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

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ABSTRACT:

Background: 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 well-being. This study aimed to investigate the QoL of older people and analyze factors associated with QoL of older people in Taungu Township, Bago Region, Myanmar.

Methods: The study is based on a cross-sectional study among 233 older people aged 60 years or above living in the Taungu 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) were employed.

Results: The study revealed that 72.1% of older people had an average QoL (Mean - SD) to (Mean + SD), 14.2% and 13.7% had high and low QoL. QoL is significantly and positively (directly) associated ($p<0.05$) 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.

Conclusion: 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".

Keywords: Older people, Quality of life, Myanmar

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INTRODUCTION

Quality of life (QoL) of older people is the outcome of the interactive combination of life-course factors and immediate situation ones [1]. Since 1970s, QoL studies have increased. These studies are important for policy makers and the residents of a society [2]. QoL of older people has become related with aging of the population by demographic change [3]. Rapid urbanization with the changing of life style, environment and family structure is affecting the older people, families and country.

Population aging occurs all over the world with increase life expectancy due to high quality health care services and techniques and decrease birth rate as a result of family planning. The rapidly demographic changes pose major challenges for the future, because the inevitable decline in family sizes and increase life expectancy [4].

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 [5]. 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 [6].

The total fertility rate decreased from 3.5 children per woman in 1991 to 2.0 children per woman in 2007 [5]. "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

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average increase" [7]. 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 [8].

While both number and proportion of older people in Myanmar is increasing and it is increasingly concerned on the QoL of older people, it is interesting to explore what factors that related to the older people's QoL. The previous research on quality of life found different directions of the relationships between QoL and demographic, socio-economic characteristics of the older people. Among older people of Northern India who had graduated, currently married, and living in extended families was significantly related to QoL [9]. Regarding gender differences among elderly in Japan, a study found that women are more like to be satisfied with their life than men [10]. Working status is positively associated with QoL of older people in Thailand [11]. In the study in Einme Township, Myanmar, the researcher found that QoL of the elderly is significantly related with individual income [12]. In a study in Korea, there were statistically significant differences in QoL of the elderly related to exercise participation, alcohol abstinence and blood pressure [13].

In Myanmar, there are a very limited number of studies regarding the QoL of older people. So, this study aims to contribute to better awareness and understanding QoL 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 QoL of this population and to be better prepared to anticipate and plan future program initiatives for an aging population.

MATERIALS AND METHODS

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". Sample size calculation was done by Epi Info StatCalc. The inclusive criteria were older people who are 60 years and above, both male and female older people who live in Taungu Township and only one elderly in a household was interviewed. The person who had physically and mentally illness and institutionalized person were excluded. The sample size was 233 respondents aged 60 years or above. This survey data were collected from March to April 2011. The Bago Region is the second with 6.3% of total older population [14].Taungu is a large city in Bago Region. Total population of Taungu Township was 66,097 in 2011 [15]. This Township is under served by the elderly program and has inadequate data for elderly health care. The survey sites were randomly selected from townships and face to face interviews with consenting elderly.

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 theother which asked about the individual's overall perception of his or her health. 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 [16].

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

QoL presented as low level, average level and high level, which was classified 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)

Descriptive statistics were used to describe socio-demographic factors, social and economic factors and health risk behavior of elderly people. Descriptive statistics and Chi-square test were used to test the association between dependent variables and independent variable (QoL and its component). SPSS (Statistical Package for the Social Sciences) version 19 is used for data analysis.

ETHICAL APPROVAL

Participation of the respondents in the primary data collection was voluntary. Questionnaires were used with attached clear instructions. Written informed consent after explaining the objectives and expectations of the study was employed. IPSR-Institutional Review Board (IPSR-IRB) approval was received on 31 July 2014 (COA.No.2014/ 1-1-26) for use of these data.

RESULTS

Description of demographic characteristics

Table 1 indicates that the mean age of older persons in this study 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%)

Table 1 Number and percentage distribution demographic and socio-economic characteristics of older people (n=233)

Characteristic	Category	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 Status	Working	162	69.5
	not working	71	30.5
Education Status	No Formal School	89	38.2
	Primary School	78	33.5
	Secondary and Above	66	28.3
Living arrangement	Live alone	15	6.4
	Live with family/ relatives	218	93.6
Individual Income	No income	125	53.6
(1$=900 Kyats)	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		
Smoking	Smoking	69	29.6
	Not Smoking	164	70.4
Drinking	Drinking	11	4.7
	Not Drinking	222	95.3
Total		233	100.0

Table 2 Number and percentage distribution of older people by level of satisfaction in the four domains of QoL (n=233)

Domain	Level of quality of life						Mean	SD
	Low		Average		High			
	No.	%	No.	%	No.	%		
Physical health	42	18.0	155	66.5	36	15.5	53.45	13.67
Psychological	30	12.9	170	73.0	33	14.2	51.78	13.13
Social Relationships	9	3.9	164	70.4	60	25.8	55.70	11.60
Environment	38	16.3	150	64.4	45	19.3	47.61	13.08

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 1: 1.5 of males to females. 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. 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.

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.

Description of physical health, psychological, social relationship and environment

Table 2 shows distribution of older people by level of QoL, and mean score and standard deviation (SD) of each domain of the QoL. Within each domain of the QoL, more than 60% of older people had average quality of life. While mean score for the

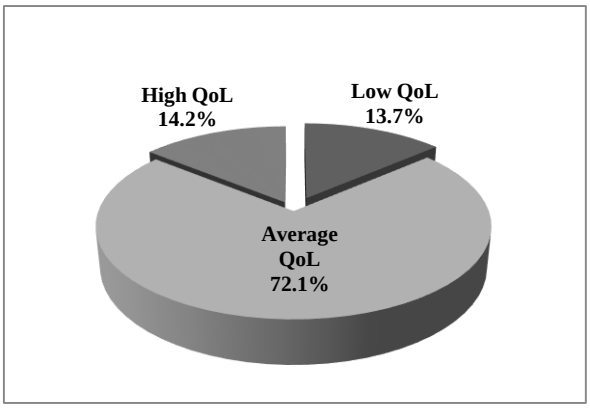

Figure 1 Overall quality of life (n=233)

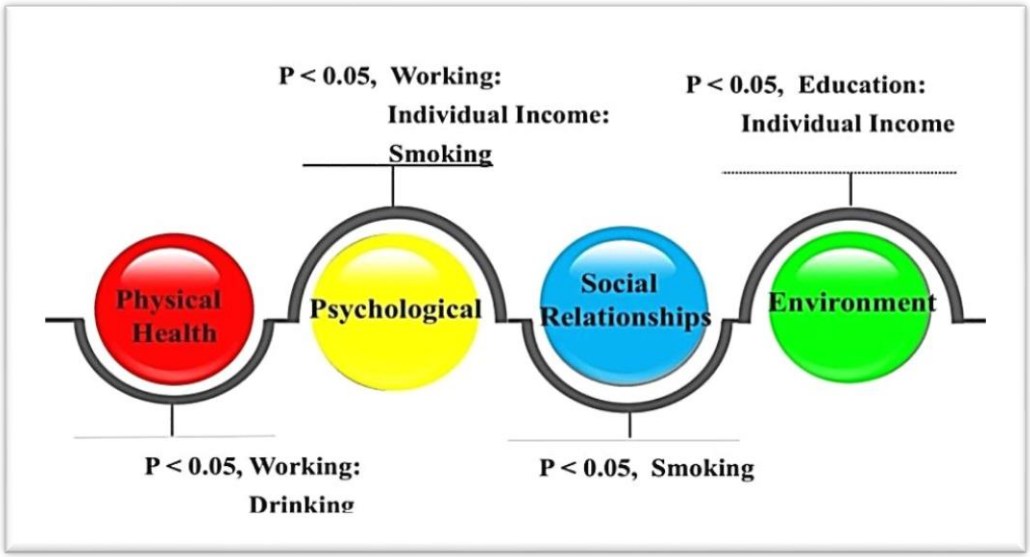

Figure 2 Relationships between demographic and socio-economic characteristics of older people and QoL's domains

environment domain was the lowest compared with the physical health, psychological and social relationship domains. The standard deviation ranged from 11.6 to 13.7 for the 4 domains of QoL.

Description of Quality of Life

In Figure 1, it was found that the majority of the older people (72.1%) had a moderate level of QoL. Only (14.2%) showed a high level of QoL, and (13.7%) had a low level of QoL.

Relationship between demographic and socio-economic characteristics of older people and physical health, psychological, social relationship and environment

The demographic, socio-economic factors which are age, sex, marital status, education level, working status, living arrangement, individual income, and smoking and drinking behavior were examined their relationships with the 4 domain of QoL.

Figure 2 demonstrates only factors that had significant relationships with each domain of the QoL. For the physical health domain, it is found that only working status and drinking factors that significantly associated ($P<0.05$) with physical health of older people. Older people who were currently working had better physical health status than those who were not working. According to health risk behavior, older people who drink alcohol had lower physical health than their counterparts.

Working status, individual income and health risk behavior (smoking habit) of older people were significantly associated ($P<0.05$) with the level of psychological status of older people. Older people who were working had better psychological status than those not working. This is similar to older people with higher individual income were more likely to be satisfied with their psychological status than those with less or no individual income. Older people who were currently smoking trend to have better psychological status than the non-smoker.

Furthermore, only health risk behavior variable-smoking was significantly ($P<0.05$) associated with

Table 3 Relationships between demographic, socio-economic characteristics of older persons and OVER all QoL(n=233)

General Characteristics	Overall Quality of Life			Total	χ^2	*P-value*
	Low	Average	High			
Age	**%**	**%**	**%**			
60-69 years	8.4	79.0	12.6	119		
70-79 years	16.4	68.5	15.1	73	8.694	0.119
80 years or above	24.4	58.5	17.1	41		
Sex						
Male	10.9	78.3	10.9	92	2.872	0.245
Female	15.6	68.1	16.3	141		
Marital status						
Currently married	10.8	75.8	13.3	120		
Widowed/ divorced	18.4	64.3	17.3	98	7.697	0.273
Never marriage	6.7	93.3	0.0	15		
Education						
No formal education	13.5	71.9	14.6	89		
Primary school	11.5	70.5	17.9	78	2.761	0.202
Secondary or above	16.7	74.2	9.1	66		
Working						
Working	10.5	75.3	14.2	162	4.822	0.095
Not working	21.1	64.8	14.1	71		
Living arrangement						
Live alone	13.3	80.0	6.7	15	0.777	0.386
Live with family/ relatives	13.8	71.6	14.7	218		
Individual income						
No income	17.6	72.0	10.4	125		
≤ 30,000 kyats	8.9	72.2	19.0	79	5.712	0.028
> 30,000 kyats	10.3	72.4	17.2	29		
Smoking						
Smoking	13.0	65.2	21.7	69	4.651	0.082
Not smoking	14.0	75.0	11.0	164		
Drinking						
Drinking	18.2	72.7	9.1	11	0.377	0.377
Not drinking	13.5	72.1	14.4	222		

the level of social relationships. Older people who were smoking had higher level of social relationships than non-smoking older people.

For the environmental domain, education level and individual income were significantly (P<0.05) related to environment satisfaction. 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 level of education or above. According to individual income, older people with more income were more likely to be satisfied with their environment than those with less individual income.

Relationship between demographic and socio-economic characteristics of older people and the overall QoL

Table 3 shows the relationship between the demographic status, socio-economic characteristics of older people and overall QoL of older people. Only individual incomes of older people was significantly associated (P<0.028) with QoL of older people. Older people with higher individual income were more likely to have higher QoL than those with less or no individual income. However, there were some lower income older people who had higher life satisfaction than those with higher income.

DISCUSSION

When the relationships between demographic, socio-economic factors and each domain of QoL were examined, it is found that for the *physical health* domain, the older people who were working showed better physical health than their counterparts. This may be because the older people who are working always an active and healthy aging [11]. 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 [17].

For *psychological status*, older people who were working or had high individual income had high level of psychological status than those not working or had low or no income. Older people who were smoking had higher psychological satisfaction status than those who were not currently smoking. This may be due to perceptions on smoking. While smoking, they may feel that their life is meaningful and that smoking helps them relax and focus their mind [18].

For the *social relationships* domain, smoking older people had higher quality of life than non-smoking. 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, older persons always smoke traditional cigarette-cheroots [19].

In the *environment* domain, the level of satisfaction with physical environment including safety in society and their life was higher in older people who had higher education level and income than their counterparts. The older persons with higher level of education often have higher level of income than those with less education level and lower income. This finding is supported by a comparative study in India and Japan that found positive relationship between level of education and satisfaction with environment [20].

For the overall QoL, it was found that the overall QoL of older people was significantly associated with the individual income at the 0.05 level. This means that older people having higher individual income experienced higher QoL than those with less or no income. In this study, only 33% of the older people 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 though, as older people, their income is not sufficient, they are proud that they have been economically active during their lives and could look after their families. This result is consistent with the study in Einme Township, Myanmar, the researcher found that QoL of the elderly was positively significantly related with individual income [12].

QoL of older people was not significantly associated with their age. A majority of the sample (51.1%) was in the young old aged group (60-69). 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. 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 NavaminSavirasarid [21] who found that the age group of the older people was not related with QoL of older people in Bangkok, Thailand.

This study found that sex was not significantly related with QoL. Female older people had higher QoL than male. In Myanmar culture and society, males are trained to be leaders, and placed as the heads of families. Males face many stressful situations. They are not as close to their children and have less contact with family members than females. This result is consistent with the study that women were more like to be satisfied with their life than men in Einme Township, Myanmar [12].

The marital status of the older people was not significantly related with QoL. Widows and divorces had higher QoL 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. This result is similar with the study in Einme Township, Myanmar, the researcher found that QoL of the elderly was not significantly related with marital status [12].

The older person's educational attainment was not significantly related with QoL of older people. But those with higher education had higher QoL. Higher educated persons can think independently. Their education helped to make some decisions. 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 QoL. This result is similar with a study which found a higher level of education was associated with a higher level of QoL [22].

The older person's working status was not significantly related with QoL. Older people who were working have higher QoL than non-working group. 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. Perhaps they feel they can help their children on the farm, and take care of grandchildren as part of a peaceful and simple life. Family support is clearly reciprocal between generations in Myanmar. This result is similar with older people situation in Myanmar [4].

Living arrangement was not significantly related with QoL of the older people. But living with spouse, family or relatives conferred higher QoL

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. Older people who participate in social and religious activities and meet with their peers felt more worthy and that they had a meaningful life. In Myanmar culture, one of the children is expected to remain with their parents in the household [20].

Furthermore, smoking and alcohol drinking were not significantly related with QoL of older people. 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 QoL 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 related to smoking knowledge. Smoking is linked to non-communicable disease like hypertension and diabetes mellitus [19]. This result is also consistent with that of Ganesh Kumar [23] who found that the non-communicable diseases affected the QoL of older people in the study of QoL among elderly in Urban Puducherry, India.

CONCLUSION AND RECOMMENDATIONS

According to overall QoL of older people, most of the older people (72.1%) perceived that they have an average level of QoL followed by high (14.2%) and low level of QoL (13.7%) respectively. Individual income of the older people was statistically related to QoL of older people. In addition, the older people who are currently working during the time of interview are more likely to have better physical health than people who do not work. In order to generate income for the older people, the government should introduce appropriate jobs for the older people. This also will boost self-confidence and promote high QoL of the older persons.

According to the findings, less educated older people had lower environmental satisfaction than more educated people. It is recommended that the government should provide and extend the coverage of at least the compulsory education level to expect for high QoL when entering old age.

According to the health risk behavior, older people who smoke had higher perceived psychological and social relationship than non-smoker. Non-drinkers were more likely to have better physical health than drinker. So the government should be more enforcement of alcohol control (alcohol policy) to reduce alcohol-related harm by harmful reduction policy. This also reflects the situations that the older people did not have enough health education. With the increasing number of older people, government should promote information and knowledge on health and its related factors to people. This is expected to improve QoL of older people by preventing onset of illness.

In terms of QoL measurement, this study suggests that there should be a Myanmar version of the WHOQOL-BREF. 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".

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