HEALTH - RELATED QUALITY OF LIFE AND SOME ASSOCIATED FACTORS AMONG THE ELDERLY LIVING IN THREE COMMUNES OF HA NAM PROVINCE, 2019

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Caring for an aging population is an emerging public health problem, and the quality of life (QoL) among the elderly is a significant concern. Our study aimed to describe the health - related quality of life (HRQoL) and factors associated with good HRQoL among the elderly in three communes of Hanam province in Vietnam. A cross - sectional design was used with a sample size of 479 participants aged 60 and above. HRQoL was measured using the SF - 36. Comparison of characteristics between those with high HRQoL and those with low HRQoL was done using Pearson chi - square tests. Results were reported using descriptive statistics and odds ratios with 95% CI (Confidence Interval). Many of the elderly had moderate HRQoL (41.3%), and elderly men were more likely to have higher QoL in terms of physical health and psychological health than elderly women. Our findings also indicated that some factors including older age, low educational level, those not living with their spouse, poor financial condition, having more than two health problems and possessing unhealthy drinking behaviors were significantly positive associated with HRQoL. Findings suggest interventions are needed to improve the quality of life among the elderly in rural areas of Vietnam.

I. INTRODUCTION

Improving the Health - related Quality of Life (HRQoL) among the elderly is a significant problem in caring for the aging population in may countries in the world. HRQoL is a multi - dimensional concept that includes domains related to physical, mental, emotional, and social functioning. It goes beyond direct measures of population health, life expectancy, and causes of death, and focuses on the impact health status has on quality of life.

Worldwide, there have been many studies conducted on HRQoL of the elderly showing low and average HRQoL overall mean scores, ranging from 40 to 50, in Taiwan[2], Italy[3] with

selection of elderly subjects from four programs to achieve heterogeneity in the "health status", "functional capacity", "gender", and "age" variables. The Clinical Impact Method was used, consisting of the spontaneous and elicited selection by the respondents of relevant items to the construct Quality of Life in Old Age from a previously elaborated item pool. The respondents rated each item's importance using a 5 - point Likert scale. The product of the proportion of elderly selecting the item as relevant (frequency, and Spain.[4] As Vietnam confronts the challenge stemming from a growing aging population, the importance of HRQoL for the elderly becomes apparent, and recently, more attention has been paid to the topic. According to results from Vietnam Population Change and Family Planning Survey in 2016, the aging index had increased from 18.2% in 1989 to 50.1% in 2016. These showed

that the population aging in Vietnam had been growing very fast over three decades[11].

Some of studies in Vietnam that can be mentioned are a study of Luong et al. in Hai Duong province[5], study of Thang N. et al. in Thai Binh province.[6] A study in 2017 reported that HRQoL score among the people in Thuy Van commune of Thua Thien - Hue province was moderate at 56.8. HRQoL positively associated with age, education status, economic status, marital status, health problems.[7]

In recent years, although the physical and spiritual life of the elderly has improved, there are still many challenges in terms of HRQoL among older Vietnamese people. One reason is a lack of evidence to design and implement relevant policies and intervention programs to improve HRQoL for seniors.[8] There were very few studies conducted on HRQoL among the elderly, especially among those who are living in rural areas in general and northen rural areas in particular.

Therefore, this study was conducted to describe the HRQoL among the elderly living in three communes in Hanam province in 2019 and identify the factors associated with high/low HRQoL?.

II. METHOD

1. Subjects

This study used a cross - sectional study design and the eligible participants were people aged 60 or older living in Dong Du commune of Binh Luc district, Thuy Loi commune of Kim Bang district or Chau Giang commune of Duy Tien district. The participants were recruited by using convenience sampling method. We chose all people who aged 60 years and above had been living in three communes for more than three years.

The sample size was calculated using the following formula with the assumption that 10% of the recruited would decline to partipate in the study.

In the formula above, p is the prevalence of the participants who had good HRQoL according to the study conducted on the elderly living in three communes of Thai Binh province using the Short Form (36) Health Survey (SF - 36) questionnaire in 2017, which is equal to 0.179 [6]; Z = 1.96; and = 0.15.

The minimum sample size was estimated to be 440 participants, and a total of 479 people were enrolled in the study.

2. Method

Instrument and data collection

The health of the participants was measured using SF - 36, which consisted of 36 items divided into eight sections. The eight sections measured vitality, physical functioning, bodily pain, general health perceptions, physical - role functioning, emotional - role functioning, social role functioning, and mental health. Each participant answered the questions in the eight sections and received eight scaled scores, which were the weighted sums of the questions in each section. Information collected about the socio - demographic characteristics of the participants included age, gender, religion, education, marital status, occupation, financial status and health problems. Current use of alcohol was assessed using the Alcohol Use Disorders Identification Test–C (AUDIT - C) which was a 3 - item alcohol screening tool that helped identify persons who were hazardous drinkers or had active alcohol use disorders (including alcohol abuse or dependence).

3. Statistical analysis

Data were cleaned and checked for extreme and illogical data before entered into a Epidata database version 3.1. Data were converted into .dta file and analyzed using Stata software

version 14.1. The whole eight sections of SF - 36 were scored on a scale of 0 to 100 with higher scores indicating better HRQoL. A section was treated as missing when more than 20% of its items were left blank. Descriptive statistics and odds ratios with 95% CI (Confidence Interval) were used to report results.

4. Ethical considerations

All participants were informed that their participation was completely voluntary and were assured that their responses would remain anonymously. All personal identifications of the participants were protected. The survey was performed with agreement and authorization from the Directors of Hanam Department of Health.

III. RESULTS

Among 479 participants, 55.3% were women and 44.7% were men; 45.7% were aged 60 - 69 years, 34.7% were aged 70 - 79 years, and 19.7% were over 80 years old. The majority (61.4%) were farmers/workers, married (75.4%) and had moderate income or less (91.0%). Most (88%) of the participants had high school education or lower, and the prevalence of illiteracy was 7.5%. All sociodemographic characteristics were presented in Table 1.

Table 1. General information about participants

Characteristics	Classifications	Total	
		n	%
Gender	Male	214	44.7
	Female	265	55.3
Age group	60 - 69	219	45.7
	70 - 79	166	34.7
	≥ 80	94	19.6
Religions	No religion	280	58.5
	Buddhism	140	29.2
	Christian	49	10.2
	Others	10	2.1
Marital status	Not living with spouses	118	24.6
	Living with spouses	361	75.4
Education level	No education	36	7.5
	Secondary school level or less	378	78.9
	Senior high school	44	9.2
	University and posture	21	4.4

Characteristics		Classifications	Total	
			n	%
Occupation		Unemployees	25	5.2
		Freelancers	57	11.9
		Government officers	82	17.1
		Workers/Farmers	294	61.4
		Others	21	4.4
Financial status		Poor	322	67.2
		Middle	149	31.1
		Rich	8	1.7
Health risk behaviors	Alcohol use	Using	104	22.1
		Not using	375	77.9
	Tobacco use	Using	103	21.5
		Not using	376	78.5

Table 2 presented the proportions of participants with very low to high physical health, mental health and HRQoL, stratified by gender.

Table 2. Health - related quality of life among participants

		Male		Female		Total	%
Physical health	Very low	24	11.2	45	17	69	14.3
	Low	50	23.4	92	34.7	142	29.7
	Moderate	82	38.3	83	31.3	165	34.5
	High	58	27.1	45	17.0	103	21.5
Mental Health	Very low	1	0.5	7	2.6	8	1.7
	Low	36	16.8	55	20.8	91	19.0
	Moderate	69	32.2	93	35.1	162	33.8
	High	108	50.5	110	41.5	218	45.5
HRQoL	Very low	5	2.3	15	5.7	20	4.2
	Low	50	23.4	79	29.8	129	26.9
	Moderate	85	39.7	113	42.6	198	41.3
	High	74	34.6	58	21.9	132	27.6

Regarding physical health, those with moderate and high level accounted for 34.5% and 21.5% of the participants, respectively, while 14.3% and 29.7% had very low and low level of physical health, respectively. The proportion of males who had moderate physical health score were the highest at 38.3%. Meanwhile, about a third (34.7%) of the women had low physical health score.

Regarding mental health, 45.5% had high score, 33.8% had moderate score, and only 1.67% had very low score. There was no significant difference between men and women in terms of mental health level (p>0.05).

Regarding HRQoL classification, 27.6% had high HRQoL, 41.3% had moderate HRQoL, and 26.9% had low HRQoL. Few (4.2%) had very low HRQoL. The proportion of males with high HRQoL was higher than females (34.6% vs 21.9%, respectively). By way of contrast, the proportion of females with low HRQoL was higher than males (29.8% vs 23.4%, respectively), similar to very low HRQoL (5.7% vs 2.3%, respectively)

Table 3. Factors associated with HRQoL among participants

Characteristics		Good HRQoL		Not good HRQoL		OR (95%CI)
		n	%	n	%	
Age group	60 – 69	171	78.1	48	21.9	
	70 – 79	110	66.3	56	33.7	1.8 (1.07 – 3.04)
	≥ 80	49	52.1	45	47.9	3.3 (1.92 – 5.59)
Gender	Male	159	74.3	55	25.7	
	Female	171	64.5	94	36.5	1.6 (1.07 – 2.37)
Educational level	Junior high school and above	52	80	13	20	
	Senior high school or less	278	67.2	136	32.8	1.95 (1.02 – 3.7)
Marital status	Living with spouses	261	72.3	100	27.7	
	Not living with spouses	69	58.5	49	41.5	1.85 (1.2 – 2.9)
Religion	No religion	194	69.3	86	30.7	
	Having religion	136	68.3	63	31.7	1.05 (0.7 – 1.5)
Occupation	Having occupation	315	69.4	139	30.6	
	No occupation	15	60	10	40	1.51 (0.66 – 3.45)
Financial status	Not poor	125	79.6	32	20.4	
	Poor	205	63.7	117	36.3	3.0 (1.37 – 5.56)
Health status	< 2 health problems	224	73.7	80	26.3	
	≥ 2 health problems	106	60.6	69	39.4	1.82 (1.22 – 2.72)
Unhealthy alcohol use	No	268	66.7	134	33.3	
	Yes	62	80.5	15	19.5	2.2 (1.13 – 3.77)

Table 3 presented factors associated to HRQoL. Higher age groups were significantly associated with increased odds of having worse HRQoL; participants in the age group 70 - 79 years old and age group 80 years old or older were 1.8 (95% CI: 1.07 – 3.04) and 3.3 (95% CI: 1.92 – 5.59) times more

likely to have poor HRQoL than those in the age group 60 - 69 years old. Women were 1.6 (95% CI: 1.07 – 2.37) times more likely to have poor HRQoL compared to men. Participants who had senior high school education or lower were 1.95 (95% CI: 1.02 - 3.7) times more likely to have poor HRQoL than those with junior high school education. Other factors significantly associated with HRQoL were having poor financial status, not living with spouse, having more than 2 health problems, and having unhealthy drinking behaviors.

IV. DISCUSSION

Our results revealed that most of the participants had moderate HRQoL. This was consistent with results from a 2018 study conducted in Tien Hai district of Thai Binh province and Thanh Binh district of Dong Thap province. In that study, the mean score of HRQoL was on moderate level.[6]

Our findings showed that having poor financial status, not living with spouse, having more than 2 health problems, and having unhealthy drinking behaviors were significantly associated with HRQoL. These results were consistent with previous research. Several investigations have shown that socio - demographic variables, health problems and health behaviors such as tobacco use can affect SF - 36 scores. Recent studies have indicated that HRQoL domain scores among the elderly are influenced by socio - demographic variables such as age[11,12], gender[13, 14], marital status[15, 16], education level[17] and economic condition.[18] A study conducted among 316 elderly people randomly selected in Tan An commune, Hai Duong province, Vietnam, showed that age groups, health status, family status and income sources[19] were related to quality of life.

By analyzing HRQoL stratified by gender, this study showed that women were worse than men in all SF - 36 scales. In a sample of 1688 individuals aged 18 years or older, Li et al. found lower scores among women in the following dimensions: Physical functioning, Bodily pain, General health and Vitality.[20] Another study by Wyss et al. in Tanzania reported similar results, with women obtained lower scores than men in all SF - 36 scales.[21] Our finding was also consistent with those from the study conducted by Nilsson on QoL of seniors in a rural area of Bangladesh[9] and another study implemented in FilaBavi, Vietnam.[10] This suggests it is important to understand factors affecting the QoL in each gender in order to better inform the interventions to reduce gender disparity in HRQoL at old age.

As shown in Table 3, higher age groups were significantly associated with lower HRQoL. These results were similar to the findings by Damayanthi et al. in 2018[14]; Campos et al. in 2014[22]; and Raggi et al. in 2016[4]. Unsurprisingly, elderly living in better economic condition had a higher HRQoL than others. This result supports previous studies in that elderly with higher income had a better QoL.[23] According to Fleck et al., levels of income and education, good living conditions and health, a good network of friends, the maintenance of good family relationships were factors that could contribute to higher quality of life, subjective welfare, a sense of self - efficacy, and thus for a better overall functioning of the elderly[24]. We were able to confirm that elderly individuals living with spouses reported a better HRQoL than those with no spouses. These findings were similar with results of Lima et al.[25]; Nam et al.[7]; Hoi et al.[8]

Our finding that those with two or more health problems had higher odds of having poor HRQoL was in line with another study in Zimbabwe which reported chronic health

conditions significantly affected HRQoL among grandparents [26]. Wang R. et al in a study conducted on the elderly living in Shanghai city suggested that the primary influencing risk factors of HRQL included chronic diseases, age, frequency of activities, and geographical region.[28] Campbell et al., which indicated that there was a significant relationship between tobacco use and HRQoL among clients in substance use disorders treatment.[27]

Our study paves the ways for further examination of HRQoL in the elderly and provides evidence for planning policies and programs that enhance quality of life and decrease burden of diseases for the elderly. However, due to the cross - sectional nature, which cannot ascertain the temporal relationship between HRQoL and the significant factors found in this study, it is difficult to make any causal inference that low HRQoL was directly caused by these factors. Studies with prospective longitudinal design should be conducted to address this issue.

V. CONCLUSION

Most of elderly people had moderate HRQoL, in which male elderly was more likely to have higher level of QoL in physical health and psychological health compared to female elderly. Older age, low educational level, not living with spouses, poor economic condition, having more than two health problems and having unhealthy drinking behaviors were significantly associated with increased odds of lower level of HRQoL.

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