

A STUDY OF HEALTH - RELATED CHARACTERISTICS IN THE ELDERLY IN KON TUM CITY

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ABSTRACT

Background: Population aging in the context of low social and economic development is a huge challenge because the aging population requires more spending on health care, retirement, and pensions. According to a study in Hanoi, 65% of older people rated themselves unwell and 35% rated normal health. According to the 2009 Viet Nam Population and Housing Census data, Kon Tum belongs to the group of 8-10% of elderly population. Health is the most important criterion when analyzing the situation of the well-being of the elderly. Determining the health characteristics of the elderly is an essential work to help us develop programs, work plans to devise appropriate policies, invest in medical equipment and specialized human resources to improve health. Improving the quality of medical examination and treatment to ensure the health of the elderly is increasingly effective, contributing to improving the quality of life of the elderly in a new age.

Objectives: Determining the general health characteristics and describe some factors related to the health of the elderly in Kon Tum city.

Methods: A cross-sectional analysis of 138 elderly person live in Kon Tum city. Inclusion criteria were elderly aged between 60 and 80 years old, absence of confusion (i.e., no cognitive or behavioural problems) and communication problems, and informed consent to participate in the study.

Results: The prevalence of hypertension in the elderly persons were 46.04%, heart rate of 60-100 beats/minute were 93.52%, thin weight 10.08%, overweight and obesity 48.2%, using alcohol 21.58%, using tobacco 14.39%, vision loss 92.09%, hearing abnormalities 9.35%, anemia 5.04%, hyperglycemia 48.2%, lipid disorders 87.05%. The prevalence of risks in the elderly: the risk of falling 9.35%, frailty 10.07%, Pre - Frailty syndrome 60.43%, malnutrition 65.47%, dependency 8.63%, depression 36.69%, cognitive impairment 49.64%.

Conclusion: We need to attend the disease in elderly person: anemia, hyperglycemia and lipid disorders, the risks (risk of falling, frailty, malnutrition, risk of dependency, risk of depression, cognitive impairment) among the elderly person in Kon Tum City because of high proportion.

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I. INTRODUCTION

The United Nations Population Projections (2008) show that the elderly population will increase from 697 million people in 2010 to 2 billion people in 2050 (increase from 10% to 23% of the world population). In Vietnam, approximately 65.4% of the elderly rated their health as weak and very weak; 29.8% rated it normal and 4.8% rated it good and very good. According to a 2000 study in Hanoi, 65% of elderly self-reported feeling unwell and 35% self-assessing normal health [1].

Kon Tum belongs to the group of 8-10% of elderly population. Understanding the health characteristics of the elderly is an essential study to help the health service to ensure better health for the elderly. We therefore conducted this study to investigate the health characteristics of the elderly and some related factors in Kon Tum City in 2019, aims to describe the general health characteristics of the elderly in Kon Tum city in 2019; and analyse of some factors related to elderly health in Kon Tum city in 2019.

II. MATERIALS AND METHODS

2.1. Study population

A cross-sectional descriptive study was conducted with elderly people aged 60 to 80 years in Kon Tum city, examination and implementation of tests at Kon Tum General Hospital from January 2019 to December 2019.

The sample size is calculated using the formula:

$$n = Z^2 \frac{p \cdot (1-p)}{1 - \frac{\alpha}{2}} d^2$$

$\alpha = 0,05$, $Z_{1-\alpha/2} = 1,96$, $p = 0,1$ [2], $d = 0,05$.
Sample size: $n = 139$.

According to statistics of the Kon Tum City Elderly Association aged between 60 and 80, there are 815 people.

Choose stratified random samples, sample spacing: $k = 815/138 \approx 6$.

Make an elderly list according to the ratio of 6 to

1, respectively 6, 12, 18, Then, in coordination with the Kon Tum City Elderly Association, send an invitation for medical examination at the Department of Examination, Kon Tum General Hospital, in case the person on the order of personal reasons cannot come to visit, Invite people in the next ordinal number, for example, 7, 13, 19 ... to ensure the sample size. During the survey, 139 patients came for medical examination and check in Kon Tum city.

2.2. Variables

We selected the variables including: smoking; use alcohol; body mass index (bmi); hypertension; eye characteristics; hearing characteristics; anemia; hyperglycemia; blood lipid disorders; cognitive impairment; depression risk; dependency risk; risk of malnutrition; vulnerable syndrome (DBTT); fall risk.

2.3. Statistical Analysis

- Using SPSS 16.0 software to process data.
- Compare two average values of two using t-test in independent groups (Independent Samples t-test). Statistical significance is determined when $p < 0.05$.

2.4. Ethical considerations

This study was approved by the Health Service of Kon Tum. All human subjects in the study were asked for their consent before collecting data, and all had complete rights to withdraw from the study at any time without any threats or disadvantages.

III. RESULTS

A total 139 elderly people aged 60 to 80 years were reviewed. Male/female ratio was 1/0.6. The mean age was 72.32 ± 7.0 years (Table 1). Figure 1 shows the use of alcohol, BMI findings, heart rate and hypertension. 128 (92.09%) case had vision loss (Table 2). Table 3 presents the characteristics of hearing. Table 4 shows the characteristics of blood samples. The characteristics of risks is shown in Figure 2.

Table 1: Characteristics of age and gender

	Male	Female	Total
Gender n(%)	52 (37.41)	87 (62.59)	139 (100)
Age (X ± SD)	73.65 ± 6.7*	71.5 ± 7.0*	72.32 ± 7.0

* p >0.05

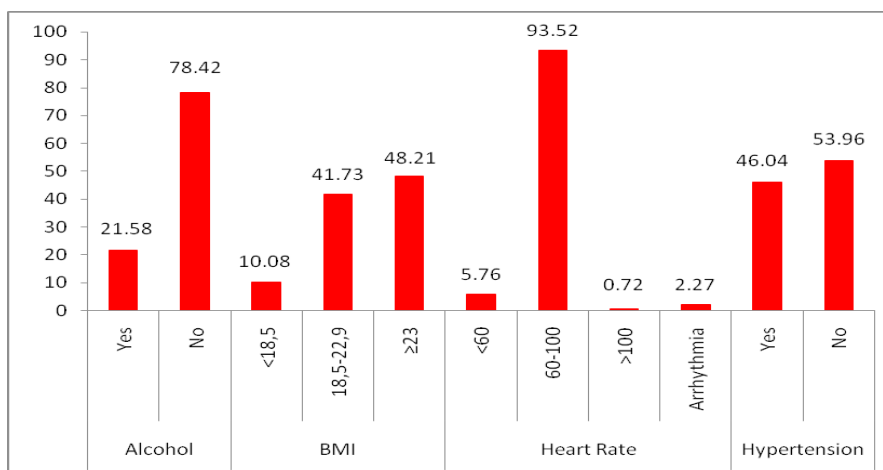


Figure 1: Characteristics of health

Table 2: Characteristics of vision

	n (%)	Mean age X ± SD
Normal	11 (7.91)	69.64 ± 5.37*
Vision loss	128 (92.09)	72.55 ± 7.09*

* p >0.05

Table 3: Characteristics of hearing

	n (%)	Mean age X ± SD
Normal	126 (90.65)	71.76 ± 6,98*
Hearing abnormalities	13 (9.35)	77.69 ± 4,6*

*p < 0.05

Table 4: Characteristics of blood samples

	Male	Female	Total
	n (%)	n (%)	n (%)
Hyperglycemia	2 (1.44)	5 (3.6)	7 (5.04)
Hyperglycemia	32 (23.02)	35 (25.18)	67 (48.2)
Lipid disorders	42 (30.22)	79 (56.83)	121 (87.05)

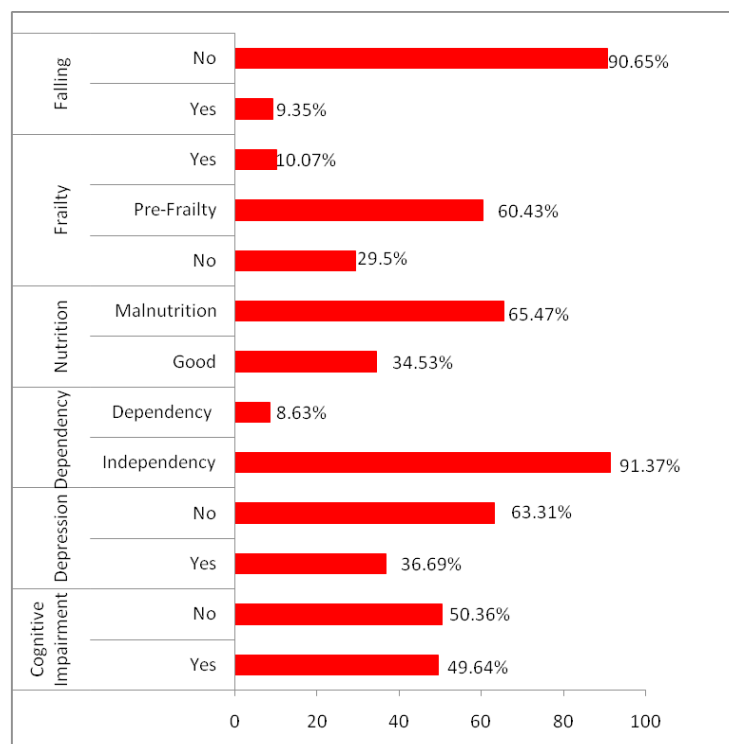


Figure 2: Characteristics of Risks

IV. DISCUSSION

4.1. General health characteristics of the elderly

We found in a random study of 139 elderly people in Kon Tum City that: The proportion of women is higher than men, the average age of the study group is 72 years, the average age of men was higher than women, however the difference of the age between male and female is not statistically significant ($*p > 0.05$). According to a United Nations report, the sex ratio leans towards women as age increases. As the proportion of women in the elderly population was increasing (also known as the “feminization” of the aging population), there is a need for aged care policies to accommodate this trend because of women. The elderly are often more vulnerable to economic and social shocks.

According to Duong Huy Luong research on the health of the elderly in Chi Linh district, Hai Duong province, the proportion of elderly people who use tobacco was 15.3%, alcohol use was 36.3% [2], his

results were higher than ours, which was subjectively assessed as the quality of life of a group of elderly people was also relatively good, however, it was the increased risk of non-communicable diseases.

As the proportion of overweight and obesity in Tran Van Long’ research in Vu Ban district, Nam Dinh province showed that the proportion of thin people was 31.6% [3], higher than our research, overweight people were 13,4%, lower than our research. This result was different from ours due to the geographical characteristics we surveyed in Kon Tum City and Tran Van Long surveyed in Vu Ban district, so the nutritional status is different.

The results of Le Van Hoi’s study in 369 elderly people in Ba Vi district, Hanoi had a hypertension rate of 40.1% [4], which was lower than our study, but also reflects the situation of hypertension in elderly people in the community were very high whether or not to treat antihypertensive drugs.

Our study found that the rate of arrhythmia was 2.27%, heart rate > 100 beats/minute 0.72%,

bradycardia <60 beats / minute 5.76% (total of abnormal heart rhythms is 8,75%). The Ngai-Sang Lock study examining cardiac arrhythmia found that the overall rate of arrhythmia was 7.7%, significantly lower than our study [5], it may be because we surveyed the community on random subjects, measuring screenings, so the rate of detecting abnormalities in heart rate was higher.

In Duong Huy Luong's study, the elderly's visual ability is normally 84.4%, and their poor vision is 15.6% [2]. There is a big difference in this ratio compared to our study; our study shows that the rate of elderly vision impairment is 92.09%.

The rate of elderly people with abnormal hearing is 9.35%, normal hearing is 90.65%, there is a difference in age between people with normal hearing and hearing loss (* p <0.05). In Duong Huy Luong's study of hearing loss of 12.8%, normal hearing at 87.2% [2], the rate of hearing abnormalities was higher than ours, but also around about 10%. Attention should be paid to hearing aid in improving the quality of life of the elderly, with hearing being one of the important factors.

The prevalence of anemia in the elderly is 5.04%, in theory, when bone marrow fat and fat marrow overshadow the hematopoietic marrow, anemia is common in old age. The rate of hyperglycemia was 48.2%, the rate of lipid disorders was 87.05%. Tran Van Long's study in Vu Ban district, Nam Dinh province has the rate of diabetes detected at 5.8% [3], lower than our study, because we have a blood glucose survey only once so have we Based on the conclusion that diabetes, lipid disorder rate is 53.3%, lower than our study. A study by Tran Kim Trang and colleagues in 371 elderly people at 115 People 's Hospital on Metabolic Syndrome found that 65.5% of patients with Metabolic Syndrome are elderly in which the rate of hyperglycemia 82.2%, the highest rate of lipid disorders is 78.2% [6]. This suggests that blood sugar and lipid disorders in the elderly play an important role in metabolic syndrome.

4.2. Factors related to elderly health

According to Miguel Terroso, in his multicenter study, the risk of falls in countries was about 2.2% [7]. The proportion in our study is relatively high (9.35%) compared to that of author Miguel Terroso. Therefore more attention should be paid to the risk of falls in the elderly to prevent complications from falls.

The research results show that the proportion of vulnerable syndrome is 60.43%, the proportion of vulnerable syndrome is 10.07%. In the Fried LP study, the prevalence of DBD syndrome in the community was 6.9% and increased with age, lower than our research, DBDS related to poverty, disability and coma [8].

The proportion of elderly who are undernourished is 34.53%, the risk of malnutrition is 65.47%, Son Nazan's research shows that the rate of malnutrition among the elderly is 38.2%, the rate of The high risk of malnutrition was 18.6% [9], lower than our study, possibly due to higher nutrition conditions of Son Nazzan's subjects due to better socioeconomic status.

The risk of partial dependence (needing assistance in daily activities) is 8.63%, elderly people can be independent in daily activities is 91.37%. In Duong Huy Luong's research on elderly health in Chi Linh district, Hai Duong province, the probability of not performing some daily activities is 10%, the ability to walk indoors without a cane is 90.5%, needing a support stick of 7.3%, unable to walk 2.3% [2], this result is similar to the risk of total dependency among the elderly surveyed in their study. I. The prevalence of disability among the elderly in Vietnam from 70 - 89 years old in order: no difficulty is 74.4%, there is difficulty 21.8%, very difficult 3.4%, unable to care for themselves 0.5% and the disability rate of the elderly increases with age, then the risk of dependency is also higher.

The proportion of people at risk of depression is 36.69%. According to the theory, the risk of old age psychosis accounts for 0.7% of the population

(0.6% for men and 0.8% for women), in the US 41.3% of elderly people have mental disorders I have to be treated at the hospital. In our study, the rate of depression in the elderly is relatively high, so it is necessary to have a strategy to prevent the risk of depression for the elderly, to create a meaningful, useful and environmental life. appropriate social or psychological school for the elderly.

The rate of cognitive decline in the research group is 49.64%. In the multi-center study by Miguel Terroso, the rate of cognitive impairment was about 10.3% [7], which is much lower than our study. Therefore, attention should be paid to the quality of life in the elderly to limit the risk of cognitive decline in the elderly.

V. CONCLUSION

The proportion of elderly people in Kon Tum City has a higher proportion of females than males, with an average age of 72 with no age difference. The proportion of elderly people with hypertension, arrhythmia, thin and overweight, alcohol use, smoking is still high. Increasing the percentage of elderly people with vision loss, relatively low hearing loss rate. Attention should be paid to anemia, hyperglycemia and lipid disorders in the elderly.

Attention should be paid to the risk of falls, vulnerability syndrome, the risk of malnutrition, the risk of dependence, the risk of depression, cognitive decline among the elderly in Kon Tum City because of the high proportion of with other places.

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