FACTORS AFFECTING QUALITY OF LIFE OF OLDER PEOPLE IN TAUNGU TOWNSHIP, BAGO REGION, MYANMAR

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ABSTRACT

During the last three decades, Myanmar has faced a steadily growing population of older people as a result of sustained declines in mortality and fertility. Quality of life (QoL) is an important issue among older people as it reflects their health status and wellbeing. This study aimed to investigate the quality of life of older people and analyze factors that associated with QoL of older people in Taungu Township, Bago Region, Myanmar. The study is based on a cross-sectional study among 233 older people aged 60 years or above living in the township. The data were collected through structured questionnaire using face-to-face interview, during March to April 2011. Questions on QoL were from the standard World Health Organization Quality of Life BREF (WHOQOL-BREF) questionnaire. Descriptive statistics and bi-variate analysis (χ^2 test) are employed. It's found that 72.1% of older people had an average QoL, 14.2% and 13.7% had high and low QoL.QoL is significantly associated (p-value < 0.05) with older people's individual income. It is implied that appropriate implementation should increase its coverage both in terms of area and less opportunity for older persons. Government should expand older people's self-help group to improve livelihoods by creating job opportunities and income generate in all States and Regions. It is also suggested the WHOQOL-BREF, the standard questionnaires needs to be validated according to context of Myanmar cultures and norms, including the meaning of "quality of life".

KEY WORDS: OLDER PEOPLE / QUALITY OF LIFE / MYANMAR

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LIST OF ABBREVIATIONS

DOP	Department of Population
MOH	Ministry of Health
MSWRR	Ministry of Social Welfare, Relief and Resettlement
OPSHG	Older People Self-Help Groups
QoL	Quality of Life
UN	United Nations
WHO	World Health Organization

CHAPTER I
INTRODUCTION

1.1 Background

Aging is a normal, biological and irreversible process. It is presumed to be a life spanning process from birth to death. "Aging is a process of deterioration in the functional capacity of an individual that results from structural changes, with advancement of age" (Chauhan & Chandrashekar, 2013). In general, aging is associated with the decline of functional capability of the body according to physiological change.

The United Nations (UN) uses 60 years or above to refer the older people. The WHO identified that "the developing world often defines old age, not by years, but by new roles, loss of previous roles, or inability to make active contribution to society." In Myanmar, people aged 60 years or above are considered as older people in the elderly health care project (Thurein, 2010).

Quality of life (QoL) is highly individualistic because the level of variation between individuals is high (Leplege & Hunt, 1997). "Quality of life of older people is the outcome of the interactive combination of life-course factors and immediate situation ones" (Walker, 2010). Since 1970s, quality of life studies have increased. These studies are important for policy makers and the residents of a society (Ardi, 2012).

The perception on aging and health may be a key indicator of quality of life in old age. Low socio-economic status was found to be a common predictor of negative perceptions. "The perception of older people in quality of life are markedly vulnerable due to decreasing physical and physiological capabilities, breakdown of extended families and loneliness due to death of spouse" (Williams, 1977). So, the lacks of socio-economic resources make older individuals perceive life more negatively.

"Quality of life of older people has become related with aging of the population by demographic change" (Gopalakrishnan & David, 2008). Rapid urbanization with the changing of life style, environment and family structure is affecting the older people, families and country. Rural-urban migration for work and education is increasing and there is more competing for economic survival. As children move out to other places, the older parents will suffer the problem of isolation and lack of physical support from their children. The onset of economic development has changed the family structure from extended family to nuclear family. The problem is worse when older people retire from their work and their spouse passes away. So the demographic changes directly affect quality of life of older people.

Myanmar's older people remain active and independent. The older people work for their income and provide assistance to their children by caring for grandchildren. As they reach advanced years, many older people are vulnerable and need assistance. The rapid demographic changes pose major challenges for the future because of the inevitable decrease in family size and increased life expectancy. To overcome the effect of the aging population, the "Ministry of Social Welfare, Relief and Resettlement" (MSWRR) is providing elderly care projects in cooperation with "Ministry of Health".

1.2 Problem Statement

Population aging occurs all over the world with increased life expectancy due to high quality health care services and techniques, and decreased birth rate as a result of family planning.

According to United Nations (UN) data in 2013, the number of older people aged 60 years or above is 841 million (11.7% of total population). UN estimated that the population age 60 years or above may reach 1,180 million (21.7%) in 2025 (United_Nations, 2009). Even though the older people are increasing all over the world, nearly two thirds of these populations are in developing countries (United_Nations, 2011). "Rapid aging in developing countries is accompanied by dramatic changes in family structure. It is expected that most institutions of civil society in developing countries will be overwhelmed by the social, economic and

health needs of this ever-increasing segment of the population" (World Health Organization, 2006).

In 2011-12, the total population of Myanmar is estimated at 60.38 million with growth rate of 1.01 % (Ministry_of_Health, 2013). "Myanmar's population is beginning to age rapidly and facing the emerging issue of a rising number of older people. During the last three decades, Myanmar faced a steadily growing population of older people as a result of sustained declines in mortality and fertility" (Department of Population, 2009).

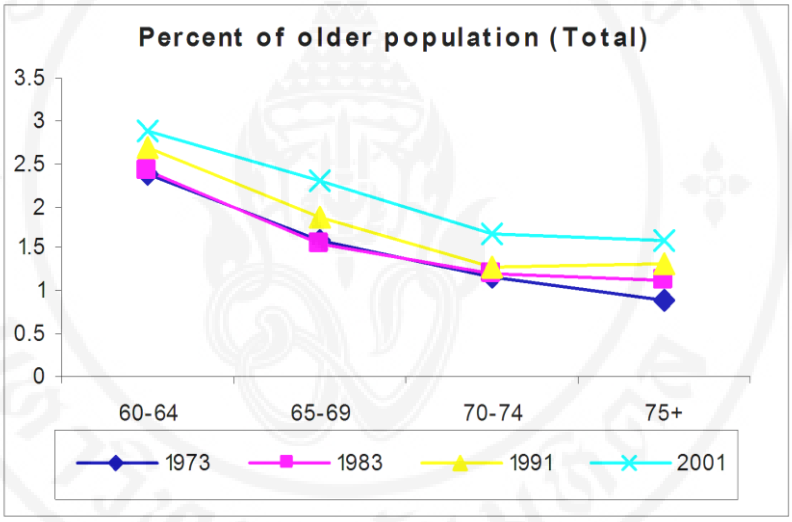

Figure 1.1 Total per cent of older people age 60 years or above (1973-2001) *(Source; UNFPA: population elderly in Myanmar)*

In Myanmar, older people who are 60 years or above was 2.14 million in 1980-81, 2.61 million in 1990-91, 3.98 million in 2000-01, 5.24 million in 2010-11 and 5.31 million in 2011-12 (Department_of_Population, 2012). The older population more than doubled in last two decades. The older population constituted 6.0 percent of the total population in 1973 increasing to 6.4 percent in 1983, to 7.1 percent in 1991, 8.5 percent in 2001, and 8.8 percent in 2011-12 (Ministry of Health, 2013).

Life expectancy for the total population at birth **is** 65.6 years. "Life expectancy for males is 63.24 years and female is 68.09 years". Life expectancy at birth for both sexes increased from 52 years in 1973 to 65 years in 2007. Life expectancy at age 60 is 17 years for both sexes (Department of Population, 2012).

The total fertility rate decreased from 3.5 children per woman in 1991 to 2.0 children per woman in 2007 (Department_of_Population, 2009). "At the same time, life expectancy has increased by about ten years over the last 50 years, a phenomenon that is even more remarkable because of the linear nature of the average increase" (Oeppen & Vaupel, 2002). United Nations projections suggest that the population aged 60 years and above will out-number children under age 15 years in 2035, and in 2050 this group of the population will comprise a quarter of the total population (United Nations, 2009). *The effect of population changes is to increase the older age group and decrease the working age group*. "It is key issue to prepare for the challenges and opportunities in response to population aging".

Population changes will have many implications for economic, health, wellbeing and quality of life of people. "The ability of older people to remain healthy and independent requires the provision of a supportive environment, including well-designed living conditions, access to economic resources, and appropriate health care. Health and social policies will thus need to deliver appropriate systems to respond to the needs of aging populations" (Rechel, Doyle, Grundy, & McKee, 2009).

In Myanmar, policies like health insurance coverage, social protection system and compulsory welfare services are not present, specifically for the older population. Inadequacy of the general social care system and social welfare services, and inadequate training of medical, social and human resources could adversely affect to the older people. These issues call for a joint effort in order to enhance the quality of life of older people.

1.3 Rationale and Justification

According to the transitions of epidemiology, demography and socio-economic conditions, the older population is growing with the declining growth rate of younger people. The result will affect the future of Myanmar, and for the declining number of people available to care for the older people. Changing of the age distribution and increasing number of older population is an emerging issue.

Shifting toward an aging society, the quality of life of older people has become of more concern. There are some different concepts of quality of life between

the general population and older people. Older people evaluate their quality of life positively on the basis of social contacts, dependency, health, social comparisons and material circumstances. “The maintenance and improvement of quality of life has become an important issue” (Netuveli & Blane, 2008).

The older people contribute their power with rich experience and wisdom for national progress. “The UN aims to ensure that priority attention will be given to the situation of older persons and addresses their independence, participation, care, self-fulfillment and dignity” (Jamuna, 1997). The statements like life satisfaction and, happiness can still escape older people, making these important problems that need to be solved (Bloom & Khanna, 2007).

In Myanmar, there are a very limited number of studies regarding the quality of life of older people. So, this study aims to contribute to better awareness and understanding quality of life of older people and its associated factors. Older people were chosen as a parity group for this study because of the need to understand the Quality of Life of this population and to be better prepared to anticipate and plan future program initiatives for an aging population.

The findings of this study will be the basic information for the older people care programs and hopefully can contribute in improving quality of life of older people and providing more effective services for the older people.

1.4 Research Question

Is the Quality of Life of older people associated with demographic and socio-economic characteristics of older people?

1.5 Research Objectives

1.5.1 Ultimate Objective

To provide evidence for policy planning to improve Quality of Life of older people in Myanmar by supporting older people care programs.

1.5.2 Specific Objective

1. To investigate the Quality of Life of older people in *Taungu* Township, Bago Region, Myanmar.

2. To analyze the factors associated with Quality of Life of older people in Taungu Township, Bago Region, Myanmar.

1.6 Expected Outcome

The results of this study will describe quality of life and factors affecting the quality of life of older people in Taungu Township, Bago Region, Myanmar. As a consequence, the older population, which is increasing in number, will have a better Quality of Life while the government invests and expands in older people care programs and social welfare services for them.

1.7 Definition of Terms

Older people mean persons who are aged 60 years and above. As chronological age increases, there is deterioration in physical and psychological health, and social status.

Quality of life is defined as "an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns" (World_Health_Organization, 1996). "Quality of Life is measured through self-assessed levels in four major domains, which are physical health, psychological satisfaction, social relationships and environmental condition in their society". The questions are based on the WHOQOL-BREF questionnaire.

CHAPTER II
LITERATURE REVIEW

The literature review of this study is divided into seven sections: (1) Concepts of an aging population (2) Concepts of Quality of Life of older people (3) Measurement of Quality of Life (4) Older people situation in Myanmar (5) Previous studies on factors affecting the Quality of Life of older people (6) Conceptual framework and (7) Research hypotheses.

2.1 Concepts of Aging Population

Aging is a natural phenomenon. In earlier eras, old age was regarded as an incurable disease. Nowadays life expectancy is seen as promotable, protectable and extendable. Old age should be regarded as a normal and inevitable biological phenomenon (Park, 2007).

The term “old age” conjures up images of sickness and poverty, despair and senility, warmth and responsibility (Sheela & Jayamala, 2008). Physical and psychological changes are general characteristics of older people. However, many older people continue to maintain a high level of function.

“The World General Assembly of aging, (Vienna, Austria in 1982) had changed the wording from aged to “aging” or “the elderly” and agreement for the criteria for the elderly is 60 years” (United_Nations, 1983). In Myanmar, people are defined as older people starting at 60 years which is also the age of retirement for government officers. The older people are categorized into four stages (Craig, 1980) based on physical health and mental health.

(1) The young old, (aged 60-69 years) refer to “the period when some significant changes occur in life such as retirement, loss of salary and decreased social role. In general, people in this age group are still strong but may need some help from the others sometimes”.

(2) The middle aged old, (aged 70-79 years) is “the period that sickness will be a problem and the number of close relatives who are dead is increasing. The social role is also decreased”.

(3) The old, (aged 80-89 years) is the period in which the older people “have difficulty adapting to the surrounding environment. The people in this group will need more help when compared to the first two groups”.

(4) The very old, (aged 90 years and upper) is “the period in which the older people have many health problems”.

Different ages have different characteristic. According to medical criteria, three groups of the older people are used (Polwieng, 1995):

1. Early elderly (60-69 years) – “healthy to be able to perform their daily living activities”.
2. Middle elderly (70-79 years) – “start to need some help from others”.
3. Late elderly (80 years and above) need help from their family members.

In this study, the older people are determined as persons aged 60 years and above, and the criteria are consistent with the civil service officers’ retirement age.

2.2 Concepts of Quality of Life of Older People

The meaning of quality of life is close to “standard of living” as “assessed from material surroundings of individuals and an individual’s perception of what constitutes an acceptable standard of living”. Another wider meaning is “Way of Life which includes living status, style of life, living standard and quality of life” (Campbell, Converse, & Rodgers, 1976).

The meaning of quality of life is multi-dimensional and varies in both objective and subjective aspects. In the past, the measurement of quality of life focused on objective outcomes, such as per capita income, food and residence. Nowadays subjective measurement is more broadly used, such as the dimension of happiness or life satisfaction, for which individuals make a comparison between the actual situation and expected situated situation (Campbell et al., 1976).

A person’s quality of life may be low, medium or high. Quality of life scorings differ by evaluation tools. Maslow’s hierarchy of needs includes certain basic

living conditions that should be covered initially before higher quality of life levels can be reached. People need the basic resources to meet other needs (Maslow, 1987).

The physical changes are more obvious after 60 years old. Hearing and vision start to fail, there may be increased blood pressure, and more proneness to health risky and infection. It is important that the older people get convenient health and leisure services. Two main types of instruments for assessment of the daily routine of the older people are basic physical activity of daily life (BADL) and instrumental activity of daily life (IADL). The BADL includes "eating, toilet behavior, getting out of bed, bathing, dressing, etc." The IADL includes "reading, writing, traveling, taking medicine, shopping, cleaning the house and cooking, etc." (Ebersole & Hess, 1988).

The older people need psychological support because they may have lost many friends and their spouse. The measurement of psychological wellbeing is subjective (Patrick & Erickson, 1993). The study of psychological well-being by Riff (1996) found that there are seven components of psychological health. They are autonomy, environment mastery, happiness and life satisfaction, personal growth, interaction, self-acceptance and purpose in life (Ryff & Singer, 1996).

Older people need social supports because their adult children often have moved away for jobs or their education. There are many sociable activities that older persons can do, such as going for walks and participating in religious and social activities. Through these activities, they will be able to make more friends. "There are four components to be happy in society such as social integration, social contact, intimacy and social support. The social health of the elderly depends on their interaction with relatives and friends." (Patrick & Erickson, 1988).

"Quality of life is a broad ranging concept which is determined in a complex way by the person's physical health, psychological state, personal beliefs, social relationships, and their relationship to salient features of their environment" (World_Health_Organization, 1996). "Quality of Life can change over time and place and according to individual perception". The level of quality of life depends on their socio-economic factors and cultural factors. And quality of life is not only material or physical wellbeing, but also involves psychosocial wellbeing and also environmental conditions (Bach & Rioux, 1996).

2.3 Measurement of Quality of Life

The WHOQOL-BREF has four domains namely "Physical Health, Psychological, Social Relationships, and Environment". It contains two items from the overall quality of life and general health facets, and one item from each of the 24 facets contained in the WHOQOL-100 has been included (World Health Organization, 1996). "The method for converting raw scores to transformed scores is shown in the appendix, on page 66 and, using the transformation method, scores were converted to a 0-100 scale".

2.3.1 Physical health

"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (World_Health_Organization, 2004). "It is a level of functional or metabolic efficiency of a living organism".

The measurement of physical health domain (WHOQOL-BREF) includes 7 questions to measure physical health, "1.Pain limit to do essential activities; 2. Need medical treatment to perform daily activities; 3.Enough energy for daily life; 4.Able to get around; 5.Sleep; 6.Ability to perform daily activities; 7.Capacity for work. Each question has a 5-point scale".

2.3.2 Psychological

WHO defines mental health as "a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community".

The measurement of psychological domain (WHOQOL-BREF) includes 6 questions to measure psychological state: "1. Enjoy in life; 2. Feel life to be meaningful; 3. Able to concentrate; 4.Able to accept their appearance; 5. Satisfied with themselves; 6. Negative feelings. Each question has a 5- point scale".

2.3.3 Social Relationships

An older person is usually retired from an active job. S/he might have lost their spouse and good friends. The children might live elsewhere and are busy with

their affairs. So the older people suffer loneliness and feeling of futility (Mahajan & Gupta, 2013). Good social status includes a balance with other components such as physical and psychological health.

The measurement of social relationships domain (WHOQOL-BREF) includes 3 indicators to measure social relationships: "1. Satisfied with personal relationships; 2. Satisfied with their sexual activity; 3. Satisfied with support from their friends. Each question has a 5-point scale".

2.3.4 Environment

The environment affects the Quality of Life and satisfaction of older people (Walker, 2010). "Both physical and social environments are key determinants of health and essential conditions for healthy aging" (Ying, 2001).

"The determinants of health include not only biological endowment and individual behaviors but also physical and social environments" (Beckingham & Du Gas, 1993). The environment domain (WHOQOL-BREF) includes 8 indicators: "1. Feeling in daily life; 2. Physical environment; 3. Enough money to meet needs; 4. Access to information; 5. Opportunity for leisure activities; 6.Satisfied with living place; 7. Access to health services; 8. Satisfied with transportation. Each question has a 5-point scale".

2.4 Older People Situation in Myanmar

Health is an important determinant of the quality of life of older people. In Myanmar, only one-third of the older people said that their health status is good. Poor health status increased by age group from 17% in the group age 60-64 years to 30% in those 80 years or above (Ministry of Social Welfare, Relief and Resettlement, 2012). The morbidity showed no different results between male and female. The highest morbidity was due to hypertension followed by respiratory disease and diabetes mellitus (Moe, Tha, Naing, & Htike, 2012).

Most of Myanmar's older people remain economically active well into old age, and 51% of those aged 60-64 are still working. Economic activity is higher in rural areas and significantly decreases with age (UNICEF, 2005). "Working in the

field or at home was a positive factor for better health and active lifestyle of older people". Role of older people in the family or community was considered as a contributing factor for healthy aging.

The vast majority of older people have been economically active during their life. About 60% were engaged in agriculture and only 10% engaged in non-agriculture. Economic activity declines with age. For 60% of older people, children are the main source of support. So family and community support was the key issue for older people.

The majority of older women are widows while their male counterparts are married. Very few older people had never married. Literacy is higher in older males than females. Almost all of the older people believe that religion is very important in their life. They pray or meditate, donate money to religious organizations and offer foods to monks in the morning (Ministry of Social Welfare, Relief and Resettlement, 2012).

The religion and culture are closely linked with each other. Traditional care for the older people has been considered as a noble practice. Younger family members serve the needs of the older people with great pride. The nature of the family structure enables the family to take care of the older members. Older people play a meaningful role as advisers and community leaders within their capacities. However, the traditional family care pattern is gradually eroding due to a decreased birth rate, migration of adult children, engagement of more family members in jobs, and rapid urbanization.

Traditionally in Myanmar, more than 60% of elderly people live with their adult children. Often their adult children live in the same community or as a neighbor. By custom, at least one adult child should remain co-resident with their parents until the parents' death. Generally people live in the extended type of family. The society values life within a thriving circle of families, relatives, neighbors and community. Myanmar society values and treats older persons as respectable and being a role model.

2.5 Older People Care Policy and Programs in Myanmar

Different types of older care models are required for the older people. The comprehensive geriatric services are required to improve quality of life.

The first home for the aged was established in 1898 by Daw Oo Zonn. The Department of Social Welfare also provides financial and technical assistance to the home for the aged. Now, there are 62 homes for the aged across the country covering over 2000 older people (Han, 2012).

Community-based home care programs provide help to vulnerable older persons by unpaid trained volunteers. These programs were started in 2004 and cover approximately 30,000 older people.

MSWRR have formed older people self-help groups (OPSHG) to improve livelihoods among older people and their families by creating job opportunities and income generating activities. OPSHG were formed in 55 villages in 14 State and Regions.

A day care center for older people was established in Yangon in 2012 by the MSWRR, and there are plan to extend this model. The center aims to reduce the social vulnerability of the older people and help them have healthy and active lives.

"Elderly health care program is part of the program to improve health for mothers, neonates, children, adolescents and the elderly as a life cycle approach of the National Health Plan (2011-2016). This program is based on comprehensive health care including preventive, curative and rehabilitative care". The elderly health care project was initiated in 1993 and is now covering 88 Townships of the whole country. This project expands by 4 Townships yearly (Ministry_of_Health, 2012).

"Under the recommendation of a wide range of actions for member states and WHO, the 58th World Health Assembly adopted resolution WHA 58.16 on *strengthening active and healthy aging*. It suggested developing, implementing and evaluating policies and programs that promote healthy and active aging".

"The constitution of the Republic of the Union of Myanmar, Article 32 (a) states that the Union shall take care of mothers and children, orphans, children of fallen defense services personal, the aged and disabled". In Myanmar, a National Policy on Aging has been formulated and is in the process of approval.

2.6 Factors Affecting the Quality of Life of Older People

The respondents with high education background had higher level of quality of life in the Senior Citizen Academies in Korea. The respondents who had good health perception showed higher quality of life. Male respondents had higher quality of life level than females (Jeong & Sohn, 2005).

In the study on quality of life of elderly in Einme Township, Irrawaddy Division, Myanmar, it was found that the majority of older people had moderate quality of life (80.9%). Family relationships and self-esteem were predictive of the quality of life of elderly people. The factors like education level, family income, family relationships, social support, current illness and self-esteem are statistically significant factors (Naing, Nanthamongkolchai, & Munsawaengsub, 2010).

A study on quality of life among rural elderly population of Northern India found that socio-demographic factors influenced quality of life of older people. The majority of elderly people enjoyed a good quality of life. "Quality of life was better in males in physical, psychological, social and environmental domains". It was found that older people who had graduated, were currently married, and living in extended families was significantly related at the 0.001 level (Syed Qadri, 2013).

In the study on quality of life among of early retired government officers in Nonthaburi Province, Thailand, it was found that the majority (70.5%) of elderly people had high quality of life. Quality of life was associated with self-esteem, social support, and participation in family and social activities (Nanthamongkolchai, Pasapun, Charrupoonphol, & Munsawaengsub, 2010).

The following are some research that found significant relationships between individual factors and quality of life of the elderly.

Age

Age is an important factor associated with the quality of life. The dependency of the older people increases with age. The older people feel that they are a burden to their family which may decrease the quality of life. Age is one of the most important factors affecting subjective wellbeing (Blanchflower & Oswald, 2007), and the middle age people have the highest sensitivity to subjective wellbeing (Easterlin, 2006). However, in the cross-sectional studies about life satisfaction, different ages

have different results (Diener & SUH, 1997). There is a weak positive linear association between age and quality of life of older people (Hansson, Hillerås, & Forsell, 2005). "Numerous cross-sectional, and longitudinal studies have produced consistent results, and the changes in life satisfaction over the lifespan are caused by age" (Sigelman & Rider, 2010).

Sex

"Sex is a specific characteristic since birth, and an indicator of power and human ability" (Orem, 1985). Sex differentiates social and physical activities. In Myanmar society, males receive higher social respect and recognition than female. According to Myanmar culture, males are the family leader. Females have a higher dependency level and more limitations on daily activities than males. This affects the quality of life of the older people (Department of Population, 2012).

There is no association between sex and quality of life of older people in the study in Einme Township, Myanmar (Naing et al., 2010). Females were more likely to need assistance or had to cope more than their husbands without any assistance (Akinyemi & Aransiola, 2010). Regarding gender differences among elderly in Japan, a study found that women are more like to be satisfied with their life than men (Oshio, 2012). In the study on life satisfaction among the elderly in Italy, it was found functional ability has greater important for life satisfaction for women than for men. (Meggiolaro & Ongaro, 2013).

Marital status

Marital status is one factor that influences the quality of life of the older people. The older people living with spouses provide physical and psychological support to each other. Marital status was significantly related with quality of life of the elderly (Wivatvanit, 2002). The sharing of experiences, security, happiness and closeness may have great effects on life satisfaction.

Good quality of life was significantly associated with married older people in rural Tanzania (Mwanyangala et al., 2010). The positive impact was found between life satisfaction and living as a couple among Italian older people (Meggiolaro &

Ongaro, 2013). Low quality of life was more felt by older people who are widowed or living alone in Sweden (Hellstrom, Persson, & Hallberg, 2004).

Education status

Quality of life is a complex status and there is no simple way to improve it. Education enhances the concept of the people and can address the problem. Higher education leads to the good jobs. The older people who had high education have a higher satisfaction and happiness than those with lower level of education. The research found a belief that education improves quality of life. A higher quality of life is a result of attending an educational institution. The study of Ross and Van Willigen (1997) pointed out that "education reduces distress largely by the way of paid work and economic resources with high personal control" (Ross & Van Willigen, 1997). Life satisfaction of the elderly is related with education in the study of cross-cultural perspectives of the elderly in Japan and India. Higher level of education resulted in higher level of life satisfaction among older people in both countries (Ramachandran & Radhika, 2012).

Working status

Working status means having good physical health and ability to conduct their daily life's work. Working is one factor that affects the quality of life of older people. Working may vary among temporary and permanent employees or owners. Working for a living not only generates income but also provides security and happiness for the older people. Working gives life satisfaction for older people because they maintain their productive role. In the study of health behavior and quality of life of the elderly that working status is associated with quality of life of older people (Wivatvanit, 2002). In the cross-cultural study of perspective of the elderly in Japan and India, the Indian respondents' working status was positively significantly associated with their life satisfaction (Ramachandran & Radhika, 2012).

Living arrangement

Living with family is a basic social institution. Families take care of, respect and help to the older people members in terms of physical, psychological and

social needs. Older people perceive satisfaction in their life, feel valued and confident (Miller, Miller, & Miller, 1986). Living with family in one's home gives pleasure, a sense of security and good social relationships and support for older people in the study of quality of life from the perspectives of older people in Britain (Gabriel & Bowling, 2004).

One study found significant association between life satisfaction, subjective wellbeing and social support among Indian older people (Das & Satsangi, 2008). The study in Sivas, Turkey, found that 46.2% suffered from unhappiness due to solitude and 62.0% wanted to live with their families (Beyaztas, Kurt, & Bolayir, 2012).

Regular contact with children may be beneficial to health in a number of ways. Living with family may facilitate access to social support and health care (Fiorillo & Sabatini, 2011). Older people living in an institutional setting had obtained higher quality of life than non-institutionalized people (Lakshmi Devi & Roopa, 2013). Living alone at home is predictive of low quality of life (Hellstrom et al., 2004).

Health risk behaviors

Health risk behavior is one factor that affects quality of life of older people. The older people suffer many health problems due to aging such as glaucoma, bony changes, long term illness such as degenerative disease of heart and blood vessel, cancer, diabetes mellitus, psychological problems such as mental changes and emotional disorders (Park, 2007).

Smoking and drinking are factors that affect quality of life of older people. One study found significant association between smoking and quality of life (Strandberg et al., 2008). In a study in Korea, it was found that there were statistically significant differences in quality of life of the elderly related to exercise participation, alcohol abstinence and blood pressure (Lee, Ko, & Lee, 2006). Never-smokers lived 10 years longer and enjoyed a better quality of life in their later years than heavy smokers (University_of_Helsinki, 2008).

The main causes of chronic disease like hypertension and stroke are related to from smoking and alcohol drinking. Chronic diseases are factors that affect

the quality of life of older people because personal illness is a cause of anxiety relating to the illness and affecting psychological status. The study in Singapore among older Chinese people living in Toa Payoh Township found that 71% expressed satisfaction with physical comfort, health and family relationships (Heok, 2004).

Economic status

Economic status is an important factor that affects quality of life of older people. High economic status and higher income can enable purchase of more things. The higher income, the higher quality of life (Hogstel, 1981) . Robert L. Clark (1989) found that "the economic well-being of the elderly people is determined by their ability to purchase and consume goods and services. Household income can be a proxy for the level of family well-being." (Clark, 1989).

In the study of Nigerians, economic status is the most consistent predictor of the four domains of quality of life. The researcher found that the economic status was correlated of quality of life of the older people. Poverty is more likely to be felt by the more vulnerable sections of the society (Gureje, Kola, Afolabi, & Olley, 2008).

The higher the individual income, the higher the quality of life based on the study of quality of life and active living in the United States (Peterson, Lowe, Peterson, & Janz, 2006). "Xiaoguang Ma and Sarah M McGhee (2013) found that economic hardship showed the strongest association with quality of life among older people in the study on socioeconomic status and health related to quality of life of among elderly Chinese people in Hong Kong" (Ma & McGhee, 2013).

In the study in Einme Township, Myanmar, the researcher found that quality of life of the elderly is significantly related with individual income (Naing et al., 2010). This result is consistent with the study in Japan that individual income is positively associated with quality of life of older people. The employment and economic policies that affect annual household income potentially influence health related quality of life (Yamazaki, Fukuhara, & Suzukamo, 2005). Ganesh Kumar (2014) found that quality of life and pension are significantly associated in Urban Puducherry, India (Kumar, Majumdar, & Pavithra, 2014).

2.7 Conceptual Framework

The conceptual framework defines the dependent variable as quality of life of the older people. WHOQOL-BREF field version was used to measure the quality of life. The independent variables are socio-demographic factors, health risk behavior and economic factors. The underlying concept of this study was that quality of life of the older people can be affected by the socio-demographic factors such as age, sex, marital status, working status, education, living arrangement, individual income and health risk behavior such as like smoking and alcohol consumption.

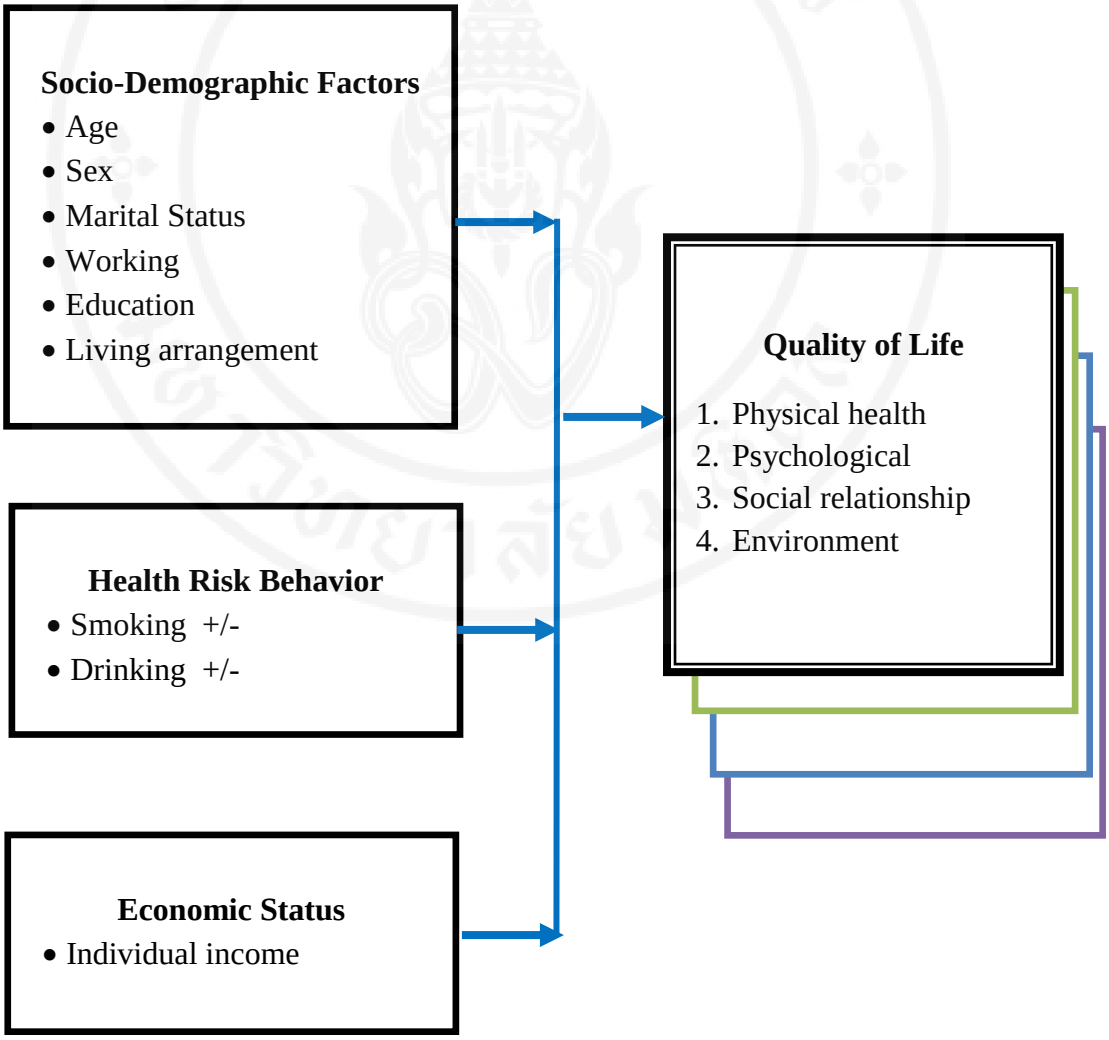

Figure 2.1 Conceptual Framework

2.8 Research Hypotheses

1. Among older people, quality of life is decreased as they age.
2. Male older people have high quality of life than females.
3. Older people who are currently married have higher quality of life than widowed/ divorced or never married older people.
4. Older people with higher education have higher quality of life than those with no or less education.
5. Older people who are working in their preferred occupation have higher quality of life than non-working older people.
6. Older people who live with children/relatives have higher quality of life than older people who live alone.
7. Older people with higher individual income have higher quality of life than older people who have no or lower income.
8. Older people who have health risk behavior have lower quality of life than older people who have no health risk

CHAPTER III
RESEARCH METHODOLOGY

3.1 Source of Data

This study is based on a secondary data set from a cross-sectional survey of the project "Health Status and Health Seeking Behavior of the Elderly People in *Taungu* Township, Bago region in Myanmar".

Yangon Region is the top Region by proportion of the population which is older people, based on data in 2007 with 6.9 % of the total. After Yangon Region, Bago Region is the second with 6.3% of total older population (Ministry_of_Health, 2010). Taungu is a large city in Bago Region. It is 220 km from Yangon, the former capital city of Myanmar. It towards the northeastern part of the Region, with mountain ranges to the east and west. Total population of Taungu Township was 66,097 in 2011 (Department_of_Health_Planning, 2011).

The respondents were people aged 60 years or above who live in Taungu Township, Bago Region. The survey was conducted collaboratively by Dr. Soe Moe, Associate Professor, Department of Community Medicine, Melaka Manipal Medical College, Malaysia, and Township Health Department from the Ministry of Health, Myanmar.

This survey data were collected from March 2011 to April 2011. This Township is under served by the elderly program and has inadequate data for elderly health care. The objective of the survey was to identify the health status of the aging population in Taungu Township, Bago Region, Myanmar, and to identify the health seeking behavior of elderly and to find out the association between the health seeking behavior of the elderly and socio-demographic characteristics.

Figure 3.1 Map of Taungu Township

(source: Wikipedia)

3.2 Sampling Design and Sample Size

This study was a cross-sectional survey and the survey sites were randomly selected from townships in Myanmar. This analysis focuses on data from Taungu Township, Bago region. The sample size was 233 respondents aged 60 years or above in Taungu Township, Bago Region, Myanmar. Villages were randomly selected to visit households and conduct face to face interviews with consenting elderly.

3.3 Ethical Issues

Participation of the respondents in the primary data collection was voluntary. Questionnaires were used with attached clear instructions. Written informed consent after explaining the nature of the study was used. The respondent could refuse to answer any question. IPSR-Institutional Review Board (IPSR-IRB) approval was received on 31 July 2014 (COA.No.2014/ 1-1-26) for use of these data.

3.4 Operational Definition

All the variables in this study are described in Table 3.1. Some main concerns for dependent and independent variables are elaborated as follows:

Age means the number of completed years. Age was recorded as a single age, and is categorized into three groups according to medical criteria that affects ability to work; "(1) 60-69 years; (2)70-79 years; (3)80 years or above" (Polwieng, 1995).

Sex means the gender of the older people: (1) male (2) female.

Marital Status means having a companion or partner classified into three groups: (1) living with spouse; (2) widowed / divorced; (3) never married.

Education means the highest level of education attained of older people, categorized into three groups: (1) no formal education; (2) primary; (3) secondary or above education.

Working refers to activities that the older people engage in. It is not related to whether the work generates income or not. "Working" means currently employed, doing irregular jobs and/or housework. The non-working group refers to those who are retired and reported that he/she is not currently working. Working status is categorized as (1) working (2) not working.

Individual income means total amount of individual monthly income of older people. Individual income is classified into three groups: (1) more than 30,000 kyats, (2) ≤ 30,000 kyats, (3) no income. In Myanmar, people living in poverty is defined as below $ 1.25 purchasing power parity (2005 PPP) a day (% of population) (UNESCAP, 2012) (*1$=900 kyats*).

Living alone means older persons who lived in a single-person household. Living with others means the older people live with their children, spouse or other relative at the time of interview. It is categorized into two groups: (1) live with another/ others (2) live alone.

Not Smoking means people who never smoke. Smoking is grouped into (1) not smoking (2) smoking. Not drinking means never drank alcohol. Drinking is divided into (1) not drinking (2) drinking. These habits are the risk factors of chronic disease such as hypertension, stroke, and diabetes.

Quality of life is defined as perceived and self-assessed level of life satisfaction of older people (World_Health_Organization, 1996). In this study, there are four domains of this measurement:

Physical health - It includes seven indicators, which are "1.activities of daily living, 2.depend on medicinal substances and medical aids, 3.energy and fatigue, 4.mobility, 5.pain and discomfort, 6.sleep and rest, 7.work capacity is satisfactory during one month".

Psychological - There are six indicators, which are "1.bodily image and appearance, 2.positive feelings, 3.negative feeling for their life, 4.self-esteem, 5.spirituality/religion/personal beliefs, 6.thinking, learning, memory and concentration".

Social relationships - It includes three indicators; "1.personal relationships, 2.social support 3.sexual activity of older people".

Environment - There are eight indicators; "1.financial resources, 2.freedom, physical safety and security, 3.health and social care (accessibility and quality), 4.home environment, 5.opportunities for acquiring new information and skills, 6.participation in and opportunities for recreation/ leisure, 7.physical environment (pollution, noise, traffic and climate) 8.transportation availability of older people".

All facts were rated on a five-point scale with a higher score indicating a higher satisfaction. The levels of overall quality of life were the sum of level of satisfaction measured through the four mentioned domains.

Overall quality of life and all four domains of QoL are classified as low level, average level and high level by using Normal Distribution formula, Mean Score ($\bar{X}$) ± Standard Deviation (SD).

high level = >($\bar{X}$ + SD)

average level = ($\bar{X}$ - SD) to ($\bar{X}$ + SD)

low level = < ($\bar{X}$ - SD)

Table 3.1 Operational definition

Variable	**Operational Definition**	**Level of Measurement**
Age	Age of older people in completed years 1=60-69, 2=70-79, 3=80 or above (years)	Ordinal
Sex	Respondent's sex either male or female 1=male, 0=female	Nominal
Marital status	Marital status of the older people 1=current married, 2=widow/ divorced 3=never married	Nominal
Education	Respondent's education fulfillment in terms of completed years of schooling 1=secondary and higher, 2=primary, 3=no formal education	Ordinal
Living arrangement	Respondent current living with family/ relative 1=live with others, 0=live alone	Nominal
Working	Respondent's nature of work 1=working , 2=not working	Nominal
Individual income	Total amount of individual monthly income (Kyats) 1= > 30000 kyats, 2= ≤ 30000 kyats, 3= no income **(1$= 900 Kyats)**	Ordinal

Table 3.2 Operational definition(cont.)

Variable	Operational Definition	Level of Measurement
Smoking	Smoking habits 1= not smoking, 2=smoking	Nominal
Drinking	Alcohol drinking 1= not drinking, 2= drinking	Nominal
Quality of Life of older people	The self-assessed level of life satisfaction of older people ❖ Physical health ❖ Psychological ❖ Social relationships ❖ Environment	Ordinal (low, average, high)

3.5 Data Analysis

Descriptive statistics were used to describe socio-demographic factors, economic factors and health risk behavior of elderly people. Descriptive statistics and Chi-square test were used to test the association between dependent and each independent variable. SPSS (Statistical Package for Social Science) version 19 software is used for data analysis. Data analysis is divided into two parts. The first part is the analysis of demographic and socio-economic characteristics of older people, level of all four domains of quality of life and level of overall quality of life of older people. Descriptive statistics were employed using mean, percentage and standard deviation. The second part present the analysis of relationship of demographic, socio-economic characteristics of older people and level of quality of life including all four domains and overall quality of life by using Chi-square tests.

3.6 Limitations of the Study

This study analyzed secondary data and it is limited by the scope of questionnaires, number of variables and the sample size. In Myanmar, there are many traditional values, practices and social customs which differ among regions. This study was conducted in only one township and findings cannot be generalized the whole country.

CHAPTER IV
RESEARCH FINDINGS AND DISCUSSION

4.1 Research Findings

The research finding consists of two sections. In the first section, the demographic characteristics, socio-economic characteristics and quality of life of older people are described. The second section examines the relationship between the demographic characteristics, socio-economic characteristics and quality of life of older people.

4.1.1 Description of Demographic characteristics

From Table 4.1, it was found that the mean age was 70.8 years with standard deviation of 8.46 years. More than half (51.1%) were between 60-69 years old, followed by (31.3%) who were between 70-79 years old and (17.6%) who were 80 years or above. The maximum age was 102 years.

Among the total sample of 233 older people, males were 39.5% and females were 60.5% which gives a sex ratio of males to females of 1: 1.5.

Regarding the marital status of the older people, almost all of the older people were ever-married. About half (51.5%) were currently married, 42.1% were widowed/ divorced, and only 6.4% were never married.

About the working status of the respondents, one third of the older people (30.5%) were not working. Two-thirds (69.5%) were currently working at the time of interview.

Concerning educational status, one-third of older people (38.2%) had not received formal education. About the same proportion (33.5%) completed the primary school education and 28.3% completed secondary school or above.

Only 6.4% of older people in this study were living alone. The majority of older people (93.6%) were living with their children, family or relatives.

Table 4.1 Number and percentage distribution of older people by demographic and social characteristics (n=233)

Characteristic	Number (n)	Percent (%)
Age		
➢ 60-69 years	119	51.1
➢ 70-79 years	73	31.3
➢ 80 years or above	41	17.6
Mean = 70.8, Medium = 68.0, S.D = 8.46, Min=60, Max=102		
Sex		
➢ male	92	39.5
➢ female	141	60.5
Marital Status		
➢ currently married	120	51.5
➢ widowed/ divorced	98	42.1
➢ never married	15	6.4
Working		
➢ working	162	69.5
➢ not working	71	30.5
Education		
➢ No Formal School	89	38.2
➢ Primary School	78	33.5
➢ Secondary or Above	66	28.3
Living arrangement		
➢ Live alone	15	6.4
➢ Live with family/ relatives	218	93.6
Total	233	100.0

Economic status

Table 4.2 showed that half of the older people (53.6%) had no income and 33.9% received less than 30,000 kyats ($ 33) per month. Only 12.4% received more than 30,000 kyats per month.

Table 4.2 Number and percentage distribution of older people by economic status (n=233)

Characteristic	Number (n)	Percent (%)
Individual Income **(1$=900Kyats)**		
➢ no income	125	53.6
➢ 30,000 kyats and below	79	33.9
➢ more than 30,000 kyats	29	12.4
Mean=14,426.5, S.D=31,558.9, Min=0, Max=300,000		
Total	233	100.0

Health risk behaviors

Table 4.3 shows that most of the older people in this study (70.4%) were not smoking. However the rest (29.6%) reported that they had a smoking habit. And most of the older people in this study (95.3%) were not drinking alcohol. But the rest of them (4.7%) reported that they drank.

Table 4.3 Number and percentage distribution of older people by health risk behavior (n=233)

Characteristic	Number (n)	Percent (%)
Smoking		
➢ Smoking	69	29.6
➢ Not Smoking	164	70.4
Drinking		
➢ Drinking	11	4.7
➢ Not Drinking	222	95.3
Total	233	100.0

Quality of Life (QoL)

Quality of life was evaluated using the World Health Organization Quality of life- BREF instrument. "The WHOQOL-BREF consists of 26 items. Each item uses a five-point scale. These items are distributed in four domains (Physical Health; Psychological; Social Relationships; and Environment). There are also two items that were examined separately: one which asked about the individual's overall perception of QOL and the other which asked about the individual's overall perception of his or her health. Four domains scores denote an individual's perception of quality of life in each particular domain. Domain scores are scaled in a positive direction" (i.e. higher scores denote higher quality of life) (World Health Organization, 1996). The mean score of items within each domain is used to calculate the domain scores compatible with the scores used in WHOQOL-100 and subsequently transformed to a 0-100 scale using the following formulas (Wig et al., 2006). "The method for converting raw scores to transformed scores is shown in appendix, on page 66 and, using the transformation method, scores was converted to a 0-100 scale".

$$\text{Transformed score} = \frac{\text{(Actual raw domain score - lowest possible raw domain score)}}{\text{Possible raw domain score range}} \times 100$$

Table 4.4 shows mean, median, and standard deviation of physical health, psychological, social relationships, environment and overall quality of life of older people. Overall mean quality of life score was 214.70, and standard deviation was 42.04. The mean and standard deviation, all four domains and overall quality of life were categorized into low, average and high levels respectively.

Table 4.4 Mean, median and standard deviation of physical health, psychological, social relationships, environment and overall QoL of older people (n=233)

	Physical Health	Psychological	Social	Environment	Overall QoL
Mean	53.45	51.78	55.70	47.61	214.70
Median	56.00	50.00	50.00	44.00	213.00
S.D	13.67	13.13	11.60	13.08	42.04
Minimum	13	6	25	13	104
Maximum	81	81	81	81	326

Table 4.5 shows results of all four domains and overall quality of life classified as low, moderate and high levels by using mean score ± standard deviation. The levels of all items were scored as follow:

Table 4.5 Levels of all four domains and overall quality of life

	Low	Average	High
Physical Health	< 40	67 to 40	> 67
Psychological	< 39	39 to 65	> 65
Social Relationships	< 44	44 to 67	> 67
Environment	< 35	35 to 61	> 61
Overall quality of life	< 173	173 to 257	> 257

Table 4.6 shows number and percentage distribution of physical health, psychological, social relationships and environment domains of quality of life of older people and overall quality of life of older people. According to mean and standard deviation, these four domains were classified into three levels: low, average and high level respectively.

Table 4.6 Number and percentage distribution of older people by level of satisfaction in the four domains of QoL (n=233)

Domains	Level of Quality of Life					
	Low		Average		High	
	No.	%	No.	%	No.	%
Physical health	42	18.0	155	66.5	36	15.5
Psychological	30	12.9	170	73.0	33	14.2
Social Relationships	9	3.9	164	70.4	60	25.8
Environment	38	16.3	150	64.4	45	19.3

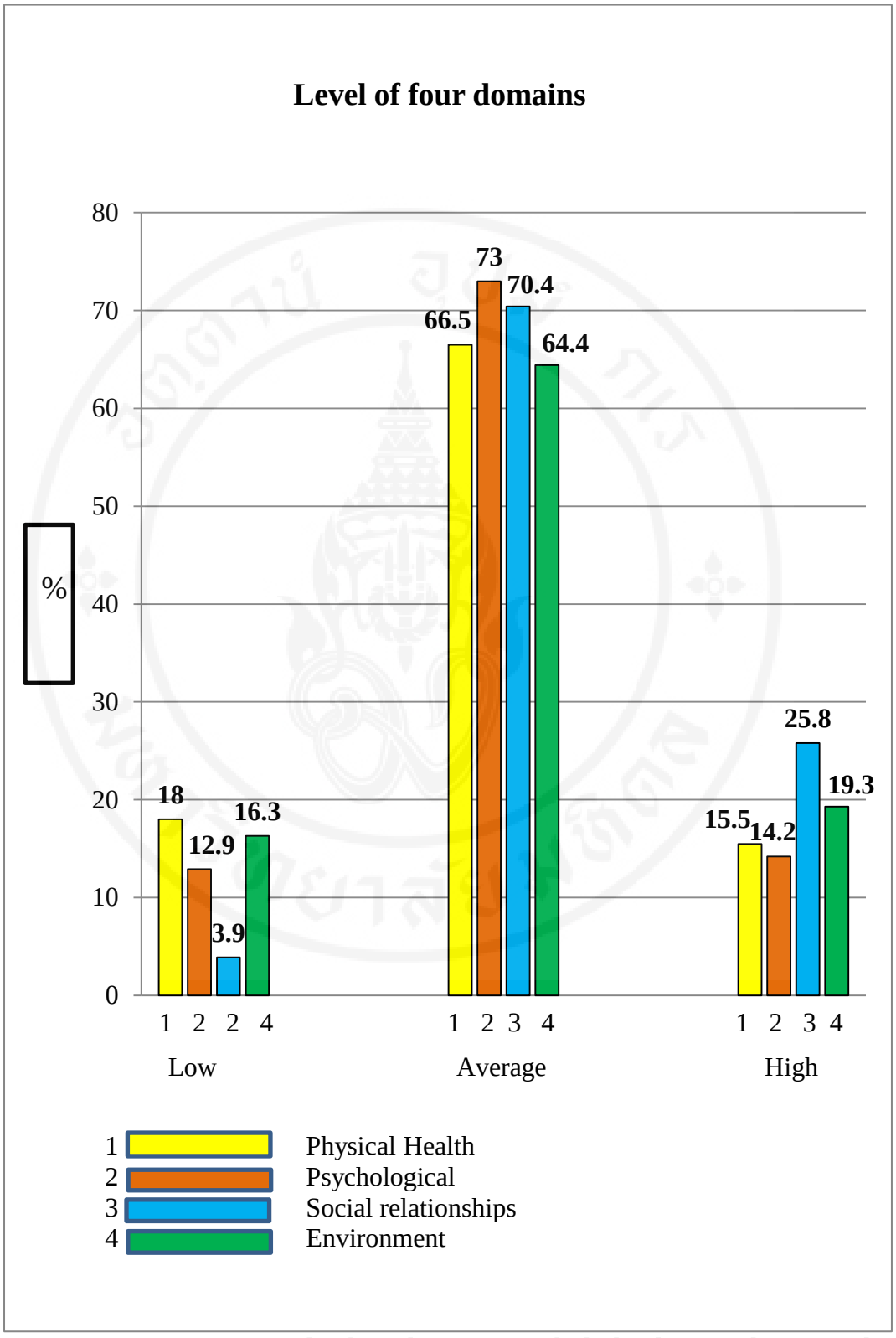

Figure 4.1 Level of physical health, psychological, social relationships and environment domains of QoL of older people (n=233)

Description of Quality of Life (QoL)

As shown in Table 4.7, the overall mean score of quality of life is 214.70, the median was 213.00 and standard deviation was 42.04.

Table 4.7 Number and percentage distribution of overall QoL (n=233)

Factors	Number (n)	Percent (%)
Quality of Life (WHO-BREF)		
➢ Low QoL	32	13.7
➢ Average QoL	168	72.1
➢ High QoL	33	14.2
Mean = 214.70, Median = 213.00, Standard deviation (S.D) = 42.04		
Total	233	100.0

The data in Figure 4.2 indicate that the majority of the older people (72.1%) had a moderate level of quality of life. Only (14.2%) showed a high level of quality of life, and (13.7%) had a low level of quality of life.

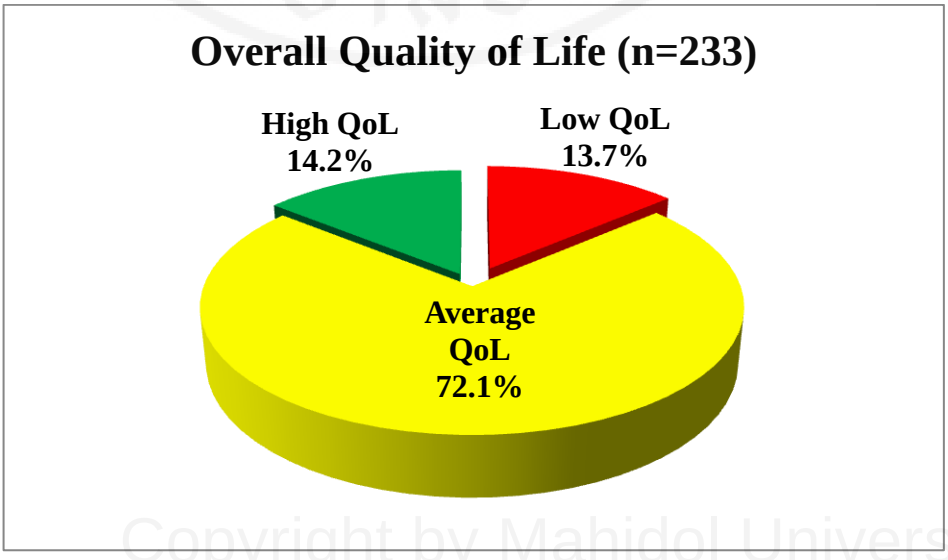

Figure 4.2 Percentage distribution of overall Quality of Life of older people (n=233)

4.1.2 Relationship between the demographic and socio-economic characteristics of older people and quality of life

This section examines the relationship between the demographic, socio-economic characteristics of older people and quality of life of older people.

Relationship between demographic and socio-economic characteristics of older people and physical health

Physical health of older people is classified into three levels: high, average and low level. From Table 4.8 it was found that most of the older people have average satisfaction of their physical health (77.3%), followed by low (12.4%) and high (10.3%) levels.

Working status and drinking are significantly associated with physical health of older people. Regarding working status, older people who are still working were more likely to be satisfied with their physical health than those who were not working. According to health risk behavior, older people who drink alcohol have lower physical health than their counterparts.

Table 4.8 Relationship between demographic and socio-economic characteristics of older people and physical health (n=233)

General Characteristics	Satisfaction with Physical Health			Total	χ^2
	Low	Average	High		
	%	%	%		
Age					2.004
➢ 60-69 years	15.1	70.6	14.3	119	
➢ 70-79 years	20.5	63.0	16.4	73	
➢ 80 years or above	22.0	61.0	17.1	41	
Sex					0.372
➢ Male	19.6	66.3	14.1	92	
➢ Female	17.0	66.7	16.3	141	
Marital Status					1.790
➢ Currently married	15.8	68.3	15.8	120	
➢ Widowed/ Divorced	20.4	63.3	16.3	98	
➢ Never Married	20.0	73.3	6.7	15	
Education					4.298
➢ No formal education	12.4	73.0	14.6	89	
➢ Primary school	19.2	65.4	15.4	78	
➢ Secondary or above	24.2	59.1	16.7	66	
Working					12.111 *
➢ Working	12.3	72.2	15.4	162	
➢ Not working	31.0	53.5	15.5	71	
Living arrangement					0.081
➢ Live alone	20.0	66.7	13.3	15	
➢ Live with family/ relatives	17.9	66.5	15.6	218	
Individual income					0.620
➢ No income	18.4	67.2	14.4	125	
➢ ≤ 30,000 Kyats	19.0	64.6	16.5	79	
➢ > 30,000 Kyats	13.8	69.0	17.2	29	
Smoking					0.286
➢ Smoking	17.4	65.2	17.4	69	
➢ Not smoking	18.3	67.1	14.6	164	
Drinking					5.891 *
➢ Drinking	45.5	45.5	9.1	11	
➢ Not drinking	16.7	67.6	15.8	222	

Relationship between demographic and socio-economic characteristics of older people and psychological satisfaction

Psychological status of older people is classified into three levels: high, average and low. From Table 4.9, it was found that most of the older people had average level of psychological satisfaction (73.0%), followed by high level (14.2%) and low level (12.9%).

Working status, individual income and health risk behavior (smoking habit) of older people are significantly associated with the level of psychological status of older people. According to individual income, older people with more individual income were more likely to be satisfied with their psychological status than those with less or no individual income. Regarding working status, older people who were working had higher psychological satisfaction than those not working. People who had a smoking habit had higher psychological satisfaction than non-smoker.

Table 4.9 Relationship between demographic and socio-economic characteristics of older people and psychological satisfaction of older people (n=233)

General Characteristics	Satisfaction with Psychological Status			Total	χ^2
	Low	Average	High		
	%	%	%		
Age					6.206
➢ 60-69 years	8.4	75.6	16.0	119	
➢ 70-79 years	16.4	74.0	9.6	73	
➢ 80 years or above	19.5	63.4	17.1	41	
Sex					2.386
➢ Male	8.7	76.1	15.2	92	
➢ Female	15.6	70.9	13.5	141	
Marital Status					8.066
➢ Currently married	10.8	74.2	15.0	120	
➢ Widowed/ Divorced	17.3	67.3	15.3	98	
➢ Never marriage	0.0	100	0.0	15	
Education					3.544
➢ No formal education	16.9	69.7	13.5	89	
➢ Primary school	7.7	75.6	16.7	78	
➢ Secondary or above	13.6	74.2	12.1	66	
Working					3.696 *
➢ Working	10.5	73.5	16.0	162	
➢ Not working	18.3	71.8	9.9	71	
Living arrangement					0.748
➢ Live alone	13.3	80.0	6.7	15	
➢ Live with family/ relatives	12.8	72.5	14.7	218	
Individual income					6.275 *
➢ No income	16.8	72.8	10.4	125	
➢ ≤ 30,000 kyats	7.6	74.7	17.7	79	
➢ > 30,000 kyats	10.3	69.0	20.7	29	
Smoking					1.970 *
➢ Smoking	15.9	66.7	17.4	69	
➢ Not smoking	11.6	75.6	12.8	164	
Drinking					4.278
➢ Drinking	0.0	100	0.0	11	
➢ Not drinking	13.5	71.6	14.9	222	

Relationship between demographic and socio-economic characteristics of older people and social relationships

Social relationship of older people is classified into three levels: high, average and low. From Table 4.10, it was found that most of the older people have average social relationships (70.4%), followed by high (25.8%) and low (3.9%).

According to health risk behavior, smoking is significantly associated with the level of social relationships. Older people who were smoking had higher social relationships than non-smoking older people.

Table 4.10 Relationship between demographic and socio-economic characteristics of older people and social relationships of older people (n=233)

General Characteristics	Satisfaction with Social Relationships			Total	χ^2
	Low	Average	High		
	%	%	%		
Age					4.579
➢ 60-69 years	1.7	70.6	27.7	119	
➢ 70-79 years	6.8	72.6	20.5	73	
➢ 80 years or above	4.9	65.9	29.3	41	
Sex					0.726
➢ Male	4.3	72.8	22.8	92	
➢ Female	3.5	68.8	27.7	141	
Marital Status					10.808
➢ Currently married	5.8	70.8	23.3	120	
➢ Widowed/ Divorced	2.0	65.3	32.7	98	
➢ Never married	0.0	100	0.0	15	
Education					18.921
➢ No formal education	1.1	77.5	21.3	89	
➢ Primary school	2.6	57.7	39.7	78	
➢ Secondary or above	9.1	75.8	15.2	66	
Working					0.379
➢ Working	3.7	71.6	24.7	162	
➢ Not working	4.2	67.6	28.2	71	
Living arrangement					1.497
➢ Live alone	6.7	80.0	13.3	15	
➢ Live with family/ relatives	3.7	69.7	26.6	218	
Individual income					2.242
➢ No income	4.0	73.6	22.4	125	
➢ ≤ 30,000 kyats	3.8	64.6	31.6	79	
➢ > 30,000 kyats	3.4	72.4	24.1	29	
Smoking					5.679 *
➢ Smoking	2.9	60.9	36.2	69	
➢ Not smoking	4.3	74.4	21.3	164	
Drinking					1.734
➢ Drinking	9.1	54.5	36.4	11	
➢ Not drinking	3.6	71.2	25.2	222	

Relationship between demographic and socio-economic characteristics of older people and environment satisfaction

Environment of older people is classified into three levels: high, average and low. From Table 4.11, it was found that most of the older people have average social relationships (64.3%), followed by high level (25.8%) and low level (3.9%).

Individual income and education status are significantly related to environment satisfaction. According to individual income, older people with some income were more likely to be satisfied with their environment than those with no individual income. Surprisingly, for education status, older people who completed only primary school were more likely to have higher satisfaction with their environment than those with secondary or above.

Table 4.11 Relationship between demographic and socio-economic characteristics of older people and environment satisfaction (n=233)

General Characteristics	Satisfaction with Environment			Total	χ^2
	Low	Average	High		
	%	%	%		
Age					3.529
➢ 60-69 years	15.1	68.9	16.0	119	
➢ 70-79 years	15.1	60.3	24.7	73	
➢ 80 years or above	22.0	58.5	19.5	41	
Sex					1.920
➢ Male	13.0	69.6	17.4	92	
➢ Female	18.4	61.0	20.6	141	
Marital Status					18.325
➢ Currently married	12.5	70.8	16.7	120	
➢ Widowed/ divorced	23.5	51.0	25.5	98	
➢ Never married	0.0	100.0	0.0	15	
Education					10.593 *
➢ No formal education	21.3	65.2	13.5	89	
➢ Primary school	17.9	55.1	26.9	78	
➢ Secondary or above	7.6	74.2	18.2	66	
Working					3.133
➢ Working	13.6	67.3	19.1	162	
➢ Not working	22.5	57.7	19.7	71	
Living arrangement					2.022
➢ Live alone	13.3	80.0	6.7	15	
➢ Live with family/ relatives	16.5	63.3	20.2	218	
Individual income					10.145*
➢ No income	23.2	60.8	16.0	125	
➢ ≤ 30,000 kyats	7.6	68.4	24.1	79	
➢ > 30,000 kyats	10.3	69.0	20.7	29	
Smoking					0.958
➢ Smoking	15.9	60.9	23.2	69	
➢ No smoking	16.5	65.9	17.7	164	
Drinking					1.539
➢ Drinking	9.1	81.8	9.1	11	
➢ Not drinking	16.7	63.5	19.8	222	

Relationship between demographic and socio-economic characteristics of older people and overall quality of life

The majority of the older people (72.1%) have average level of quality of life followed by high level (14.2%) and low level of quality of life (13.7%).

Table 4.12 shows the relationship between the demographic status, socio-economic characteristics of older people and overall quality of life of older people. Individual incomes of older people are statistically significantly associated with quality of life of older people. Older people having more individual income are more likely to have higher quality of life than those with no individual income. Surprisingly lower income older people had higher life satisfaction than those with higher income.

Table 4.12 Relationship between demographic and socio-economic characteristics of older people and overall quality of life (n=233)

General Characteristics	Overall Quality of Life			Total	χ^2
	Low	Average	High		
	%	%	%		
Age					8.694
➢ 60-69 years	8.4	79.0	12.6	119	
➢ 70-79 years	16.4	68.5	15.1	73	
➢ 80 years or above	24.4	58.5	17.1	41	
Sex					2.872
➢ Male	10.9	78.3	10.9	92	
➢ Female	15.6	68.1	16.3	141	
Marital Status					7.697
➢ Currently married	10.8	75.8	13.3	120	
➢ Widowed/ divorced	18.4	64.3	17.3	98	
➢ Never marriage	6.7	93.3	0.0	15	
Education					2.761
➢ No formal education	13.5	71.9	14.6	89	
➢ Primary school	11.5	70.5	17.9	78	
➢ Secondary or above	16.7	74.2	9.1	66	
Working					4.822
➢ Working	10.5	75.3	14.2	162	
➢ Not working	21.1	64.8	14.1	71	
Living arrangement					0.777
➢ Live alone	13.3	80.0	6.7	15	
➢ Live with family/ relatives	13.8	71.6	14.7	218	
Individual income					5.712 *
➢ No income	17.6	72.0	10.4	125	
➢ ≤ 30,000 kyats	8.9	72.2	19.0	79	
➢ > 30,000 kyats	10.3	72.4	17.2	29	
Smoking					4.651
➢ Smoking	13.0	65.2	21.7	69	
➢ Not smoking	14.0	75.0	11.0	164	
Drinking					0.377
➢ Drinking	18.2	72.7	9.1	11	
➢ Not drinking	13.5	72.1	14.4	222	

4.2 Discussion

This study focused on quality of life and factors affecting quality of life of older people aged 60 years or above in Taungu Township, Bago Region, Myanmar. In this study, more than half of older people were between 60-69 years old (early elderly). Maximum age was 102 years and mean age was 70.8. There were more females than males (60.5% and 39.5% respectively) which represent male: female ratio of 1: 1.5. The large number of female in this sample may be due to the fact that older males are more likely to be working outside the home than females. Also the older females were interested in the survey and had more time to participate. The interview was collected with only one respondent per one household.

About half of older people were currently married and majority of the widows were female. This may be due to longer female life expectancy than males: 68.1 years for females and 63.2 years for males. Concerning education status, it was found that 38.2% of older people had no formal schooling, 33.5% had primary school, while 28.3% had attained secondary school or above. Level of education was found to have a gender bias as males received more formal education than females. It should be recalled that the older people in this study were born before 1948 when the country had not yet achieved independence. At that time, it was difficult to attend school. Another study in Aung Lan Township, Magway Region, Myanmar had similar findings (Thurein, 2010).

Regarding marital status, almost all of the older people were ever-married, about half (51.5%) were currently married, while 42.1% were widowed or divorced. The rest (6.4%) were never-married. As age increases, the proportion of widows increased but the proportion of married people decreased. Similar results were found in Kyauktan Township, Yangon Region, Myanmar (Lwin, 1997). This may be due to longer female life expectancy than males, and the tendency of males to remarry if their spouse dies. For working status, two-thirds of the older people (69.5%) were found to be still working. One third (30.5%) were not working. This result is consistent with the situation of older people in Myanmar in that 70% of older people are economically active and had energy for their daily activities according to the Ministry of Social Welfare, Relief and Resettlement 2012. Average individual income was 14,426.5 Kyats (16$) per month. Their monthly income was not enough to meet their needs and

they were depending on their adult children and relatives. The low level of individual income may be due to lower education and higher dependency status of older people.

Most of older people were living with their children or relatives and only 6.4% were living alone. The majority of older people were living with two or more household members. The higher percentage living with children or relatives may be due to the context of the study area, including villages. Migration of adult children was lower compared to large cities. In terms of health risk behavior, one third of the older people were smoking. This may be due to the lower percentage of males in this study. Almost all of the older people did not drink alcohol (95.3%) and only 4.7% drank. This may be due to religious factors in that Myanmar is a Buddhist country and people devoutly practice the five percepts.

In the physical health domain, the average physical health score was 53.45, with standard deviation of 13.67. Those with an average level of physical health were 66.5% followed by low level of physical health (18.0%) and high level of physical health (15.5%). Female older people had higher physical health than males. Females did housework every day and had enough energy to perform daily chores. Widows and divorced older people had higher physical health than their counterparts because they were conducting daily chores by themselves. The older people who were working, had higher education and lived with family showed higher physical health than older people who were living alone, less educated or not working (Wivatvanit, 2002). The older people received income from their work and support from family, so they had a higher level of physical health than their counterparts. This resembles the findings of the study among elderly Chinese (Ma & McGhee, 2013). The level of physical health was higher among older people who were not drinking alcohol than those who drank. The older people who were not drinking alcohol were free from disease, did not need medical treatment, and had enough energy to carry out daily chores. This study was consistent with the study in Singapore (Heok, 2004).

The average psychological status score was 51.78, with standard deviation 13.13. Those with an average level of psychological were 73.0% followed by high level (14.2%) and low level (12.9%). Those older people who were working and had high individual income had high level of psychological status than those not working and low or no income. The older people, who working and had high individual income

were healthier and free from diseases. Thus, they felt their life to be a meaningful; they were satisfied with their life and had peace of mind with a positive outlook. Smoking older people had higher psychological satisfaction status than non-smoker. This may be due to perceptions on smoking. While smoking, they may feel that their life is meaningful and they that smoking helps them relax and focus their mind (Derbyshire, 2008). Older people who were not drinking alcohol had higher psychological satisfaction than drinkers (Lee, Ko, & Lee, 2006). They were free from disease, had positive feelings and good concentration.

For the social relationships domain, the average score was 55.70, with standard deviation 11.60. Those with an average level of social relationships were 70.4% followed by high level (25.8%) and low level (3.9%). The level of social relationships in working older people and those with primary school education was higher than older people who were not working and had no formal education. This may be because older people who work were more active in going places and participating in social activities, meeting with their friends and colleagues and receiving support from them. Smoking and drinking older people had higher quality of life than non-smoking and drinker. According to personal relationships, if they were not smoker or drinker, they could not socialize or celebrate with their friends as much and could not receive as much support from their friends. It should be noted that, in Myanmar, those who drink and smoke mostly drink traditional liqueurs and smoke cheroots (Moe, Tha, Naing, & Htike, 2012).

In the environment domain, the average environment score was 47.61, with standard deviation 13.9. An average level of environment was found for 64.4% followed by high level (19.3%) and low level (16.3%). Level of environment was higher in older people who lived with their family and had individual income than for older people who lived alone and /or had no income. Non-drinking and smoking older people had higher satisfaction with their environment than their counterparts. This may be due to easier access to transportation, information and opportunity for leisure activities. They had enough money to meet their needs.

For overall quality of life, the total mean sore was 214.0, with standard deviation 42.04. In this study, it was found that those with an average level of quality of life were 72.1% of the sample followed by high level (14.2%) and low level

(13.7%). Most of the older people had an average QoL because Myanmar is a developing country and about 70% of people live in rural areas (Health in Myanmar 2013). Overall socio-economic status is not high. The majority of older people live in low income households and their monthly income is not more than 30,000 kyats per month (60% of older people). According to Myanmar culture people are taught to be satisfied with what they have even if they are poor. Half of the older people felt their income was adequate to meet their needs in daily life. And this finding is similar to the survey on quality of life of older people in Einme Township, Myanmar which found that 80% of older people had a moderate level of quality of life (Naing, Nanthamongkolchai, & Munsawaengsub, 2010).

This study found that quality of life of older people was not significantly associated with their age. Most of older people had average quality of life. This may be due to the perception on quality of life and age structure. A majority of the sample (51.1%) was in the young old aged group (60-69) and 79% had average quality of life. This may be due to the working activities of older people in this age group. The young old aged are still working in their occupations of choice. A majority of Myanmar older people had been economically active during their life and about 60% worked in agriculture as farmers. The survey on the situation of older people in Myanmar found that those under 70 years still worked during the previous year. According to their life experiences, they made decisions and solved the problems on their own. They received stable income through support from children and their pension. This resembles the findings of the study of Navamin Savirasarid (Savirasarid, 2008) who found that the age group of the older people was not related with quality of life of older people in Bangkok, Thailand.

The results of this study found that sex was not significantly related with quality of life. Female older people had higher quality of life than male. In Myanmar culture and society, males are trained to be leaders, are put in the position to make decisions, and placed as the heads of families (Naing et al., 2010). Thus, males face many stressful situations. They are not as close to their children and have less contact with family members than females. “Females had a higher dependency level and more limitations on daily activities than males. Females were conducting the variety of housework and daily chores and this affects males and females differently in terms of

quality of life of the older people" (Department of Population, 2012). This result is consistent with the study that women were more like to be satisfied with their life than men in Einme Township, Myanmar (Naing et al., 2010).

This study found that marital status of the older people was not significantly related with quality of life. Widows and divorces had higher quality of life than their counterparts. This may be due to having a spouse was felt to be less important in old age. The respondents had enough energy and can do their work without assistance. They also received support from their adult children for their daily needs. If they suffer illness, their children will take care of their health. The older people received some help from community and local organizations like community-based home care for older people by unpaid volunteers and older people self-help groups. This result is similar with the study in Einme Township, Myanmar, the researcher found that quality of life of the elderly is not significantly related with marital status (Naing et al., 2010).

This study found that educational attainment was not significantly related with quality of life of older people. But those with higher education had higher quality of life. Higher educated persons can think independently and make the decisions and take action to solve the problems in their daily lives. Their education helped to make some decisions. They also participated in local organizations and social activities, and they received knowledge about health, education, and social norms. Older people can learn about what is important in their surroundings and can develop positive links to the environment for social support, giving and receiving help or accepting what cannot be changed. The research found a conviction among learners that education improves their quality of life. People with less education have more practical thinking and are more willing to listen to other's advice. This result is similar with a study which found a higher level of education was associated with a higher level of quality of life (Ramachandran & Radhika, 2012).

This study found that working status was not significantly related with quality of life of the older people. Older people who were working have higher quality of life than non-working group. This may be due to aspects of working status and amount of regular income of older people. In this study, more than half of the older people were still working. Myanmar is a developing country and most of the people

work as farmers and are physically active. Even though they make insufficient income, the study found that 72.1% of the respondents have an average quality of life. Perhaps they feel they can help their children on the farm, and take care of their children and grandchildren as part of a peaceful and simple life. Family support is clearly reciprocal between generations in Myanmar. Older people received support from the family and also contributed substantially to their household. Adult children also benefit from contributions to their children's care, housework and maintenance of the house by the older people who live with them. This result is similar with older people situation in Myanmar (Ministry_of_Social_Welfare_Relief_and_Resettlement, 2012). Therefore most of the older people had average quality of life.

The study found that living arrangement was not significantly related with quality of life of the older people. But living with spouse, family or relatives conferred higher quality of life than those with live alone. This may be due to the fact that living with spouse or family means there is someone who can take care and support physical, psychological and social needs. For older people who live alone, they felt that they suffered physical and mental illness and were being neglected. Older people who participate in social and religious activities and meet with their peers felt more worthy and that they had a meaningful life. This result is consistent with the study in Britain that found living with family had high quality of life (Gabriel & Bowling, 2004). In Myanmar culture, one of the children is expected to remain with their parents in the household (Han, 2012). Therefore, older people who live with family have higher level of quality of life than those living alone.

The study found that quality of life of older people was significantly associated with the individual income at the 0.05 level. This means that older people having more individual income experienced higher quality of life than those with no income. In this study, more than half of the older people had no monthly income. Only 33% had monthly income but the amount was less than 30,000 kyats ($33). The older people received some support from their adult children and relatives. Even those with no monthly income, 72.1% of the older people felt they had an average quality of life. This may be due to the fact that many were still working and/or received support from their adult children and their relatives. Even though, as older people, their income is not sufficient income they are proud that they have been economically

active during their lives and could raise their families. This result is consistent with the study in Einme Township, Myanmar, the researcher found that quality of life of the elderly is significantly related with individual income (Naing et al., 2010).

This study found that smoking and alcohol drinking were not significantly related with quality of life of older people. Those not drinking had higher quality of life than those who drink. Drinking can affect self-reliance and esteem. Most of the older people were non-drinkers. This may be due to the fact that Myanmar Buddhists are devout and practice the five percepts. Smoking older people had higher quality of life than non-smoker but this was not significantly related. Smokers may feel more satisfied with their life, have better concentration, and their personal relationships were good. But it also means that they have not had enough health education on smoking. Smoking is linked to non-communicable disease like hypertension and diabetes mellitus (Moe et al., 2012). In this study, one third (34.8%) of the older people had disease like hypertension, diabetic mellitus, asthma. It also affects the quality of life of older people because they may feel that they will become a burden to their children and relatives if they become ill. This result was consistent with that of Navamin Savirasarid (Savirasarid, 2008) who found that the older people without personal ailments had better quality of life than those with personal ailments in the study of quality of life of older people in Bangkok, Thailand. This result was also consistent with that of Ganesh Kumar (Kumar, Majumdar, & G, 2014) who found that the non-communicable diseases affect the quality of life of older people in the study of quality of life among elderly in Urban Puducherry, India.

CHAPTER V
CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This study aimed to investigate the quality of life of older people as analyzed by age, sex, marital status, education, working status, living arrangement, individual income and health risk behavior (smoking and alcohol drinking).

The respondents of the study were older people who were 60 years or above and living in Taungu Township, Bago Region, Myanmar. The data used in this analysis were the secondary data from the cross-sectional health and health seeking behavior survey among older people in Taungu Township, Bago Region in Myanmar, 2011.

There were 233 respondents in the analysis. Descriptive statistics were employed using mean, percentage and standard deviation. Bi-variate analysis (Chi-square tests) was used to analyze the relationship of demographic, socio-economic characteristics of the older people and level of quality of life including all four domains and overall quality of life.

Half of the respondents were 60-69 years (51.1%), with mean age of 70.8 years. Most respondents were female (60.5%) and half of the respondents were current married. One-third each had no formal education, primary school, or secondary/ higher respectively. Half of the respondents did not have individual incomes (53.6%) and average income was 14,426.5 kyats per month. One third of the respondents (29.6%) smoked. Almost all of the older people did not drink alcohol (95.3%).

Regarding physical health, most of the respondents (66.5%) are perceive that they have average physical health followed by low physical health (18.4%) and 15.5% perceived their health as high. Working status and alcohol drinking are statistically related to physical health of older people at the 0.05 level. Age, sex, marital status, education status, individual income, living arrangement and smoking of older people are not statistically related with physical health.

Among 233 respondents, most (73.0%) perceived that they had average psychological satisfaction followed by high (14.2%) and low level of psychological satisfaction (12.9%) respectively. Age, sex, marital status, education status, arrangement and alcohol drinking of older people are not significantly related with psychological satisfaction. Individual income, working status and smoking of older people are statistically related to psychological satisfaction of older people at the 0.05 level.

According to social relationships of older people, about three-fourths of the older people (70.4%) are received average level on social relationships. Only 3.9% have low social relationship and 25.8% received high level of social relationships. There is no significantly relationship between age, sex, marital status, living arrangement, individual income, education status, working status and alcohol drinking habit of older people and social relationships. Only smoking habit is statistically related to social relationships of older people at 0.05 level.

Among 233 older people, more than half of older people (64.4%) perceive an average level of environmental satisfaction followed by 19.3% and 16.3% received high and low level in environment satisfaction. Age, sex, marital status, education status, working status, living arrangement and health risk behavior of older people are not statistically significantly related to environmental satisfaction. Only individual income is statistically related to environmental satisfaction of older people at the 0.05 level.

According to overall quality of life of older people, most of the older people (72.1%) perceived that they have an average level of quality of life followed by high (14.2%) and low level of quality of life (13.7%) respectively.

Age, sex, marital status, education, working, living arrangement and health risk behavior of older people are not statistically significantly related to quality of life. Only individual income of the older people is statistically related to quality of life of older people at the 0.05 level.

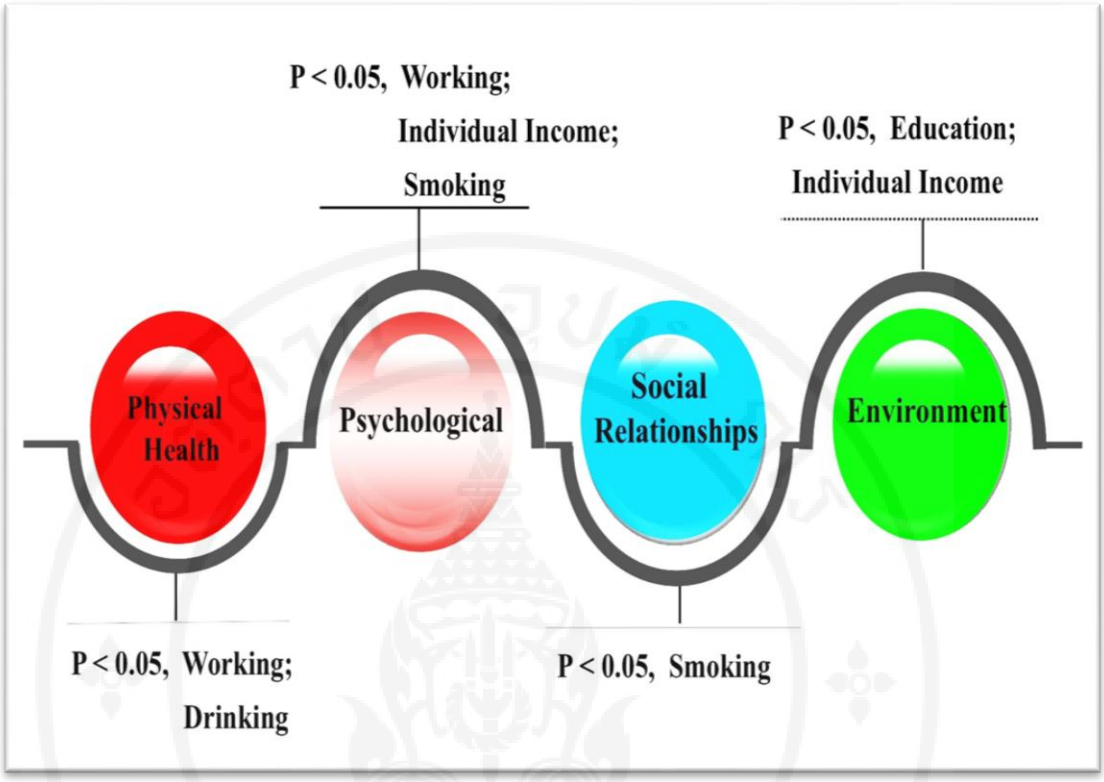

Figure 5.1 Relationship between demographic and socio-economic characteristics of older people and four domains

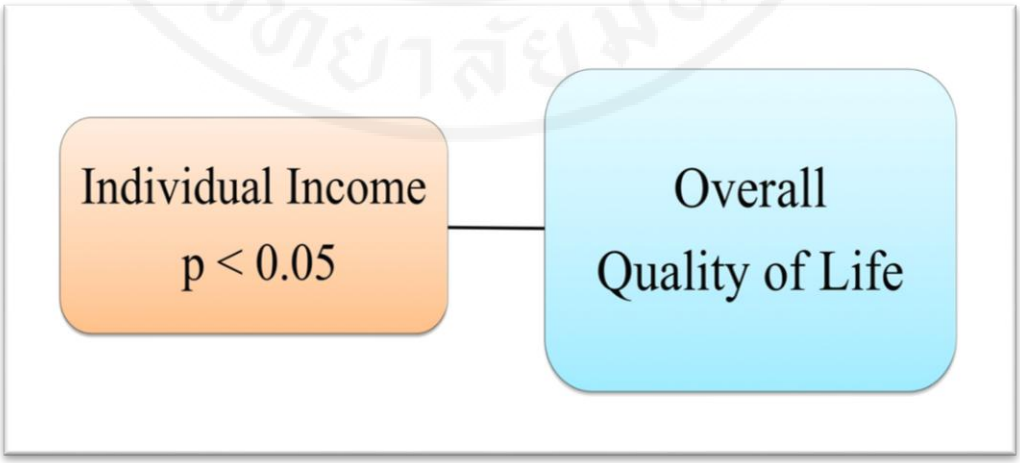

Figure 5.2 Relationship between socio-economic characteristics of older people and overall quality of life

5.2 Recommendations

5.2.1 Recommendations for Policy makers

According to the findings, individual income is more likely to promote better quality of life. In order to generate income for the older people, the government should provide some appropriate work to generate income for the older people, to boost confidence in themselves and promote high quality of life. Government should expand older people self-help groups to improve livelihoods by creating job opportunities and income generation in every state and region.

The older people who work in their original occupations are more likely to have better physical health than people who do not work. Government should provide some appropriate work for the older people. Non-drinker are more likely to have physical health than drinker. So government should be more enforcement of alcohol control (alcohol policy) to reduce alcohol-related harm by harmful reduction policy.

According to the findings, less educated older people have lower environmental satisfaction than more educated people. It is recommended that the Government should provide and extend the coverage of compulsory education to receive good quality of life when entering old age.

According to the health risk behavior, older people who smoke have higher perceived psychological and social relationship than non-smoker. This reflects the situation that the older people have not had enough health education. With the increasing number of older people, the local authorities and government should promote health status and health education of the older people. It will improve quality of life of older people by preventing onset of illness.

5.2.2 Recommendations for future research

It is suggested there should be an adaptation of the WHOQOL-BREF to create Myanmar version. The standard questionnaire needs to be validated according to the context of Myanmar culture and norms of satisfaction regarding the meaning of "quality of life". For example, questions on satisfaction with sex life may not be appropriate in the Myanmar context and culture. Countries have different cultures and different perceptions of the meaning of "quality of life".

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APPENDIX

WHOOQOL-BREF

Overall quality of life

		Very poor	Poor	Neither poor nor good	good	Very good
	How would you rate your quality of life?	1	2	3	4	5

Overall quality of health

		Very Dissatisfied	Dis-satisfied	Neither Satisfied nor Dissatisfied	Satisfied	Very Satisfied
	How satisfied are you with your health?	1	2	3	4	5

1. Physical Health

No		Not at all	A little	A moderate amount	Very much	An extreme amount
3	How much do you feel that pain prevents you from doing what you need to do?	1	2	3	4	5
4	How much do you need medical treatment to function in your daily life?	1	2	3	4	5
		Not at all	A little	Moderately	Mostly	Completely
10	Do you have enough energy for everyday life?	1	2	3	4	5
		Very poor	Poor	Neither poor nor good	good	Very good
15	How well are you able to get around?	1	2	3	4	5
		Very Dis-satisfied	Dis-satisfied	Neither Satisfied nor Dissatisfied	Satisfied	Very Satisfied
16	How satisfied are you with your sleep?	1	2	3	4	5
17	How satisfied are you with your ability to perform daily living activities?	1	2	3	4	5
18	How satisfied are you with your capacity for work?	1	2	3	4	5

2. Psychological

No		Not at all	A little	A moderate amount	Very much	An extreme amount
5	How much do you enjoy life?	1	2	3	4	5
		Not at all	A little	A moderate amount	Very much	Extremely
6	To what extent do you feel life to be meaningful?	1	2	3	4	5
7	How well are you able to concentrate?	1	2	3	4	5
		Not at all	A little	Moderately	Mostly	Completely
11	Are you able to accept your bodily appearance?	1	2	3	4	5
		Very Dissatisfied	Dissatisfied	Neither Satisfied nor Dissatisfied	Satisfied	Very Satisfied
19	How satisfied are you with yourself?	1	2	3	4	5
		Never	Seldom	Quite often	Very often	Always
26	How often do you have negative feelings, such as blue mood, despair, anxiety, depression?	1	2	3	4	5

3. Social Relationships

No.		Very Dissatisfied	Dissatisfied	Neither Satisfied nor Dissatisfied	Satisfied	Very Satisfied
20	How satisfied are you with your personal relationships?	1	2	3	4	5
21	How satisfied are you with your sex life?	1	2	3	4	5
22	How satisfied are you with the support you get from your friends?	1	2	3	4	5

4. Environment

No.		Not at all	A little	A moderate amount	Very much	Extremely
8	How safe do you feel in your daily life?	1	2	3	4	5
9	How healthy is your physical environment?	1	2	3	4	5
		Not at all	A little	Moderately	Mostly	Completely
12	To what extent do you have enough money to meet your needs?	1	2	3	4	5
13	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
14	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5
		Very Dissatisfied	Dissatisfied	Neither Satisfied nor Dissatisfied	Satisfied	Very Satisfied
23	How satisfied are you with the conditions of your living place?	1	2	3	4	5
24	How satisfied are you with your access to health services?	1	2	3	4	5
25	How satisfied are you with your transport?	1	2	3	4	5

Method for converting raw scores to transformed scores

DOMAIN 1		
Raw Score	Trasnformed scores	
	4-20	0-100
7	4	0
8	5	6
9	5	6
10	6	13
11	6	13
12	7	19
13	7	19
14	8	25
15	9	31
16	9	31
17	10	38
18	10	38
19	11	44
20	11	44
21	12	50
22	13	56
23	13	56
24	14	63
25	14	63
26	15	69
27	15	69
28	16	75
29	17	81
30	17	81
31	18	88
32	18	88
33	19	94
34	19	94
35	20	100

DOMAIN 2		
Raw score	Trasnformed scores	
	4-20	0-100
6	4	0
7	5	6
8	5	6
9	6	13
10	7	19
11	7	19
12	8	25
13	9	31
14	9	31
15	10	38
16	11	44
17	11	44
18	12	50
19	13	56
20	13	56
21	14	63
22	15	69
23	15	69
24	16	75
25	17	81
26	17	81
27	18	88
28	19	94
29	19	94
30	20	100

DOMAIN 3		
Raw score	Transformed scores	
	4-20	0-100
3	4	0
4	5	6
5	7	19
6	8	25
7	9	31
8	11	44
9	12	50
10	13	56
11	15	69
12	16	75
13	17	81
14	19	94
15	20	100

DOMAIN 4		
Raw score	Transformed scores	
	4-20	0-100
8	4	0
9	5	6
10	5	6
11	6	13
12	6	13
13	7	19
14	7	19
15	8	25
16	8	25
17	9	31
18	9	31
19	10	38
20	10	38
21	11	44
22	11	44
23	12	50
24	12	50
25	13	56
26	13	56
27	14	63
28	14	63
29	15	69
30	15	69
31	16	75
32	16	75
33	17	81
34	17	81
35	18	88
36	18	88
37	19	94
38	19	94
39	20	100
40	20	100

Domain 1= Physical Health

Domain 2= Psychological

Domain 3= Social Relationships

Domain 4= Environment

(Source: WHOOQOL-BREF)

Health Seeking Behaviour of Older People

Code No. ---------- **Date.**----------

Name.---------- **Address.**----------

Age in years (Age completed at last birthday).----------

Gender. 1. Male 2.Female

Ethnicity.----------

Religion.----------

Marital Status. 1. Currently married 2. Widowed 3. Divorced 4. Separated
5.Never married 9. Others

If ever married, No. of marriage.----------

If ever married, No. of children. Male= Female=

Age and gender of the young children.----------years, Male----/ Female---

Age and gender of the oldest children.----------years, Male----/ Female---

Employment status: 1.Currently employed 2. Retired with income
3. Retired without income 4. Irregular jobs
5. Household works 6. Others

Occupation:----------

Education: 1. No schooling 2. Attended school 3.Primary passed
4. Secondary passed 5. High school passed 6.Higher education
9. Other

Average monthly household income = $\frac{\text{Total income of the whole household}}{\text{total number of people in the household}}$

Average monthly income of the respondent = ----------

Smoking: 1.Yes 2.No

If Yes, number of cigarettes/ cheroots per day:----------

The duration of smoking in years= ----------

If No, any use of smokeless tobacco: 1.Yes 2.No

The duration of using smokeless tobacco in years= ----------

Drinking: 1.Yes 2.No

If Yes, frequency of drinking:

1. At least once a week 2. At least once a month

3. (5-10) times a year 4. Less than 5 times per day

5. Only at special social occasion 9.Other

How is your health? 1. Very poor, 2.Poor,

3. Not poor but not good 4. Good 5.Very good

Are you ill at the present moment?; 1.Yes 2.No

If Yes, what is troubling you?;----------

Have you ever sought treatment/consultation from the hospital/ health clinic/ GP clinic during the past ONE YEAR? 1. Yes 2.No

If Yes, from where you have taken treatment? How frequent? (Can give more than ONE option)

1.Hospital	1-2 times	3-5 times	6-10 times	>10 times
2.Health Clinic	1-2 times	3-5 times	6-10 times	>10 times
3.GP Clinic	1-2 times	3-5 times	6-10 times	>10 times

Did you remember the Diagnosis of that illness?----------

Have you sought treatment for that illness?: 1.Yes 2.No

If Yes, from whom you have treatment? (Can give more than ONE option)

1.Self 2.Family 3.Friends 4.Traditional healers 5.GP

6.Kllnik Desa / Kllnik Kesihatan 7.RMECKlinik 8.Hospital

9.Others

Do you know the Diagnosis of current illness?----------

Thank you for answering questions.

BIOGRAPHY

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