
Thrice in a month	3
More than 3 times	4

Similarly, "yes" refers to 1 and "no" refers to 0. A total family support scorewas the summation of only five items score using scale.Score ranged from 0 to 20 with mean score 6.The total score was grouped based on the mean score into two groups. If the score was higher or equal to mean, it was considered to be high family support while if score was lower than mean score, it was considered to be low family support.

3.6 Ethical consideration

The research was approved from the MU-SSIRB Ethics Committee of Mahidol University. Permission wasalso taken from the central and each studied Elderly club before the study was carried out. Investigator maintained the precautions so that any individual and institution were not harmed. Verbal consent was taken from each participant. The participantswereassured of confidentiality and informed that their participation is voluntary. They were explained clearly about the purpose of the study.

3.7 Validity and reliability of the instrument

Pretest of the questionnaire was done on January, 2011 to check the internal consistency in an elderly club named 'Ban Salawan elderly club' under Salayatumbon (sub-district) health promoting hospital to sample population of 30 respondents.Cronbach's alphaof categorical variables: physical-social functioning activity (24 items) was found to be 0.87 (n=29s), for self-efficacy (13 items) was to be 0.89(n=30) and for family support (5 items) was 0.60(n=30).

Regular guidance of research supervisor was sought at every stage of research work whenever necessary.

3.8 Data collection procedure

After getting approval from the ethics committee of Mahidol University (COA No.MU-SSIRB2012/032.1302), the data was collected on February, 2011.The collection procedurefollowed following steps:

- A formal letter was sent to the concerned person of the district health office asking permission to collect data and identify field researchers who acted as an assistant researcher.
- All the formal and necessary steps were followed before and while collecting data.
- Since target group was elderly under QOL program, therefore elderly who were the member of elderly clubs were selected. The data were collected when there was a meeting for elderly that held on 14-15 Feb, 2012 at different venue of Muang district and where elderly people from different clubs of Muang district attended. For the selection of participant as per se calculated size from each club, every participant was asked about their club name. However, for the club members not attending the meeting that day, data were collected by visiting the clubs themselves.
- The prospective elderly personswereinformed of the objective and data collection procedure and thenrequestedto participate in the study.
- Questionnaires were given to field researchers and they distributed the questionnaires to the selected targeted elderly people. The selected elderly were asked

to fill out the questionnaire by themselves and those with unable to do, field researchers helped to fill the questionnaire by interviewing.

- Field researchers collected the research questionnaires and were proven that all the questions were filled completely.

3.9 Data management and analysis

All questionnaire were coded using Epi-data and were analyzedby using Minitab version14.Descriptive statistics (such as frequency, percentage, mean, median, quartile deviation, minimum and maximum range)were used to describe the distribution of the variables. Simple linear regression was carried out to find out the relationship between studied independent variables such as age, gender, marital status, educational level, occupation, income, adequacy of income, perceived health status, health problem, self-efficacy and family support with the physical-social functioning activity. Multiple linear regression analysis was carried out to find out the significant predictors for the physical-social functioning activity. Also, correlation between independent variables (such as self-efficacy, family support, and age) and physical-social functioning activity (dependent variable) were evaluated by Pearson correlation coefficient.Statistical significance was set up at $p<0.05$.

CHAPTER IV
RESULTS

The prime purposeof the research was to examine physical-social functioning activities of the elderly participating in QOL program in Kanchanaburi province. And also to identify the relationships between the respondents' personal socio-demographic factors, self-efficacy, family support and physical-social functioning activities. A total of 289 self-administered questionnaires in Thai were completed by the respondents in February, 2012 at Muang district, Kanchanaburi Thailand.

A cross-sectional analytical study was conducted. The results are presented in the form of number and percentage. The quantitative data is shown with mean, median, quartile deviation (QD), minimum and maximum. Simple regression and correlation analysis were used to examine the relationship between the independent variables and physical-social functioning activity. Also, multiple linear regression was used to find the significant predictors for outcome variable. The findings under this chapter are presented as personal socio-demographic characteristics, self-efficacy, family support and the physical-social functioning activity of the studied elderly including relationships of the physical-social functioning activity with independent variables.

4.1 Personal socio-demographic characteristics

Table 4.1 below shows that gender distribution was equivalent to nearly 40% of male and 60% of female respondents. Many of respondents (60.55 %) fell under 60-69age group with mean age 69 years. More than half (63.32%) were married which refers who were staying with their spouse while 31.14% were widowed, divorced or separated referring that they did notstay with their spouse. Large proportion of respondents (46.71%) was government workers and semi government

followed by employee with private firms/self-employed, laborer/Wages/Farming and house wife. Respondents' attaining bachelor and higher education was only 29.07%.More than half (55.36 %) of the respondents had income more than 10,000 baht per month and major income source was governmental pension followed by their children/grandchildren.

The income was adequate (with or without savings) for 80.02% of respondents. Itwas found that most of the respondents had large family size i.e. more than 3-4 persons. Less than 10% of elderly people lived alone while 38.75 % stayed with their spouse and nearly equal percent (35.99%) stayed with children and grandchildren.Respondents rated their perceived health status at most as fair and good/excellent while 33.22% rated poor and very poor. Among the respondents, almost 70% had health problems while 30% had mentioned no illnesses or did not specify. The reported health problems were hypertension, diabetes mellitus, etc.

Table 4.1 Number and percentage of respondents by personal socio-demographic characteristics

Personal characteristics	Number(n=289)	Percent
Age(years)		
60-69	175	60.55
70-79	72	24.91
>=80	42	14.83
Median=67, QD=5, Min=60, Max=88		
Gender		
Male	114	39.45
Female	175	60.55
Marital status		
Single	16	5.54
Married	183	63.32
Widowed/divorced/separated	90	31.14
Occupation		
Government worker/Semi-government	135	46.71
Employee with private firms/ Self employed	81	28.03
House-wife	30	10.38
Laborer/Wages/Farming	43	14.88

Table 4.1 Number and percentage of respondents by personal socio-demographic characteristics(cont.)

Personal characteristics	Number(n=289)	Percent
Educational level		
Primary and no education	102	35.29
Secondary level and Diploma	103	35.64
Bachelor and higher	84	29.07
Income		
Less than 5000 Baht	70	24.22
5000-10000 Baht	59	20.42
More than 10000 Baht	160	55.36
Source of income		
Children/Grandchildren	59	20.42
Governmental pension	178	61.59
Paid work	21	7.27
Business/Trade/House rent	31	10.73
Adequacy of income		
Adequate with saving	139	48.1
Adequate without saving	98	33.91
Inadequate with debt	29	10.03
Inadequate without debt	23	7.96
Number of family members		
1-2 persons	74	25.61
3-4 persons	117	40.48
More than 4 persons	98	33.91
Staying		
Alone	25	8.65
With spouse	112	38.75
With children and grand children	104	35.99
With spouse, children and grandchildren	48	16.61
Perceived health status		
Excellent/Good	91	31.49
Fair	102	35.29
Poor /very poor	96	33.22
Health problem presence		
Yes	200	69.20
No illness/not specified	89	30.80

4.2 Self-efficacy of the studied elderly people

Table4.2 shows the percentage of respondents' self-efficacy.This study focused on self-efficacy level of elderly people. There were altogether 13 items to assess their self-efficacy level. When respondents were asked whether they can do light household work at least 10-30 min continually, 26.3 % were highly confident to do and 54.33% were confident to do it. Regarding, moderate household worksuch as scrub the floor, wash clothes, even though their children will not allow them, 21.8 % were highly confident and 56.75% were confident. When asked that- 'You can set time to do exercise at least 5 times a week', only 15.22% were highly confident to do while 42.91% and 41.87% were confident and not at all confident respectively. About 56 % were highly confident to go out by themselves.

Likewise, when asked that –'You can believe that you could continue exercising at least 1month further', 41.87% were not at all confident. About 31.49% were not confident at all to manage to carry out exercise even when they have worries and problems.For the statement-'You can be able to exercise at least minimum of 30 min on 5 days each week', about 43.6% were not at all confident to do so. Generally, overall figure showed that on an average, half of respondent were confident in doing the activities with conditions.

Table 4.2 Percentage of respondentsself-efficacy

Statement	Highly confident	Confident	Not at all confident
1. You can do light housework at least 10-30 min continually	26.3	54.33	19.38
2. You can do moderate house work such as scrub the floor, wash clothes, even though your children will not allow you.	21.8	56.75	21.45
3. You can set time to do exercise at least 5 times a week	15.22	42.91	41.87
4. You can believe that you could continue exercising at least 1month further	15.57	42.56	41.87
5. You can go out by yourself	56.06	29.41	14.53
6. You can do your leisure activities even if your health is getting worse	21.11	58.48	20.42
7. You can decrease your nap time or watching TV to do more physical activities	16.96	61.59	21.45
8. You can increase the intensity of physical activities more than usual	19.03	58.48	22.49
9. You can join religious trip even when you are tired	19.38	53.98	26.64
10. You can manage to carry out your exercise even when you have worries and problems	16.26	52.25	31.49
11.You can manage to carry out physical activity even when you are tired	14.19	57.09	28.72
12.You can manage to carry out your daily activity even when you feel tensed	16.26	59.52	24.22
13.You can be able to exercise at least minimum of 30 min on 5 days each week	14.19	42.21	43.6

Regarding the overall respondents' self-efficacy, it was categorized into three levels based on total score: high, moderate and low with ≥ 80%, 60-79% and less than 60% respectively. It resulted that over half (i.e., 60.9%) had high and moderate self-efficacy level. In other words, the elderly living in the community of QOL program have high self-efficacy in general.

Table 4.3 Number and percentage ofrespondents by self-efficacy level

Self-efficacy level	Number	Percent
High	45	15.57
Moderate	131	45.33
Low	113	39.10
Mean score=25, Min=13, Max=39		

Score: High ≥80%, Moderate =60-79%, Low<60%

4.3 Family support of the studied elderly people

In regard to family support, most of the respondents answered that they like companionship while only 10.03% answered no. In response to financial support from family members for doing leisure activities and exercise,43.94% never got financial support while 31.14% received rarely which referred to "once in a month".

In response to emotional support from family members for joining social functions or ceremony or meetings,34.6% never got and 33.91 received rarely(once in a month).For the opportunity being provided to travel by their family members, 52.25% received once in a month. About 61.59% received informational support by family members to participate in community activity.

Around 28% of respondents got most encouragement by their spouse to participate in exercise or any activity followed by daughter, son and grandchildren.43.6% of respondents answered that they were contacted/visited once in a month by their grand children/grandchildren.

Table 4.4 Percentage of respondents by family support

Family support	**Percent**
Do you like more companionship or contact with other people?	
Yes	89.97
No	10.03
Did you get financial support for doing leisure activities and exercise from your family members?	
Never	43.94
Once in a month	31.14
Twice in a month	7.61
Three times in a month	1.73
More than 3 times in a month	15.57
Did you get support from your family members for joining social functions or ceremony or meetings?	
Never	34.6
Once in a month	33.91
Twice in a month	7.96
Three times in a month	3.81
More than 3 times in a month	19.72
How frequently are you provided opportunity to travel by your family members?	
Never	23.53
Once in a month	52.25
Twice in a month	12.46
Three times in a month	3.11
More than 3 times in a month	8.65
Did you get any information by family members to participate in community activity?	
Yes	61.59
No	38.41
From whom did you get encouragement to participate in exercise or any activity mostly?	
Spouse	28.03
Daughter	21.11
Son	13.49
Grandchildren	9.69
None	27.68

Table 4.4 Percentage of respondents by family support (cont.)

Family support	Percent
How frequently did your children/grand children visit/contact you (those who do not stay with you)?	
Never	13.49
Once in a month	43.6
Twice in a month	19.38
Three times in a month	5.88
More than 3 times in a month	17.65
How often were you visited by your family members during the preceding month?	
Never	26.99
Once in a month	45.33
Twice in a month	12.8
Three times in a month	4.15
More than 3 times in a month	10.73

To determine family support, only five items using scale were analyzed to find total score of support. A high level was equal to, or more than, the mean of total family score; a low level was less than the mean of total family support score.

Table 4.5 shows that 51.9% had received high family support for joining or doing activity while 48.10% had low family support.

Table 4.5 Number and percentage of respondents by family support level

Family support level	Number	Percent
High(≥mean)	150	51.9
Low(<mean)	139	48.10
Mean score =6, Min=0, Max=20		

4.4 Physical-social functioning activity of the studied elderly (dependent variable)

Table 4.6 shows physical-social functioning activity of the elderly people measured in terms of household activity, leisure time activity, exercise and social functioning activity that was done in a typical week in last one month. Among household activity about 42% respondents regularly did light daily routine work such as cooking and sweeping. Around 35% of the elderly did regular grocery shopping. As expected, many elderly, 43.94% never did heavy gardening. In contrast, only 10.03% of respondents regularly did heavy gardening.

Regarding leisure time activity, many elderly ranging from 47% to 74% regularly did reading newspaper and watching TV/ listening radio respectively. More than half percent (53.63%) did regular light gardening while 71.28% never played cards/board games/bingo.

In regard to exercise, 71.97% of respondents never went for aerobics, nearly 60% never went for jogging/running, and 79.58% never went for dancing. About 44.64% went for walk/briskly regularly while 32.91% went regularly for stretching exercise.

In regard to social activity, 28.72% never went to elderly club, 40.83% rarely went to elderly club. Around 28% never attended club or community meetings, never went for travelling and to elderly club. Regular attending church/temple, offering food to monk seems to be common among Thai elderly, however, above figure shows that elderly people rarely did social activity.

Table 4.6 Percentage of respondents by physical-social functioning activity

Type of physical functioning activity	**In a typical week within last months**				
	Never	**Rarely**	**Sometimes**	**Often**	**Regularly**
Household Activity					
Cooking	26.64	11.42	14.88	4.84	42.21
Sweeping	12.46	15.22	17.65	12.11	42.56
Washing clothes	24.91	24.91	17.3	9.69	23.18
Scrubbing floor	28.37	23.18	18.34	9.34	20.76
Heavy gardening	43.94	29.07	12.11	4.84	10.03
Grocery shopping	16.26	24.57	15.57	7.96	35.64
Leisure time activity					
Reading book or newspaper	14.88	17.99	13.15	6.57	47.4
Watching TV/Listening radio	4.5	4.84	11.42	5.19	74.05
Light gardening	12.11	14.53	12.8	6.92	53.63
Doing artwork/craft work/needlework	64.71	19.72	5.19	0.69	9.69
Playing cards/board games/bingo	71.28	10.03	9.34	4.84	4.5

Table 4.6 Percentage of respondents by physical-social functioning activity (cont.)

Type of physical functioning activity	In a typical week within last months				
	Never	**Rarely**	**Sometimes**	**Often**	**Regularly**
Exercise					
Aerobics	71.97	9.34	5.54	3.81	9.34
Jogging/Running	58.82	12.46	6.23	6.57	15.92
Walk/Briskly	18.34	10.03	15.57	11.42	44.64
Stretching/Flexibility	32.53	12.8	10.03	10.73	33.91
Dance(bamboo,Thai)	79.58	8.65	3.46	3.46	4.84
Social functioning activity					
Attending temple/church	11.07	48.79	20.76	3.11	16.26
Volunteering work	38.41	28.37	16.61	3.11	13.49
Attending ceremony/ festival/movie/ lecture	47.4	34.26	9	3.11	6.23
Visiting friends/ family (other than you live with)	29.41	46.02	13.15	4.15	7.27
Offer food to monk	10.73	32.18	17.99	9.69	29.41
Attend community/club meetings	28.37	44.29	11.76	5.54	10.03
Travelling	26.64	43.25	15.57	4.5	10.03
Going to elderly club	28.72	40.83	11.76	5.54	13.15

Physical-social functioning activity of respondents was categorized into two levels as good and poor. A good level was equal to, or more than, the mean of physical-social activity total score; a poor level was less than the mean of total physical-social activity score. Similar scoring was also used for categorizing each part of physical-social functioning activity.

Table 4.7 shows that there was only a slight difference in distribution of levels of activity as respondent having good level of activity was 48.79% and having poor level was 51.21%.

Table 4.7 Number and percentage of respondents by physical-social functioning activity

Activity level	Number	Percent
Good (>=mean)	141	48.79
Poor(<mean)	148	51.21
Mean score=39.0, Min=4, Max=92		

Table 4.8 shows that most of the elderly have good household activity and leisure time activity with around 55% and 61% respectively involved in these activities. On the other hand, involvement in exercise and social functioning activity is poor with only 47.4% and 41.52% participants taking part in these respectively.

Table 4.8 Number and percentage of respondents by each part of physical-social functioning activity

Physical-social functioning activity	Number	Percent
Household activity		
Good	159	55.02
Poor	130	44.98
Mean=11.0, Max=0, Min=24		
Leisure time activity		
Good	175	60.55
Poor	114	39.45
Mean=10.0, Max=0, Min=20		
Exercise		
Good	137	47.40
Poor	152	52.60
Mean=7.0, Max=0, Min=20		
Social functioning activity		
Good	120	41.52
Poor	169	58.48
Mean=11.0, Max=0, Min=32		

4.5 Association between independent and dependent variables

4.5.1 Simple linear regressionanalysis using physical-social functioning activity as dependent variable

The personal socio-demographic factors such as age, marital status, education level, occupation, monthly income, adequacy of income, perceived health status and health problem had significant relationship with the physical-social functioning activity. There was no significant gender difference in the physical-social functioning activity.Self-efficacy and family support werefound to have highly significant relationship withphysical-social functioning activity (Table4.9).

Table 4.9 Simple regressionusing physical-social functioning activity as dependent variable

Factors	β	T-value	p-value
Age(years)	-.201	-3.470	.001**
Gender			
Male	.000	-0.15	.988
Female [a]			
Marital status			
Single [b]			
Married	-.283	-2.271	.024*
Widowed/separated/divorced	-.332	-2.657	.008**
Educational level			
Primary and no education	-0.493	-7.749	<0.001***
Secondary school and Diploma	-0.121	-1.909	0.057
Bachelor and higher [c]			
Occupation			
Government worker/Semi-government [d]			
Employee with private firms/ Self-employed	-.208	-3.545	<0.001***
House-wife	-.219	-3.829	<0.001***
Laborer/Wages/Farming	-.370	-6.377	<0.001***

Table 4.9 Simple regression using physical-social functioning activity as dependent variable (cont.)

Factors	β	T-value	p-value
Income			
Less than 5000 Baht	-.426	-7.597	<0.001***
5000-10000 Baht	-.206	-3.678	<0.001***
More than 10000 Baht [e]			
Adequacy of income			
Adequate [f]			
Inadequate	-0.256	-4.494	<0.001***
Perceived health status			
Excellent/Good	.162	2.637	0.009**
Fair [g]			
Poor /very poor	.300	-4.866	<0.001***
Health problem			
Yes	-0.170	-2.927	0.004**
No illness/not specified [h]			
Total self-efficacy score	0.525	10.442	<0.001***
Total family support score	0.406	7.518	<0.001***

a, b, c, d, e, f, g, h are referent groups.
Significant at *p <0.05, ** p< 0.01, ***p<0.001

4.5.2Simple linear regression analysis using each part of physical-social functioning activity as dependent variable

Personal socio-demographic characteristics which include age, gender, marital status, occupation, educational level, monthly income, perceived health status and health problems were found to have significant relationship with householdactivity. Self-efficacy and family supporthad a significant relationship with household activity (see appendix B, Table 4.14)**.**

Similarly, age, gender, educational level, occupation,monthly income, adequacy of income, perceived health status, health problem, self-efficacy and family supportwere associated to leisure time activity. However, marital status was not associated with it. (see Appendix B, Table 4.15)

In regard to exercise, socio-demographic factors such as educational level, occupation, monthly income, adequacy of income and perceived health status were found to be significant. Self-efficacy and family support were highly significantly associated to exercise (see appendix B, Table 4.16).

In social functioning activity factors such as marital status, educational level, occupation, monthly income, perceived health status health problem, self-efficacy and family support were found to have a significant relationship with social functioning activity (see appendix B, Table 4.17).

4.5.3Correlation between age, self-efficacy and family support

Inter correlation analysis was done using total score of each variablesto find association among age, self-efficacy and family support. Table 4.10describes the inter correlations among independent variables. It shows that multicollinearity among the independent variables is significantly low.

Table 4.10 Intercorrelations of independent variables

Variables	1	2	3
1 Self-efficacy score	1		
2 Family support score	.292**	1	
3 Age (years)	-.374**	-.001	1

***p<.01*

Also, there was a significant positive association between self-efficacy(r=0.525), family support(r=0.406) and physical-social functioning activity at p-value <0.001. Age of respondents was negatively associated with physical-social functioning activity with (r= -0.201, p-value 0.001).

4.5.4 Multiple linear regression analysis between independent variables and physical-social functioning activity

Multiple linear regression was used in order to identify how study factors were related to physical-social functioning activity of the elderly people. All significant independent variables which were found to be associated with the physical-social functioning activity in simple linear regression and correlation analysis were included in full model.The full model predicted marital status, perceived health status, self-efficacy and family support as significant predictors (see Appendix B, Table 4.18).

In addition, multiple linear regression was also carried out separately using household activity and social functioning activity as dependent variable because the model seems to be closer, as for the overall the physical-social functioning activity.

Table 4.11 shows final model which predicted marital status, educational level, perceived health status, self-efficacy and family support as predictors for response (outcome) variable.The variation in the physical-social functioning activity score by all predictors was explained by coefficient of determination (R^2adj) which was 43.0%. The regression model was adjusted for age, marital status, education and health perception. Controlling other variables, the self-efficacy explained around 27 percent of the influence on physical-social functioning activity. On the other hand the influence of family support was 25 percent on physical-social functioning activity. Higher the self-efficacy and family support, higher was the activity of elderly people.

Table 4.11 Final model of multiple linear regression analysis using physical-social functioning activity as dependent variable

Factors	β	T-value	p-value
Age(years)	-0.067	-1.33	0.184
Marital status			
Single [a]			
Married	-0.252	-2.64	0.009**
Widowed/separated/divorced	-0.130	-1.33	0.186
Educational level			
Primary and no education	-0.245	-4.06	<0.001***
Secondary school and Diploma	-0.039	-0.72	0.473
Bachelor and higher [b]			
Perceived health status			
Excellent/Good	0.115	2.20	0.029*
Fair [c]			
Poor /very poor	-0.116	-2.14	0.034*
Total self-efficacy score	0.274	4.78	< 0.001***
Total family support score	0.259	5.46	< 0.001***
R-Sq(adj)=43.0%	Se=12.6	N=289	

a, b, care referent groups.

Significant at *p <0.05, ** p< 0.01, ***p<0.001

Table 4.12 shows final model of regression using household activity as dependent variable. The model predicted age, gender, perceived health status and self-efficacy as predictors. The variation in the household activity score by all predictors wasexplained by coefficient of determination (R^2adj) which was29.2%. Adjusting other variables (such as age, gender, and perceived health status), self-efficacy explained around 29.6% of the influence on household activity.

Table 4.12 Final model of multiple linear regression analysis using household activity asdependent variable

Factors	β	T-value	p-value
Age(years)	-.165	-2.95	0.003**
Gender			
Male	-.227	-4.39	<0.001***
Female[a]			
Educational level			
Primary and no education	-.058	-.866	.387
Secondary school and Diploma	.032	.527	.599
Bachelor and higher [b]			
Perceived health status			
Excellent/Good	.077	1.33	.186
Fair [c]			
Poor /very poor	.144	-2.38	0.018*
Total self-efficacy score	.296	4.59	<0.001**
Total family support score	.055	1.04	.297
R-Sq(adj)=29.2%	Se=5.35		

a, b, care referent groups.
Significant at *p <0.05, ** p< 0.01, ***p<0.001

Table4.13 shows regression model using social functioning activity as dependent variable which predicted gender, educational level, perceived health status, self-efficacy and family supportas predictors. The variation in the social functioning activity score by all predictors wasexplained by coefficient of determination (R^2adj) which was28.8%. Adjusting other variables (such as age, gender, perceived health status and family support), self-efficacy explained around 29.4% of the influence on social functioning activity.On the other hand, family support explained 23.1% of the influence on it.

Table 4.13 Full model ofmultiple linear regression analysis using social functioning activity as dependent variable

Factors	β	T-value	p-value
Age(years)	.101	1.81	.071
Gender			
Male	-.113	-2.18	0.03*
Female[a]			
Educational level			
Primary and no education	-.210	3.12	0.002**
Secondary school and Diploma	.011	-3.21	.862
Bachelor and higher [b]			
Perceived health status			
Excellent/Good	.086	1.47	.142
Fair [c]			
Poor /very poor	-.034	-.567	.571
Total self-efficacy score	.294	4.56	<0.001***
Total family support score	.231	4.36	<0.001***
R-Sq(adj)=28.8%	Se=5.81		

a, b, care referent groups.
Significant at *p <0.05, ** p< 0.01, ***p<0.001

CHAPTER V
DISCUSSION

The findings suggest that self-efficacy and family support has statistically significant effect on physical-social functioning activity of older people living in community QOL program. Including self-efficacy and family support, personal socio-demographic characteristics such as age, educational level, income, adequacy of income, occupation, perceived health status and health problem of elderly studied has also effect on physical-social functioning activity.

5.1 Self-efficacy of elderly people

The findings of this study demonstrated self-efficacy as a significant predictor for physical-social functioning activity among elderly people. McAuley (1993) study of examining the roles played by self-efficacyimplicated exercise self-efficacy as a significant mediator in the maintenance of exercise at follow-up(51). Similarly, another study by White et al., 2009 demonstrated self-efficacy as a mediator for linking relationship between physical activity and QOL (57). Du Charme et al. study examined influence of two various forms of self-efficacy (i.e. barrier and scheduling) on exercise attendance of novice exercisers. The study resulted that both forms of efficacy significantly predicted behavioral intention through the exercise program (54). Morris et al. (2008) study reported changes in neighborhood satisfaction and functional limitations had direct effects on changes in self-efficacy and ultimately, physical activity behavior(56). In an another study by David et al. showed self-efficacy predicted HRQL(Health related quality of life) suggesting higher self-efficacy of older adults lowers health risk behavior such as exercise, dietary fat intake, weight control, alcohol and promotes better health(53). In contrast, another study by White et al., 2011 supported the outcome expectations were directly related to physical

to physical participation beyond self-efficacy in accordance to SCT model of physical activity behavior(55).

In accordance to Bandura's (1997), self-efficacy and health behavior have a reciprocal relationship. Individuals with high self-efficacy in performing health behaviors are more likely to seek preventive care, exercise more and rate their health more favorably than individuals with low self-efficacy. Indeed, in primary care one goal of preventive services for older is to increase individuals' preventive self-efficacy to promote behavior and reduce risk. Therefore, elderly living in QOL program have high self-efficacy in general to do physical-social functioning activity.Findings of study also provide support for Bandura self-efficacy theory and are consistent with previous studies.

5.2 Family support of elderly people

The study resulted that family support had a positive relationship with physical-social functioning activity of the elderly people. This finding is consistent withYuan et al. study which also found a positive correlation between family support and participation in physical activity mentioning that even sick elderly people are willing to engage when supported and encouraged by their family members(5).Similarly, another study showed weak association between social support(by family members and friends) and leisure time physical activity behavior (49).

Another study which was done in Korea reported that family support, particularly to diet, wassignificantly associated with controlled glucose level in Korean immigrants with type 2 diabetes. That is, more perceived family support was associated with better glucose control(59). Quality of family relation(35) and social support are found be a good predictor that explains well the QOL of elderly people (32).

Around 28% of respondents got most encouragement by their spouse to participate in exercise or any activity followed by daughter, son and grandchildren. Similarly, Yuan et al. and Eyler et al. study also presented that spouse was found to be a good motivator for elderly to engage in physical activity(5,60).Also, findings from

a cross-cultural study of older persons in the United States and India showed that emotional support from a spouse was more important in determining well-being than is support from one's children(66).

In contrast, Okabayashi and colleagues (2004) hypothesized that in Japan, a culture characterized by children's commitment to supporting their elderly parents, children wasthe most important social and emotional support. Using a national survey of Japanese over the age of 60, these researchers determined that support from one's children wasassociated with positive mental health outcomes, more than support from other sources including spouses and friends(65).

Moreover, when regression was used taking household activity as dependent variable, family support could not predict the household activity. While, when social functioning activity as dependent variable was used in a regression model, family support significantly predicted social functioning activity. This suggests that elderly people might not need family support do to indoor activity while to do outside home activity they need support from their family.

5.3 Physical-social functioning activity of elderly people

The study examined physical-social functioning activity of elderly living in QOL community and selected factors affecting it. There was only a slight difference in the distribution of levels of activity as respondents' having good level was 48.79% and having poor level was 51.21%. Physical-social functioning activity was measured in terms of household activity, leisure time activity, exercise and social functioning activity following ACSM(American College of Sports Medicine and the American Heart Association) guideline(39) only focusing on frequency.In accordance with the recommended level leisure time activity and household activity were more common and done more frequently among elderly rather than exercise. The reason would be though the concern of doing exercise and keeping oneself physically fit is seen among people where some health promotive activity are conducted, people still are not acquiring such behavior apart from doing household activity. This was consistent with study done among Thai elderly in Chiang Mai Province,Thailand reported household

activity was more common and likely to be an alternative strategy to enhance physical activity resulting in an improvement of health related quality of life among the urban Thai elderly(25). In Thailand, many studies found that relativelyfew older adults regularly engaged in exercise in comparison to household activity (25,26,76).

A cohort study done in Chinese women demonstrates that physical activity domains, other than sports and exercise are important contributors to total energy expenditure(28).

One of the study done among Korean immigrant women to examine relationships among LTPA (leisure time physical activity) behavior, background (age, SES status) and intrapersonal correlates of behavior (self-efficacy and decisional balance) reported lower rate of regular LTPA participation. Korean immigrant women's lives are full of physical activities, although they may not be regular exercisers and the exclusive assessment of LTPA would underestimate overall physical activity in Korean immigrant women(49).

5.4 Personal socio demographic characteristics

More than a half (60.55%) of the participants were female. The major age-group was 60-69 year old. This finding was consistent with the study done in Chiang Mai province,Thailand where around two-third of participants were female and major age-group was 60-69years old(25).Hence, it also aligns with the National elderly survey,2002 that reported more than half Thai elderly belonged to 60-69 age group which is also regarded as young elderly group(21). Large proportion of elderly in the studied area were living with at least two generation and this was demonstrated by previous study and national elderly survey, 2002 (21,25).

Major income source of participants was governmental pension as many of participants were former government/semi-government employee. However, in contrary,children/grandchildren were major income source for elderly people in the study done in Chiang Mai province, Thailand (25). In this study, age was negatively correlated with physical-social activity of elderly suggesting activitydecreases with age. This finding was supported by previous studies conducted in the United States

andEurope, which found that participation in physical activitydecreases with age(26,27).However, some studies in Asia showed that participation increases with age(28,29).

There was no significant relationship of gender with physical-social functioning activity. However, it was found to be significant when analyzed for each part i.e., for household activity and leisure time activity.Income and adequacy of income were also found to have effect on physical-social functioning activity of elderly. Thissuggests that high income and having adequacy might increase doing physical-social functioning activity.This finding is well supported by several studies demonstrating income and adequacy are predictors or indicators to QOL, that is most related to social function and satisfaction of elderly (22,28,32,33).

Perceived health status and presence of health problems were found to have relationship withphysical-social functioning activity of elderly. It was consistent with previous studies that showed the presence of disease or poor health leading to inactivity and thus affecting QOL of older population (26,32,76). However, study done in Bangkok revealed that there was no relationship between perceived health status with activity behavior(69).

5.5 Methodological concern

Multiple regression analysis was carried out to identify the significant predictor of physical-social functioning activity. Two important assumptions of multiple regression analysis were tenable: normality and homoscedasticity (see Appendix C Figure 5.1 and 5.2)

CHAPTER VI
CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

This study was cross sectional study done at Muang district of Kanchanaburi province where QOL program targeting elderly exists. The study intended to examine physical-social functioning activities and to identify the relationships between the respondents personal socio-demographic factors, self-efficacy, family support and physical-social functioning activities.A total of 289 self-administered questionnaires in Thai were completed by the respondents in February, 2012.

In the study female respondents comprised higher figure which was 60%.Many of respondents (60.55 %) fell under 60-69age group with median age 69 years and 63.32% were married which refers staying with their spouse. Respondents attaining bachelor and higher education was 29.07% and 46.71% were government employees. Above half (55.36 %) had income more than 10,000 baht per month and major income source was governmental pension followed by their children/grandchildren. The income was adequate (with or without savings) for 80.02% of respondents.Respondents rated their perceived health status at most as fair and good/excellent while 33.22% rated poor and very poor. Among the respondents, almost 70% had health problems which were all chronic diseases like diabetes, hypertension while 30% mentioned no illnesses or did not specify.

This study focused on self-efficacy and family support of elderly people for physical-social functioning activity.It resulted that over half (60.9%) had high and moderate self-efficacy level and 39.10% had low self-efficacy level. In regard to family support 51.9% had received high family support for joining or doing activity. In other words, the elderly living in the community of QOL program have high self-

efficacy and high family support in general. About 48.19% of the studied elderly had good physical-social functioning activity level and 51.21% had poor level.

Based simple regression analysis, except gender all studied personal socio-demographic characteristics (such as age, marital status, educational level, occupation, monthly income, adequacy of income, perceived health status and health problems) were found to be significantly associated to the physical-social functioning activity. In addition, gender difference was seen significant for household and leisure time activity when analysis was done for each part of physical-social functioning activity. Moreover, there was a significant positive correlation between physical-social functioning activity and self-efficacy ($r=0.525$, $p <0.001$), family support ($r=0.406$, $p= 0.001$). Age of respondents was negatively correlated with physical-social functioning activity with ($r= -0.201$, $p<0.001$).

Final model of multiple regression predicted marital status, educational level, health perception, self-efficacy and family support as predictors for physical-social functioning activity. Adjusting for age, marital status, education, health perception and family support, self-efficacy explains around 27 percent of the influence on physical-social functioning activity. On the other hand, the influence of family support is 25 percent on physical-social functioning activity. Higher the self-efficacy and family support, higher the activity of elderly people.

In general self-efficacy and family support of the elderly were found to be high however adherence to exercise was still a challenge. Instead, household activity and leisure time activity were found to predominate over other activity. However, around 48% of participantswere found to have good physical-social functioning activity level.

6.2 Recommendations

6.2.1 Recommendation for policy level

1. There should be continuous monitoring and supervision of existing elderly clubs for its proper and active function. Such efforts should also seek to retain the elderly into regular QOL activities.

2. Emphasis should be given for continuation of such programs that uplifts QOL of elderly people.

3. Severalinterventions should be conducted for strengthening and sustainability of existing QOL program.

4. Family support programs, to facilitate the good interrelationship within the family, should be encouraged and promoted to enhance confidence of elderly for health-promoting behaviors subsequently.

5. Therefore, well suggested interventions, to improve exercise behavior in older adults should incorporate social supports to strengthen self-efficacy and outcome expectations related to exercise.

6.2.2 Recommendation for further research

1. This study was conducted where QOL program targeting to elderly was comparatively functional than other place. Therefore, a comparative study should be done to identify the real difference on self-efficacy level and physical-social activity of elderly people living intwo different settings.

2. In this study, only frequency of activity was measured. In further study, frequency and duration of activity should be measured to get accurate measurement.

3. This study assessed only one aspect of self-efficacy theory i.e., self-efficacy expectation so it is urged to include outcome expectation as well. However, since the study area was under QOL, so it was assumed that the target group has positive expectations on benefit of doing activity.

4. This study focused social support only by family members. Further study should investigated regarding support from other sources such as friends, health workers.

REFERENCES

1. UNFPA. Population Ageing in Thailand:Prognosis and Policy Response 2006[Online] Available from: http://thailand.unfpa.org/documents/thai_ageing_englishversion.pdf [Accessed 2011 Oct 11]

2. PACIFIC EASCFAAT. The Elderly Policy Development of Thailand. Expert Group Meeting on the Regional preparations for the Global Review of Madrid International Plan of Action on Ageing. [Online] Available from:http://www.unescap.org/esid/psis/meetings/Ageing_Madrid_2007/ElderlyPolicyDevelopmentThailand.pdf [Accessed 2011 Nov 22]

3. Jitapunkul S, Wivatvanit S. National Policies and Programs for the Aging Population in Thailand. Ageing International. 2008;33(1):62-74.

4. Kostka T, Jachimowicz V. Relationship of quality of life to dispositional optimism, health locus of control and self-efficacy in older subjects living in different environments. Qual Life Res. 2010 Jan 10.doi:10.1007/s11136-010-9601-0;19(3):351-61.

5. Yuan SC, Weng SC, Chou MC, Tang YJ, Lee SH, Chen DY, et al. How family support affects physical activity (PA) among middle-aged and elderly people before and after they suffer from chronic diseases. Arch Gerontol Geriatr 2010.doi:10.1016/j.archger.2010.11.029.

6.Hashimoto S, Munakata T, Okutomi Y. A Cross-sectional and Longitudinal Study on the Exercise Behavior and Life Stress of Participants in a Community Health Promotion Program for Elderly and Middle-aged People.J Sport Sci.2006;4 (Special_Issue_2_2006):555-69.

7. Cheng ST, Li KK, Leung EMF, Chan ACM. Social Exchanges and Subjective Well-being: Do Sources of Positive and Negative Exchanges Matter?.J Gerontol B Psychol Sci Soc Sci. 2011 Jul 9. doi:10.1093/geronb/gbr061

8. Mahidol University, ASEAN Institute for Health Development. The Integrated Planning and Strengthening Partnership Approach for Community based

Quality of Life Development for Thai Elderly, Kanchanaburi; 2007.(unpublished)

9.Bowling A, Stenner P. Which measure of quality of life performs best in older age? A comparison of the OPQOL, CASP-19 and WHOQOL-OLD.J Epidemiol Community Health.2010 Aug 18.

10.Bowling A. Good Neighbours:Measuring Quality of Life in Older Age.2011.[Online] Available from:http://www.ilcuk.org.uk/files/pdf_pdf_159.pdf[Accessed 2011 Oct 31]

11.The World Health Organization quality of life assessment (WHOQOL): Position paper from the World Health Organization. Soc SciMed.1995;41(10):1403-9.

12.The World Health Organization Quality of Life (WHOQOL) -BREF. [Online] Available from: http://www.who.int/substance_abuse/research_tools/whoqolbref/en/[Accessed 2012 Jan 15]

13.O'Connor R. Measuring Quality of Life in Health. Churchill Livingstone:Elsevier;2004.

14. Cornwell EY, Waite LJ. Social Disconnectedness, Perceived Isolation, and Health among Older Adults. J Health Soc Behav. 2009 Mar 1;50(1):31-48.

15. Lee L-L, Arthur A, Avis M. Using self-efficacy theory to develop interventions that help older people overcome psychological barriers to physical activity: A discussion paper. Int J Nurs Stud. 2008;45(11):1690-9.

16.McAuley E, Szabo A, Gothe N, Olson EA. Self-Efficacy: Implications for Physical Activity, Function, and Functional Limitations in Older Adults. Am J Lifestyle Med. 2011 Feb 16.

17. Viswanath K. Perspectives on Models of Interpersonal Health Behavior. In: Glanz K, Rimer BK,Viswanath K,editors.Health Behavior and Health Education: Theory,Research,and Practice.4th ed. Sanfranscisco,CA: John Wiley & Sons;2008.p.271-280.

18. Luszczynska A, Scholz U, Schwarzer R. The General Self-Efficacy Scale: Multicultural Validation Studies. J Psychol. 2005 Sep 1;139(5):439-57.

19. Sermsri S. Socio-cultural Perspectives in Health. 2nded. Thailand: ASEAN Institute for Health Development, Mahidol University;2007.

20. Thai Health 2007 "The Scent of the Lamduan Flower"Preparing for an Aging Society, Thai Health Promotion Foundation. 2007.

21. Report on the Survey of the Elderly: National Statistical Office,2002.

22.Kanchanakitsakul M. Factors affecting satisfaction of Thai senior citizens living with their children. [M.A. Thesis in Population and Social Research] Nakhonpathom: Institute for Population and Social Research, Mahidol University; 1999.

23. Report of Round 4 Census Kanchanburi Project:Institute for Population and Social Research, Mahidol University Supported by The Well come Trust,2003.

24. Henry CJ, Webster-Gandy J, Varakamin C. A comparison of physical activity levels in two contrasting elderly populations in Thailand. Am J Hum Biol. 2001 May-Jun;13(3):310-5.

25. Binhosen V, Panuthai S, Srisuphun W, Chang E, Sucamvang K . Physical Activity and Health Related Quality of Life Among the Urban Thai Elderly. Thai J Nurs Res.2003;7(4).[Online]Availablefrom: http://www.tnc.or.th/files/2011/05/tnc_journal612/thai_journal_of_nursing_research_vol_7_no_4_octob_17285.pdf.[Accessed 2011 Nov 22]

26. Lawlor DA, Taylor M, Bedford C, Ebrahim S. Is housework good for health? Levels of physical activity and factors associated with activity in elderly women. Results from the British Women's Heart and Health Study. J Epidemiol and Community Health. 2002 Jun 1;56(6):473-8.

27. Shaw BA, Spokane LS. Examining the Association Between Education Level and Physical Activity Changes During Early Old Age. J Aging Health. 2008 Oct 1;20(7):767-87.

28. Jurj A, Wen W, Gao YT, Matthews C, Yang G, Li HL, et al. Patterns and correlates of physical activity: a cross-sectional study in urban Chinese women. BMC Public Health. 2007;7(1):213.

29. Kurozawa Y, Hosoda T, Iwai N, Nose T, Yoshimura T, Tamakoshi A. Levels of Physical Activity among participants in the JACC Study. J Epidemiol. 2005;15(Supplement_I):S43-S7.

30. Gardner AW, Montgomery PS. Differences in Exercise Performance and Leisure-Time Physical Activity in Older Caucasians and African-Americans. Clinical Medicine Insights: Geriatrics. 2008.doi: 10.4137/CMGer.S664;1(CMGer-1-Gardner-et-al):1.

31. Woo J, Chan R, Leung J, Wong M. Relative Contributions of Geographic, Socioeconomic, and Lifestyle Factors to Quality of Life, Frailty, and Mortality in Elderly. PLoS ONE. 2010;5(1):e8775.

32. Naing MM. Quality of life of the elderly people in Einme Township,Myaungmya District,Irrawaddy Division,Myanmar.[M.P.H. Thesis in Public Health International]. Bangkok: Faculty of Public Health, Mahidol University; 2010.

33.Savirasarid N. The selected factors related to quality of life of elderly people in Bangkok. [M. Sc. Thesis in Clinical Psychology]: Faculty of Graduate Studies, MahidolUniversity; 2008.

34.Utz RL, Carr D, Nesse R, Wortman CB. The Effect of Widowhood on Older Adults' Social Participation. Gerontologist. 2002 Aug 1;42(4):522-33.

35.Herrera Ponce MS, Barros Lezaeta C, Fernández Lorca MB. Predictors of Quality of Life in Old Age: A Multivariate Study in Chile. J Popul Ageing. 2011:1-19.

36. World Health organization. Global health risks: mortality and burden of disease attributableto selected major risks. Geneva:WHO;2009 [Online] Available from: http://www.who.int/healthinfo/global_burden_disease/GlobalHealthRisks_report_full.pdf[Accessed 2011 Oct 5]

37. World Health Organization. Global recommendations on physical activity for health. 2010 [Online]Available from: http://whqlibdoc.who.int/publications/2010/9789241599979_eng.pdf. [Accessed 2011 Oct 2]

38. Physical Activity and Health:A Report of the Surgeon General, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion;1996 [Online]Available from:

http://www.cdc.gov/nccdphp/sgr/pdf/sgrfull.pdf
[Accessed 2011 Nov 22]

39.Miriam E. Nelson SNB, Pamela W. Duncan, Carol A. Macera,Carmen Castaneda-Sceppa,. Physical activity and public health in older adults: Recommendation from the American College of Sports Medicine and the American Heart Association. Circulation. 2007 Aug 28;116(9):1094-105.

40.William L. Haskell I-mL, Russell R. Pate, Kenneth E. Powell, Steven N. Blair,Barry A. Franklin, Caroline A. Macera, Gregory W. Health, Paul D. Thompson, Adrian Bauman. Physical activity and public health: updated recommendation for adults from the American College of Sports Medicine and the American Heart Association. Med Sci Sports Execr.2007 Aug;39(8):1423-34.

41. Berkman LF, Glass T.Social Integration,Social Networks,Social Support and Health.In: Berkman LF, Kawachi I, editor. Social Epidemiology. New York: Oxford University Press,Inc; 2000.p.137-65.

42. Thanakwang K. Mechanisms by which social networks influence healthy ageing among Thai elderly in Nan province, Thailand [Ph.D. Thesis in Demography]. Nakhonpathom: Faculty of Graduate Studies,Mahidol University; 2008.

43.Clark MS, Bond MJ. The Adelaide Activities Profile: a measure of the life-style activities of elderly people. Aging (Milan, Italy). 1995;7(4):174-84.

44. MaestreCastelblanque E, Albert CunatV, Martinez Perez JA. Life-style activities in older people without intellectual impairment: a population-based study. The International Electronic Journal of Rural and remote Health Research,Education,Practice and Policy. 2005 Jan 31 [Online] Available from:http://www.rrh.org.au/publishedarticles/article_print_344.pdf
[Accessed 2011 Dec 17]

45. Rowe JW, Kahn RL. Successful Aging. Gerontologist. 1997 Aug 1, 1997;37(4):433-40.

46. Hinterlong JE, Morrow-Howell N, Rozario PA. Productive Engagement and Late Life Physical and Mental Health. Research on Aging. 2007 Jul 1, 2007;29(4):348-70.

47. Missouri. Social Support and Health-Related Quality of Life Among Older Adults.2000 [Online] Available from: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5417a4.htm [Accessed 2011 Nov 5]

48. Acree L, Longfors J, Fjeldstad A, Fjeldstad C, Schank B, Nickel K, et al. Physical activity is related to quality of life in older adults. Health and Quality of Life Outcomes. 2006;4(1):37.

49. Choi J, Wilbur J, Miller A, Szalacha L, McAuley E. Correlates of Leisure-Time Physical Activity in Korean Immigrant Women. West J Nurs Res. 2008 Aug 1;30(5):620-38.

50. Siegrist J, Wahrendorf M. Participation in socially productive activities and quality of life in early old age: findings from SHARE. Journal of European Social Policy. 2009 Oct,1;19(4):317-26.

51. McAuley E. Self-efficacy and the maintenance of exercise participation in older adults. J Behav Med. 1993;16(1):103-13.

52. Potter LM, Grealy MA, O'Connor RC. Healthy ageing, perceived motor-efficacy, and performance on cognitively demanding action tasks. Br J Psychol. 2009;100(1):49-70.

53.Grembowski D, Patrick D, Diehr P, Durham M, Beresford S, Kay E, et al. Self-Efficacy and Health Behavior Among Older Adults.J Health SocBehav. 1993;34(2):89-104.

54.DuCharme KA, Brawley LR. Predicting the intentions and behavior of exercise initiates using two forms of self-efficacy. J Behav Med. 1995;18(5):479-97.

55.White SM, Wójcicki TR, McAuley E. Social Cognitive Influences on Physical Activity Behavior in Middle-Aged and Older Adults. J Gerontol B Psychol Sci Soc Sci. 2011 Jul 9, 2011.

56. Morris K, McAuley E, Motl R. Neighborhood satisfaction, functional limitations, and self-efficacy influences on physical activity in older women. Int J Behav Nutr Phys Act. 2008;5(1):13.

57. White S, Wojcicki T, McAuley E. Physical activity and quality of life in community dwelling older adults. Health and Quality of Life Outcomes. 2009;7(1):10.

58. Thanakwang K, Soonthorndhada K. Mechanisms by Which Social Support Networks Influence Healthy Aging Among Thai Community-Dwelling Elderly. J Aging Health.2011 Dec 1;23(8):1352-78.

59. Choi SE. Diet-Specific Family Support and Glucose Control Among Korean Immigrants With Type 2 Diabetes. The Diabetes Educator. 2009 Nov/Dec;35(6):978-85.

60. Eyler AA, Brownson RC, Donatelle RJ, King AC, Brown D, Sallis JF. Physical activity social support and middle- and older-aged minority women: results from a US survey. Social Science & Medicine. 1999;49(6):781-9.

61. Paukert AL, Pettit JW, Kunik ME, Wilson N, Novy DM, Rhoades HM, et al. The roles of social support and self-efficacy in physical health's impact on depressive and anxiety symptoms in older adults. J ClinPsychol Med Settings.2010;17(4):387-400.

62. King DK, Glasgow RE, Toobert DJ, Strycker LA, Estabrooks PA, Osuna D, et al. Self-Efficacy, Problem Solving, and Social-Environmental Support Are Associated With Diabetes Self-Management Behaviors. Diabetes Care. 2010 Apr 1;33(4):751-3.

63. Fiori KL, Antonucci TC, Cortina KS. Social Network Typologies and Mental Health Among Older Adults. J Gerontol B Psychol Sci Soc Sci. 2006 Jan 1;61(1):P25-P32.

64. Shaw BA, Krause N, Liang J, Bennett J. Tracking Changes in Social Relations ThroughoutLate Life. J Gerontol B Psychol Sci Soc Sci. 2007 Mar 1;62(2):S90-S9.

65. Okabayashi H, Liang J, Krause N, Akiyama H, Sugisawa H. Mental health among older adults in Japan: do sources of social support and negative interaction make a difference? Social Science & Medicine. 2004;59(11):2259-70.

66. Venkatraman MM. A Cross-Cultural Study of the Subjective Well-Being of Married Elderly Persons in the United States and India. J Gerontol B Psychol Sci Soc Sci. 1995 Jan 1;50B(1):S35-S44.

67. Cornwell B, Laumann EO, Schumm LP. The Social Connectedness of Older Adults: A National Profile. American Sociological Review. 2008 Apr 1;73(2):185-203.

68. Krause N. Church-Based Social Support and Health in Old Age. J Gerontol B PsycholSciSoc Sci. 2002 Nov 1;57(6):S332-S47.

69. Ei Ei. Factors associated with physical activity among elderly living in an urban community,Bangkok,Thailand.[M.P.H. Thesis in Public Health International].Bangkok: Faculty of Public health,Mahidol University;2009.

70.Report of Baseline Survey, Kanchanburi Project:Institute for Population and Social Research, Mahidol University Supported by The Well come Trust.2000.

71. CHAMPS:CommunityHealthy Activities Model Program for Seniors Institute for Health and Aging.[Online]Available from: http://sbs.ucsf.edu/iha/champs/resources/qxn/pdfs/champs_englishqxn_26Dec02.pdf.[Accessed 2012 Jan 12]

72. Lorio CKD. Measurement in Health Behavior. SanFranciso,CA:Jossey Bass;2005.

73. Kroll T, Kehn M, Ho P-S, Groah S. The SCI Exercise Self-Efficacy Scale (ESES): development and psychometric properties. Int J Behav Nutr Phys Act.2007;4(1):34.66.

74. Krause N. Anticipated Support, Received Support, and Economic Stress among Older Adults. J Gerontol B PsycholSciSoc Sci. 1997 Nov 1;52B(6):p284-93.

75.Bowling A. Older People's Quality of Life Questionnaire (OPQOL-35). [Online] Available from:http://www.ilcuk.org.uk/files/pdf_pdf_161.pdf\ [Accessed 2011 Nov 22]

76. Pothiban L, Srisuphan W, Chaiwan S, Klinkajorn Y, Dechaprom N, Boonchuang P, et al. Risk Factor Prevalence, Risk Status and Perceived Risk for Coronary Heart Disease among Thai Elderly. Nursing & Health Sciences. 2000;2(2):93-101.

APPENDICES

APPENDIX A

ENGLISH QUESTIONNAIRE

ASSOCIATION BETWEEN SELF-EFFICACY, FAMILY SUPPORT AND PHYSICAL-SOCIAL FUNCTIONING ACTIVITY AMONG THE ELDERLY IN COMMUNITY QOL PROGRAM, KANCHANABURI PROVINCE, THAILAND

This questionnaire is constructed for collecting relevant data about physical-social functioning activity among the elderly in Kanchanburi Province, Thailand. The finding from this study will be used to find the relationship between self efficacy level and family support for physical-social activities for well-being of elderly.This questionnaire consists of 5 parts:1) Personal characteristics, 2)Physical –social functioning activity, 3) Self-efficacy, 4) Family support

You are invited to participate in this research project as you are a person aged 60 years and above living in Kanchanaburi province, Thailand. Your private information will be kept confidential, it will not be subject to an individual disclosure, but will be included in the research report as part of the overall results. Your data will be destroyed after the completion of the project.

This project is approved by the District health office and ethic committee of Mahidol University (COA.MU-SSIRB).

Thank you very much for your kind participation to the study.

Name of researcher: BipnaShrestha
Student ID: 5438177
Mobile phone number: 082-352-0580

After completing the questionnaire, please return it to the coordinator of the project.

There are no rights or wrong answers. Please select the response that best describes you/your views.

PART 1: Personal characteristics

1. Age _____ (completed years of age)

2. Gender
   a) Female
   b) Male

3. Marital status
   a) Single
   b) Married
   c) Widowed
   d) Divorced
   e) Separated

4. What is your highest educational attainment?
   a) No education
   b) Primary school
   c) Secondary school
   d) Diploma School
   e) Bachelor's degree
   f) Higher than bachelor's degree

5. What is your previous main occupation before the retirement?
   a) Government worker
   b) Semi-government worker
   c) Employee with private firms
   d) Self –employed
   e) House wife
   f) Laborer/Wages
   g) Others (specify)…….

6. What is your monthly income?
   a) Less than5000baht
   b) 5000-10000baht
   c) More than 10000 baht

7. What is the main source of your current income? From:
   a) Children/grand children
   b) Governmental pension
   c) Social security
   d) Paid work
   e) Others (specify)…….

8. Is your current income adequate for your daily living?
    a) Adequate with saving
    b) Adequate without saving
    c) Inadequate with debt
    d) Inadequate without debt

9. What is the number of your family members?
    a) 1-2 persons
    b) 3-4 persons
    c) More than 4 persons

10. Whom do you stay with most of the time?
    a) Alone
    b) With spouse
    c) With children
    d) With grandchildren
    e) Others (specify)……

11. In general how do you feel about your health?
    a) Excellent
    b) Good
    c) Fair
    d) Poor
    e) Very poor

12. Pleaseindicate if any diseases that you were diagnosed by the physician.
    …….

PART 2: Physical-social functioning activity

The questions below areabout activities that you may have done in a typical week during the last one month.

Please put 'X' in the appropriate box after the following questions.

The term never = 0, rarely = 1times per week, sometime= 2 times per week, often=3 times per week, regularly= more than 3 times per week

Type of Physical functioning activity	Frequency				
	Never	Rarely	Sometimes	Often	Regularly
Household activity **In a typical week during the last 1 month……**					
1. How frequently did you cook food in last week?					
2.How frequently did you do light house work like sweeping or vacuuming?					
3.How frequently did you do moderate housework like wash your clothes by yourself?					
4.How frequently did you do heavy housework like scrubbing floor?					
5.How frequently did you do heavy gardening such as spading?					
6.How frequently did you go for Grocery shopping?					

	Frequency				
	Never	Rarely	Sometimes	Often	Regularly
Leisure time activity					
In a typical week during the last 1 month……					
7.How frequently did you read book or newspaper?					
8.How often did you watch TV/listen radio?					
9.How frequently did you do light gardening such as watering plants?					
10.How frequently did you do art work or craft work or needle work?					
11.How frequently did you play cards, board games, bingo with other people?					
Exercise					
In a typical week during the last 1 month……					
12.How frequently did you go for aerobics?					
13.How frequently did you go for jogging or running?					
14.How frequently did you go for walk or briskly for exercise?					

	Frequency				
	Never	Rarely	Sometimes	Often	Regularly
15.How frequently did you go for stretching or flexibility exercises?					
16.How frequently did you go for dance (bamboo dance, Thai dance)?					
Social functioning activity					
In a typical week during the last 1 month……					
17. How frequently did you attend temple/church?					
18. How frequently did you do volunteer work?					
19. Did you attend in any ceremony/festival or movie or lecture?					
20. How frequently did you visit friends or family? (other than those you live with)					
21. How frequently did you offer food to monk?					
22. How frequently did you attend community meetings or other club meetings?					
23. How frequently did you go for travelling?					
24. How frequently did you go to elderly club?					

PART 3: Self-efficacy for physical-social functioning activity

The statement given below refers to "How confident are you that you could overcome the following barriers?"Please put 'X' in the appropriate box after the following statements.

Statement	Highly confident	Confident	Not at all confident
25.You can do light housework at least 10-30 min continually.			
26.You can do moderate house work such as scrub the floor, wash clothes, even though your children will not allow you.			
27.You can set time to do exercise at least 5 times a week			
28.You can believe that you could continue exercising at least 1month further			
29.You can go out by yourself			
30.You can do your leisure activities even if your health is getting worse.			
31.You can decrease your nap time or watching TV to do more physical activities.			
32.You can increase the intensity of physical activities more than usual.			
33.You can join religious trip even when you are tired.			
34.You can manage to carry out your exercise even when you have worries and problems.			

Statement	Highly confident	Confident	Not at all confident
35.You can manage to carry out physical activity even when you are tired.			
36.You can manage to carry out your daily activity even when you feel tensed.			
37.You can be able to exercise at least minimum of 30 min on 5 days each week.			

PART 4: Family Support

Please put 'X' in the appropriate box after the following questions. The questions below are about support that you had received during the last one month.

38.Do you like more companionship or contact with other people?

a) Yes
b) No

39.Did you get financial support for doing leisure activities and exercise from your family members?

a) Never
b) Once in a month
c) Twice in a month
d) Three times in a month
e) More than 3 times in a month

40. Did you get support from your family members for joining social functions or ceremony or meetings?

a) Never
b) Once in a month
c) Twice in a month
d) Three times in a month
e) More than 3 times in a month

41. How frequently are you provided opportunity to travel by your family members?

a) Never
b) Once in a month
c) Twice in a month
d) Three times in a month
e) More than 3 times in a month

42. Did you get any information by family members to participate in community activity?

a) Yes
b) No

43.From whom did you get encouragement to participate in exercise or any activity mostly? (Please tick only one which you prefer most)

a) Spouse
b) Daughter
c) Son
d) Grandchildren
e) None

44. How frequently did your children/grand children visits/contacts you (those who do not stay with you)?

a) Never
b) Once in a month
c) Twice in a month
d) Three times in a month
e) More than 3 times in a month

45. How often were you visited by your family members during the preceding month?

a) Never
b) Once in a month
c) Twice in a month
d) Three times in a month
e) More than 3 times in a month

THANK YOU FOR YOUR PARTICIPATION

APPENDIX B

THAI QUESTIONNAIRE

แบบสอบถาม

ความร่วมมือกันระหว่างการนำโครงการไปปฏิบัติเพื่อก่อให้ผลสำเร็จอย่างจริงจังด้วยตนเอง
การให้การสนับสนุนของครอบครัว
และกิจกรรมการทำหน้าที่ทางสังคมทางกายภาพระหว่างผู้สูงอายุในโครงการคุณภาพชีวิตชุมชน
จังหวัดกาญจนบุรี ประเทศไทย

.....

แบบสอบถามนี้

ได้รับการแนะนำให้เก็บรวบรวมข้อมูลที่เกี่ยวข้องกับกิจกรรมการทำหน้าที่ทางสังคมกายภาพระหว่างผู้สูงอายุในจังหวัดกาญจนบุรีประเทศไทย

สิ่งที่ค้นพบจากการศึกษานี้จะนำไปใช้เพื่อค้นหาความสัมพันธ์ระหว่างระดับของการนำโครงการไปปฏิบัติเพื่อก่อให้เกิดผลสำเร็จอย่างจริงจังด้วยตนเองและการให้การสนับสนุนของครอบครัวเพื่อกิจกรรมต่างๆ ทางสังคมกายภาพเพื่อความสุขของผู้สูงอายุ

แบบสอบถามนี้มีทั้งหมด4 ตอน คือ

1) ลักษณะส่วนบุคคล

2) กิจกรรมที่เกี่ยวกับการทำงานของร่างกาย

3) การนำโครงการไปปฏิบัติเพื่อก่อให้ผลสำเร็จอย่างจริงจังด้วยตนเองและ

4) การให้การสนับสนุนของครอบครัว

ท่านเป็นบุคคลหนึ่งที่ได้ถูกเชิญให้มีส่วนร่วมในโครงการวิจัยนี้ ในฐานะที่ท่านมีอายุ60 ปีและสูงกว่า ซึ่งอาศัยอยู่ในจังหวัดกาญจนบุรี ประเทศไทย

ข้อมูลส่วนตัวของท่านจะถูกเก็บไว้เป็นความลับจะไม่เปิดเผยแก่บุคคลใดบุคคลหนึ่ง แต่จะนำเสนอในภาพรวมในรูปของรายงานการวิจัยที่เป็นส่วนหนึ่งของภาพรวมของผลการวิจัย ข้อมูลของท่านจะถูกทำลายทันทีหลังจากที่ดำเนินโครงการเสร็จสิ้นแล้ว

โครงการนี้ได้รับการตรวจสอบจากสำนักงานสาธารณสุขอำเภอและคณะกรรมการจริยธรรมของมหาวิทยาลัยมหิดลแล้ว)COA.MU-SSIRB)จึงขอให้ท่านตอบแบบสอบถามนี้ด้วยความสบายใจ

ชื่อของผู้วิจัย นางสาวบิปน่า เชรษถา
หมายเลขบัตรนักศึกษา 5438177
โทรศัพท์มือถือ 08-2352-02580

หลังจากที่ท่านตอบแบบสอบถามนี้ครบถ้วนสมบูรณ์ทุกข้อแล้ว กรุณาส่งคืนให้แก่ผู้สัมภาษณ์หรือผู้ประสานงานโครงการด้วย จักเป็นพระคุณอย่างยิ่ง

ตอนที่ 1: ข้อมูลลักษณะส่วนบุคคลของผู้ตอบแบบสอบถามผู้ให้สัมภาษณ์/

คำแนะนำการตอบแบบสอบถาม : กรุณาเขียนตัวเลขลงในช่องว่าง _____ ที่ให้ไว้ หรือเขียนเครื่องหมาย ✓ทับตัวอักษรในหัวข้อ ก ข ค ง หน้าคำตอบที่ท่านตอบนี้ไม่ถือว่าถูกหรือผิด กรุณาเลือกตอบข้อที่ตรงกับลักษณะแต่ละข้อของตัวท่านมากที่สุด

1. ท่านมีอายุ(ตอบปีเต็ม ไม่ต้องใส่จำนวนเดือนและวัน) เต็ม.....
2. ท่านนับถือศาสนา
    ก) พุทธ
    ข) คริสต์
    ค) อิสลาม
    ง) ศาสนาอื่นๆ โปรด)
    .....(ระบุ
3. ท่านมีเชื้อชาติ
    ก) ไทย
    ข) จีน
    ค) มุสลิม
    ง) มีเชื้อชาติอื่นๆ.....(โปรดระบุ)
4. เพศ
    ก) หญิง
    ข) ชาย
5. สถานภาพทางการสมรส
    ก) โสด
    ข) สมรส
    ค) หม้าย
    ง) หย่าร้าง
    จ) แยกกันอยู่
6. ท่านจบการศึกษาระดับสูงสุดระดับไหน
    ก) ไม่ได้เรียนหนังสือ
    ข) ประถมศึกษา
    ค) มัธยมศึกษา
    ง) อนุปริญญา.วิชาชีพ เช่น ปวส/

จ) ปริญญาตรี

ฉ) สูงกว่าปริญญาตรี

7. อาชีพหลักของท่านก่อนเกษียณอายุ คือ อาชีพอะไร

ก) รับราชการ

ข) รัฐวิสาหกิจ

ค) บริษัทเอกชน

ง) ทำงานธุรกิจส่วนตัว/กิจการ/

จ) แม่บ้าน

ฉ) กรรมกรรับจ้างรายวัน/

ช) ทำงานอื่น โปรด)

.....(ระบุ

8. ท่านมีรายได้ในแต่ละเดือนเท่าไรระบุจำนวนโดยประมาณเดือน/บาท.....

ก) น้อยกว่า 5,000 บาท

ข) 5,000 – 10,000 บาท

ค) มากกว่า 10,000 บาท

9. แหล่งที่มาของรายได้หลักของท่านในปัจจุบันได้จากแห่งใด โปรดตอบเฉพาะที่มาของรายได้หลักเพียงข้อ) (เดียว

ก) จากลูกๆ จากหลานๆ/

ข) เบี้ยบำนาญเบี้ยเลี้ยงชีพจากรัฐบาล/

ค) ประกันสังคม

ง) ค่าจ้าง

จ) แหล่งที่มาของรายได้อื่นๆ โปรด)

.....(ระบุ

10. รายได้ของท่านในปัจจุบันเพียงพอสำหรับการใช้จ่ายในชีวิตประจำหรือไม่

ก) เพียงพอ และมีเหลือเก็บ

ข) เพียงพอ แต่ไม่เหลือเก็บ

ค) ไม่เพียงพอ และเป็นหนี้

ง) ไม่เพียงพอ แต่ไม่เป็นหนี้

11. จำนวนสมาชิกในครอบครัวของท่านมีจำนวนกี่คนระบุจำนวนคน.....

ก) 1-2 คน

ข) 3-4 คน

ค) มากกว่า 4 คน

12. ปัจจุบัน ท่านพักอาศัยอยู่กับใคร เป็นส่วนใหญ่

ก) อยู่คนเดียว

ข) อยู่กับคู่สมรส

ค) อยู่กับลูกๆ

ง) อยู่กับหลานๆ

จ) อยู่กับคนอื่นๆ .....(โปรดระบุ)

13. โดยทั่วๆ ไป ท่านมีความรู้ด้วยตัวของท่านเองว่า ท่านมีสุขภาพอย่างไร

ก) สุขภาพดีเยี่ยม

ข) สุขภาพดี

ค) สุขภาพค่อนข้างดี

ง) สุขภาพไม่ค่อยดี

จ) สุขภาพแย่มาก

14. กรุณาระบุว่า ท่านเจ็บป่วยด้วยโรคอะไรบ้าง จากการตรวจรักษาของแพทย์

.....

ตอนที่ 2: กิจกรรมที่เกี่ยวกับการทำงานของร่างกาย

คำถามต่อไปนี้ อาจเกี่ยวกับกิจกรรมที่ท่านทำในแต่ละสัปดาห์ ระหว่างช่วงเวลาของเดือนที่ผ่านมา

คำแนะนำ : กรุณาใส่เครื่องหมายกากบาต X ลงในช่องหลังคำถามในตารางความถี่ที่ให้ไว้ข้างล่างนี้ คำที่ใช้ในตารางความถี่ของการทำกิจกรรม หมายถึง **ไม่เคย**= ไม่เคยทำเลย,**นานๆ ครั้ง**= 1 ครั้งต่อสัปดาห์,**บางครั้ง**= 2 ครั้งต่อสัปดาห์, **บ่อยๆ**= 3 ครั้งต่อสัปดาห์ และ**เป็นประจำ**= มากกว่า 3 ครั้งต่อสัปดาห์

ชนิดของกิจกรรมที่เกี่ยวกับการทำงานของร่างกาย	ความถี่ของการทำกิจกรรม				
	ไม่เคยทำ	1 ครั้ง	2 ครั้ง	3 ครั้ง	มากกว่า 3 ครั้ง
กิจกรรมของครอบครัว					
ในรอบ 1 สัปดาห์ ในช่วงเวลาของเดือนที่ผ่านมา					
1. ท่านปรุงอาหารบ่อยแค่ไหนเมื่อสัปดาห์ที่แล้ว					
2. ท่านทำงานบ้านเบาๆ เช่น การกวาดพื้น หรือเช็ดขี้ฝุ่นบ่อยแค่ไหน					
3. ท่านทำงานบ้านที่มีความหนักปานกลาง เช่น การซักผ้าด้วยตัวเอง บ่อยแค่ไหน					
4. ท่านทำงานบ้านที่มีความหนัก เช่น การถูพื้น บ่อยแค่ไหน					
5. ท่านทำงานในสวนที่มีความหนัก เช่น งานที่ใช้จอบเสียมทำอาทิ การดายหญ้าถางหญ้า / ขุดดินฯ บ่อยแค่ไหน					
6. ท่านไปซื้อของที่ร้านขายของชำ บ่อยแค่ไหน					
กิจกรรมยามว่าง					
ในรอบ 1 สัปดาห์ ในช่วงเวลาของเดือนที่ผ่านมา					
7. ท่านอ่านหนังสือหรือหนังสือพิมพ์ บ่อยแค่ไหน					
8. ท่านดูทีวีหรือฟังวิทยุ บ่อยแค่ไหน					
9. ท่านทำงานสวนเบาๆ เช่น การรดน้ำต้นไม้ บ่อยแค่ไหน					

ชนิดของกิจกรรมที่เกี่ยวกับการทำงานของร่างกาย	ความถี่ของการทำกิจกรรม				
	ไม่เคยทำ	1 ครั้ง	2 ครั้ง	3 ครั้ง	มากกว่า 3 ครั้ง
10. ท่านทำงานที่เกี่ยวกับศิลปะ งานที่ต้องใช้ฝีมือ หรืองานเย็บปักถักร้อย บ่อยแค่ไหน					
11. ท่านเล่นเกมส์ต่างๆ เช่น หมากรุก หมากฮอส ครอสเวิร์ด เล่นไพ่ กับเพื่อนๆ หรือคนอื่นๆ บ่อยแค่ไหน					
การออกกำลังกาย					
ในรอบ 1 สัปดาห์ ในช่วงเวลาของเดือนที่ผ่านมา					
12. ท่านไปออกกำลังกายด้วยแอโรบิก บ่อยแค่ไหน					
13. ท่านไปออกกำลังกายด้วยการวิ่งเยาะๆ วิ่ง/ (จ๊อกกิ้ง) บ่อยแค่ไหน					
14. ท่านไปเดินออกกำลังกายโดยการเดิน เคลื่อนไหวร่างกาย บ่อยแค่ไหน					
15. ท่านไปออกกำลังกายด้วยวิธียืดเหยียดหรือยืดหยุ่นร่างกายบ่อยแค่ไหน					
16. ท่านไปออกกำลังกายด้วยการเต้นรำ เช่น รำไทย หรือออกกำลังกายด้วยการรำไม้พลอง แบบป้า) บ่อยแค่ไหน (บุญมี					
กิจกรรมที่เกี่ยวกับการทำงานของร่างกายร่วมกับสังคม					
ในรอบ 1 สัปดาห์ ในช่วงเวลาของเดือนที่ผ่านมา					
17. ท่านไปวัด ไปโบสถ์ หรือสุเหร่า บ่อยแค่ไหน					
18. ท่านมีส่วนร่วมในการทำงานด้วยจิตอาสาหรืองานอาสาสมัคร บ่อยแค่ไหน					
19. ท่านไปร่วมงานเฉลิมฉลองงานเทศกาล ไปดู/หนังหรือฟังการพูด การบรรยาย บ่อยแค่ไหน					

ชนิดของกิจกรรมที่เกี่ยวกับการทำงานของร่างกาย	ความถี่ของการทำกิจกรรม				
	ไม่เคยทำ	1 ครั้ง	2 ครั้ง	3 ครั้ง	มากกว่า 3 ครั้ง
20. ท่านได้ไปเยี่ยมเยือนเพื่อนๆสมาชิกครอบครัว ที่ไม่ได้อยู่ร่วมกับท่าน บ่อยแค่ไหน					
21. ท่านได้ถวายอาหารแด่พระสงฆ์ เช่น การทำบุญใส่บาตร บ่อยแค่ไหน					
22. ท่านได้เข้าร่วมประชุมของชุมชนการประชุม/ของชมรมอื่นๆ บ่อยแค่ไหน					
23. ท่านได้เดินทางไปท่องเที่ยวพักผ่อนหย่อนใจ บ่อยแค่ไหน					
24. ท่านได้ไปที่ชมรมผู้สูงอายุ บ่อยแค่ไหน					

ตอนที่3: การนำโครงการไปปฏิบัติเพื่อก่อให้ผลสำเร็จอย่างจริงจังด้วยตนเอง

ข้อมูลที่ให้ไว้ข้างล่างนี้เกี่ยวกับ ความเชื่อมั่นที่ท่านจะเอาชนะอุปสรรคต่างๆ ในคำถามต่อไปนี้อย่างไร กรุณาใส่เครื่องหมายกากบาต X ลงในช่องว่างหลังข้อความ ที่ตรงกับลักษณะของท่านมากที่สุด

ข้อความ	เชื่อมั่นมาก	เชื่อมั่น	ไม่เชื่อมั่นเลย
25. ท่านสามารถทำงานบ้านเบาๆ ต่อเนื่องกัน อย่างน้อย 10 - 30 นาที			
26. ท่านสามารถทำงานบ้านหนักปานกลาง เช่น ถูพื้น ซักเสื้อผ้า แม้ว่า ลูกๆ บอกว่าไม่ต้องทำก็ตาม			
27. ท่านสามารถจัดการเกี่ยวกับเวลาของการออกกำลังกาย ได้อย่างน้อยสัปดาห์ละ 5 ครั้ง			
28. ท่านมีความเชื่อว่า ท่านสามารถออกกำลังกายได้อย่างต่อเนื่องอย่างน้อยเป็นเวลา 1 เดือน			
29. ท่านสามารถออกไปไหนนอกบ้านได้ด้วยตัวเอง			
30. ท่านสามารถทำกิจกรรมยามว่างของท่าน แม้ว่าสุขภาพของท่านจะแย่ลงก็ตาม			
31. ท่านสามารถลดเวลาการงีบนอนของท่าน หรือการดูทีวี เพื่อเพิ่มการทำกิจกรรมทางด้านร่างกายให้มากขึ้น			
32. ท่านสามารถเพิ่มความตั้งใจในการทำกิจกรรมทางด้านร่างกายได้มากกว่าปกติที่เคยทำได้			
33. ท่านสามารถร่วมเดินทางไปท่องเที่ยวเกี่ยวกับศาสนาได้ ถึงแม้ว่า จะรู้สึกว่าเหน็ดเหนื่อยก็ตาม			
34. ท่านสามารถบริหารจัดการให้การออกกำลังกายเป็นไปได้อย่างต่อเนื่อง ถึงแม้ว่า จะมีความกังวลและปัญหาอยู่บ้างก็ตาม			
35. ท่านสามารถบริหารจัดการเพื่อให้การทำกิจกรรมทางด้านร่างกายเป็นไปอย่างต่อเนื่อง ถึงแม้ ท่านจะรู้สึกว่าเหน็ดเหนื่อยอยู่บ้างก็ตาม			

ข้อความ	เชื่อมั่นมาก	เชื่อมั่น	ไม่เชื่อมั่นเลย
36. ท่านสามารถบริหารจัดการเพื่อให้การทำกิจกรรมประจำวันเป็นไปอย่างต่อเนื่อง ถึงแม้ว่า ท่านจะรู้สึกเครียดบ้างก็ตาม			
37. ท่านสามารถออกกำลังกายอย่างน้อย 30 นาทีต่อครั้ง เป็นเวลา 5 วันต่อ 1 สัปดาห์			

ตอนที่ **4** : **การให้การสนับสนุนของครอบครัว**

คำแนะนำ: กรุณาใส่เครื่องหมายกากบาต ✓ลงบนหัวข้อ ก ข หรือ ก ข ค ง จ ที่ตรงกับลักษณะของท่านมากที่สุด

38. ท่านชอบสร้างมิตรภาพ หรือติดต่อกับบุคคลอื่นๆ มาก ใช่ไหม
    ก) ใช่
    ข) ไม่ใช่
39. ท่านได้รับการสนับสนุนทางด้านการเงินในการทำกิจกรรมยามว่างและการออกกำลังกาย จากสมาชิกในครอบครัวของท่าน ใช่ไหม
    ก) ไม่เคยได้รับการสนับสนุนเลย
    ข) 1 ครั้งต่อเดือน
    ค) 2 ครั้งต่อเดือน
    ง) 3 ครั้งต่อเดือน
    จ) มากกว่า 3 ครั้งต่อเดือน
40. ท่านได้รับการสนับสนุนจากสมาชิกของครอบครัวในการร่วมทำงานเฉลิมฉลองกิจกรรมเพื่อ/สังคม หรืองานเฉลิมฉลอง และงานพบปะสังสรรค์ต่างๆ ใช่ไหม
    ก) ไม่เคยได้รับการสนับสนุนเลย
    ข) 1 ครั้งต่อเดือน
    ค) 2 ครั้งต่อเดือน
    ง) 3 ครั้งต่อเดือน
    จ) มากก่า 3 ครั้งต่อเดือน

41. ท่านได้รับโอกาสจากสมาชิกของครอบครัวที่จัดการให้ไปท่องเที่ยวบ่อยแค่ไหน
    ก) ไม่เคยได้รับการสนับสนุนเลย
    ข) 1 ครั้งต่อเดือน
    ค) 2 ครั้งต่อเดือน
    ง) 3 ครั้งต่อเดือน
    จ) มากกว่า 3 ครั้งต่อเดือน
42. ท่านได้รับข้อมูลข่าวสารจากสมาชิกในครอบครัวเพื่อการเข้าร่วมกิจกรรมของชุมชน ใช่ไหม
    ก) ใช่
    ข) ไม่ใช่
43. ท่านได้รับการสนับสนุนให้เข้าร่วมออกกำลังกาย ทำกิจกรรมอย่างใดอย่างหนึ่ง/จากใครมากที่สุด (โปรดเลือกตอบเพียงข้อเดียวเท่านั้น)
    ก) คู่สมรส
    ข) ลูกสาว
    ค) ลูกชาย
    ง) หลานๆ
    จ) ไม่เคยเลย
44. ลูกๆ ติดต่อกับท่านบ่อยแค่ไหน/หลานๆ ของท่านที่ไม่ได้อยู่ด้วยกัน ได้มาเยี่ยมเยือน/
    ก) ไม่เคยมาเยี่ยมเลย
    ข) 1 ครั้งต่อเดือน
    ค) 2 ครั้งต่อเดือน
    ง) 3 ครั้งต่อเดือน
    จ) มากกว่า 3 ครั้งต่อเดือน
45. ท่านได้ไปเยี่ยมสมาชิกครอบครัวของท่านในช่วงเดือนที่แล้วบ่อยแค่ไหน
    ก) ไม่เคยมาเยี่ยมเลย
    ข) 1 ครั้งต่อเดือน
    ค) 2 ครั้งต่อเดือน
    ง) 3 ครั้งต่อเดือน
    จ) มากกว่า 3 ครั้งต่อเดือน

ขอขอบพระคุณที่ท่านให้ความช่วยเหลือตอบแบบสอบถามนี้เป็นอย่างยิ่ง

APPENDIX C

Table 4.14 Simple linear regression using household activity as dependent variable

Factors	β	T-value	p-value
Age(years)	-0.326	-5.852	<0.001***
Gender			
Male	-0.167	-2.874	0.004**
Female [a]			
Marital status			
Single [b]			
Married	-0.363	-2.920	0.004**
Widowed/separated/divorced	-0.311	-2.501	0.013*
Educational level			
Primary and no education	-0.265	-3.854	<0.001***
Secondary school and Diploma	-0.043	-0.625	.523
Bachelor and higher [c]			
Occupation			
Government worker/Semi-government [d]			
Employee with private firms/ Self-employed	-0.156	-2.501	0.013*
House-wife	-0.087	-1.431	0.154
Laborer/Wages/Farming	-0.187	-3.044	0.003**
Income			
Less than 5000 Baht	-0.168	-2.752	0.006**
5000-10000 Baht	-0.071	-1.160	0.247
More than 10000 Baht [e]			
Adequacy of income			
Adequate [f]			
Inadequate	-0.090	-1.528	0.128
Perceived health status			
Excellent/Good	0.132	2.073	.039*
Fair [g]			
Poor /very poor	-0.236	-3.699	<0.001***
Health problem			
Yes	0.175	-3.007	0.003**
No illness/not specified [h]			
Total self-efficacy score	0.445	8.421	<0.001***
Total family support score	0.164	2.825	0.005**

a, b, c, d, e, f, g, h are referent groups. Significant at *p <0.05, ** p< 0.01, ***p<0.001.

Table 4.15 Simple linear regression using leisure time activity as a dependent variable

Factors	β	T-value	p-value
Age(years)	0.123	-2.095	0.037*
Gender			
Male	0.158	2.720	0.007**
Female [a]			
Marital status			
Single [b]			
Married	-0.156	-1.243	.215
Widowed/separated/divorced	-0.229	-1.823	.069
Educational level			
Primary and no education	0.510	-8.038	<0.001***
Secondary school and Diploma	0.164	-2.578	0.010*
Bachelor and higher [c]			
Occupation			
Government worker/Semi-government [d]			
Employee with private firms/ Self-employed	-0.157	-2.724	.007**
House-wife	-0.295	-5.238	<0.001***
Laborer/Wages/Farming	-0.380	-6.667	<0.001***
Income			
Less than 5000 Baht	0.382	-6.678	<0.001***
5000-10000 Baht	0.180	-3.151	0.002**
More than 10000 Baht [e]			
Adequacy of income			
Adequate [f]			
Inadequate	-0.215	-3.729	<0.001***
Perceived health status			
Excellent/Good	-0.030	-0.461	0.645
Fair [g]			
Poor /very poor	-0.303	-4.702	<0.001***
Health problem			
Yes	-0.123	-2.102	0.036*
No illness/not specified [h]			
Total self-efficacy score	0.382	7.009	<0.001***
Total family support score	0.366	6.673	<0.001***

a, b, c, d, e, f, g, h are referent groups.

Significant at *p <0.05, ** p< 0.01, ***p<0.001

Table 4.16 Simple linear regression using exercise as dependent variable

Factors	β	T-value	p-value
Age(years)	-0.065	-1.095	0.274
Gender			
Male	0.081	1.381	0.168
Female [a]			
Marital status			
Single [b]			
Married	-0.016	-0.129	0.897
Widowed/separated/divorced	-0.058	-0.459	0.646
Educational level			
Primary and no education	-0.369	-5.496	<0.001***
Secondary school and Diploma	-0.140	-2.091	0.037**
Bachelor and higher [c]			
Occupation			
Government worker/Semi-government [d]			
Employee with private firms/ Self-employed	-0.061	-0.988	0.324
House-wife	-0.155	-2.577	0.010*
Laborer/Wages/Farming	-0.239	-3.928	<0.001***
Income			
Less than 5000 Baht	-0.420	-7.460	<0.001***
5000-10000 Baht	-0.208	-3.698	<0.001***
More than 10000 Baht [e]			
Adequacy of income			
Adequate [f]			
Inadequate	-0.292	-5.171	<0.001***
Perceived health status			
Excellent/Good	0.209	3.306	0.001**
Fair [g]			
Poor /very poor	-0.189	-2.991	0.003**
Health problem			
Yes	-0.088	-1.500	0.135
No illness/not specified [h]			
Total self-efficacy score	0.294	5.214	<0.001***
Total family support score	0.351	6.346	<0.001***

a, b, c, d, e, f, g, h are referent groups.

Significant at *p <0.05, ** p< 0.01, ***p<0.001

Table 4.17 Simple linear regression using social functioning activity as dependent variable

Factors	β	T-value	p-value
Age(years)	-0.066	-1.118	0.265
Gender			
Male	0.004	0.074	0.941
Female [a]			
Marital status			
Single [b]			
Married	-0.246	-1.972	0.050*
Widowed/separated/divorced	-0.338	-2.711	0.007**
Educational level			
Primary and no education	-0.386	-5.838	<0.001***
Secondary school and Diploma	-0.058	-0.882	0.378
Bachelor and higher [c]			
Occupation			
Government worker/Semi-government [d]			
Employee with private firms/ Self-employed	-0.224	-3.743	<0.001***
House-wife	-0.166	-2.843	0.005**
Laborer/Wages/Farming	-0.328	-5.564	<0.001***
Income			
Less than 5000 Baht	-0.356	-6.160	<0.001***
5000-10000 Baht	-0.182	-3.141	0.002**
More than 10000 Baht [e]			
Adequacy of income			
Adequate [f]			
Inadequate	-0.206	-3.571	<0.001***
Perceived health status			
Excellent/Good	0.145	2.249	0.025*
Fair [g]			
Poor /very poor	-0.194	-3.016	0.003**
Health problem			
Yes	-0.116	-1.972	0.050*
No illness/not specified [h]			
Total self-efficacy score	0.426	7.967	<0.001***
Total family support score	0.366	6.672	<0.001***

a, b, c, d, e, f, g, h are referent groups.

Significant at *p <0.05, ** p< 0.01, ***p<0.001

Table 4.18 Full model of multiple linear regression using physical-social functioning activity as dependent variable

Factors	β	T-value	P-value
Age(years)	-0.95	-1.84	0.066
Marital status			
Single [a]			
Married	-0.259	-2.66	0.008**
Widowed/separated/divorced	-0.121	-1.22	0.223
Educational level			
Primary and no education	-0.098	-1.16	0.246
Secondary school and Diploma	0.008	0.14	0.890
Bachelor and higher [b]			
Occupation			
Government worker/Semi-government[c]			
Employee with private firms/ Self-employed	-0.059	-0.97	0.334
House-wife	-0.026	-0.42	0.673
Laborer/Wages/Farming	-0.060	-0.86	0.391
Income			
Less than 5000 Baht	-0.115	-1.609	0.109
5000-10000 Baht	-0.032	-0.567	0.571
More than 10000 Baht [d]			
Adequacy of income			
Adequate [e]			
Inadequate	-0.065	-1.26	0.208
Perceived health status			
Excellent/Good	0.114	2.13	0.034*
Fair [f]			
Poor /very poor	0.090	-1.61	0.108
Health problem			
Yes	0.003	0.071	0.943
No illness/not specified [g]			
Total self-efficacy score	0.273	4.66	< 0.001***
Total family support score	0.243	4.997	< 0.001***
R-Sq(adj)=43.4%	Se=12.6	N=289	

a, b, c, d, e, f and g are referent

Significant at *p <0.05, ** p< 0.01, ***p<0.001

APPENDIX D

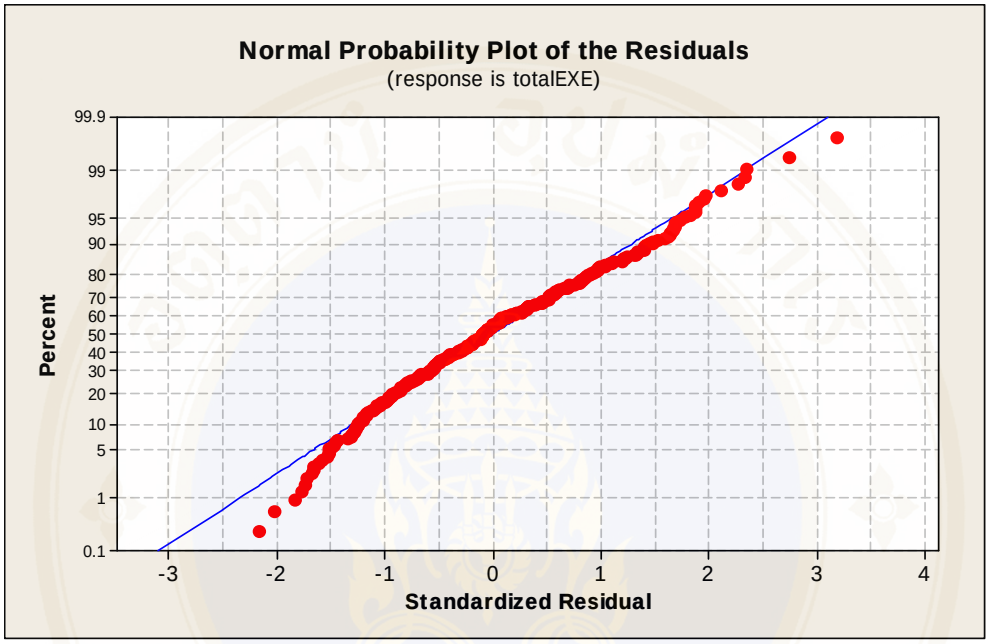

Figure 5.1 Normalprobability plot of the residuals (Response is physical-social functioning activity)

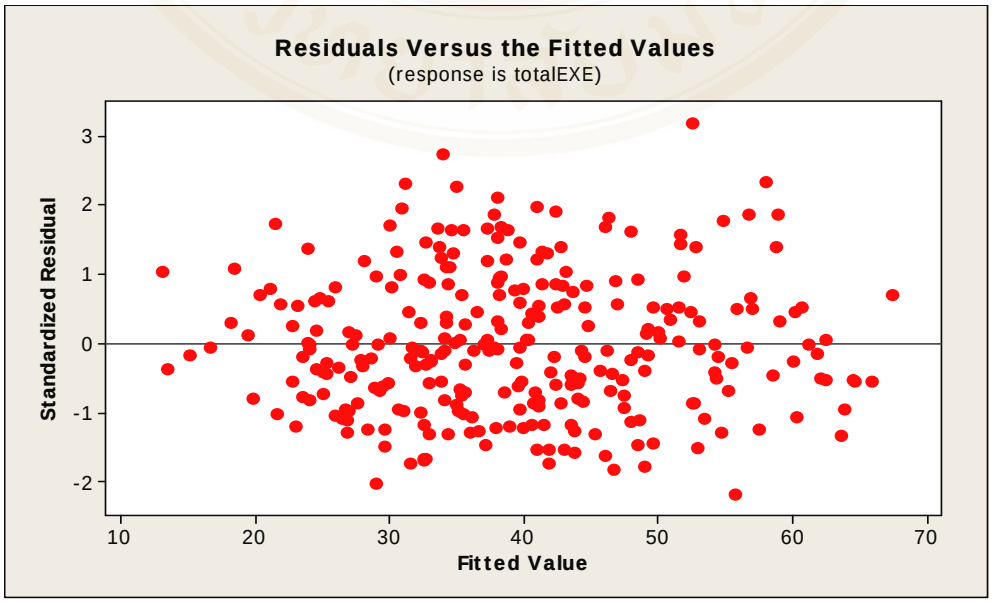

Figure 5.2 Residuals versus the fitted values (Response is physical-social functioning activity)

BIOGRAPHY

NAME	Bipna Shrestha
DATE OF BIRTH	6 September 1986
PLACE OF BIRTH	Kapilvastu, Nepal
INSTITUTIONS ATTENTED	Purbanchal University, 2006-2009 Bachelor of Public Health (BPH) ASEAN Institute for Health Development, Mahidol University, 2011-2012 Master in Primary Health Care Management (MPHM)
HOME ADDRESS	Kapilvastu district, Lumbini zone, Nepal Tel.:977-76-530112 e-mail:bipna.sth@gmail.com bipna_sth@yahoo.com