

ORIGINAL ARTICLE

FACTORS PREDICTIVE OF ALCOHOL CONSUMPTION AMONG ELDERLY PEOPLE IN A RURAL COMMUNITY: A CASE STUDY IN PHAYAO PROVINCE THAILAND

Donnapa Hongthong, Ratana Somrongthong*, Pimpimon Wongchaiya, Ramesh Kumar**

Boromarajonani College of Nursing, Phayao-Thailand, *College of Public Health Sciences, Chulalongkorn University-Thailand, **Health Services Academy Islamabad-Pakistan

Background: Alcohol consumption is recognized as a public health issue. Study objectives were to identify factors predictive of alcohol consumption among elderly people in Phayao province Thailand, where there was high prevalence of alcohol consumption. **Methods:** This was a cross-sectional study. Four hundred elderly people participated in a survey. Data was collected by face-to-face interviews. Chi-square and multivariate logistic regression were used to determine the factors predictive of alcohol consumption among the study subjects. **Results:** One thirds of elderly (31.7%) had consumed alcohol in their lifetime, and (15.7%) of them were current drinkers. Following univariate analysis, seven factors included gender, working, sickness, smoking, quality of life (QOL), daily activities and economic recession - were identified as being significantly associated with drinking ($p < 0.05$). Multivariate analysis revealed four factors to be predictive of alcohol among elderly people: gender (OR=6.02, 95% CI=3.58–10.13), smoking (OR=4.34, 95% CI=2.57–7.34), economic recession (OR=2.79, 95% CI=1.66-4.71), and QOL (OR=1.86, 95% CI=1.09–3.16). **Conclusion:** Gender (male) and smoking were strongly predictive factors of elderly alcohol consumption. Hence, an effort to reduce alcohol consumption should be placed on male elderly and those who smoke.

Keywords: Predictive factors, alcohol consumption, elderly people
J Ayub Med Coll Abbottabad 2016;28(2):237–40

INTRODUCTION

Recently population of older people has been growing worldwide due to their improved life expectancy and an advancement in medical care. The proportion of aged 60 years and above is expected to double from 2007 to 2050.¹ Thailand is one of the country having large number of older population living in rural areas. The national statistics show that the proportion of aged over 60 years in 2014 was reported as 14.9% of the total population.² Ageing people is considered as a vulnerable group to develop diseases, functional disability and other mental illness.

Majority of elderly faces a lot of challenges associated with health problems and a few of them also reported the problems related to alcohol consumption.³ Alcoholic beverages are widely consumed throughout the world. The World Health Organization estimates that there are about two billion people worldwide who consume alcoholic beverages.⁴ In Thailand, over one-fourth (28.6%) of the Thai population were identified as current drinkers.⁵ Phayao province, located in the northern Thailand, has been reported as having the highest user of alcohol consumption in Thailand among people aged over 15 years (54%).⁶

However, there is scarcity in literature to identify the risk factors for alcohol consumption

among elderly in a rural area, Phayao province and not even a single study has been conducted so far. Hence, this study was conducted to explore the patterns of alcohol drinking and to identify predictive factors of alcohol consumption among elderly people in rural area of Phayao province where high prevalence of alcohol consumption has been reported. During the research this area was identified as one of top ten provinces with highest index of Thai aging in 2014.⁷ This may serve as baseline information and help in planning the services for elderly population in rural Thailand. These findings were part of the survey on Quality of Life among Thai older people.⁸

MATERIAL AND METHODS

This cross-sectional study was conducted among older people more than 60 years ages who were living in Phayao province. Sample size of 400 older people was taken by using the Taro Yamane formula⁹ with 60, 261 elderly¹⁰ population. Muang district was selected for this study area since it has the highest proportion of older persons in the region, and within this district, the sub-district of Bantom was selected because it has the highest number of older people of all sub-districts in Muang district. Quota sampling was used to calculate the number of participants from nine

villages by using random sampling method to recruit participants in each village. Written consent was obtained from all participants. Ethical approval was taken from the Ethics Review Committee for Research Involving Human Research Subjects, Health Science Group, Chulalongkorn University, Thailand. The survey was conducted by using 15 minutes face-to-face interviews. The researcher scheduled one-day training on a structured interview questionnaire for five trained nursing students before data collection process. The questionnaire has closed ended questions with four parts; Part 1 was socio-demographic characteristics consisting of sex, age, marital status, education level, job type, and financial income, number of children, living situation and caretaker.

Part 2 was alcohol consumption part which included the questions relevant with individual and environmental factors of alcohol consumption, and drinking patterns.

Part 3 had World Health Organization Quality of Life questionnaire-version for older people (WHOQOL-OLD)¹¹ the 24 QoL items with rating scale, composed of 6 facets: sensory abilities, autonomy, past-present, and future activities, social participation, death and dying. Questionnaire was translated into local language Thai and validity was also done. Reliability was reported as 0.88. The overall score starts from 24-120 points, and it is interpreted into three categories; low QoL (24–55 scores), moderate QoL (56–88 scores) and high QoL (89–120 scores). Statistical analysis was done by using chi-square for testing differences of the proportions between people who ever consumed alcohol (n=127) and those who had never consumed alcohol (n=273). Multivariate logistic regression was used to determine the predictive factors of alcohol consumption among the participants. Statistical significance was set at a *p*-value of <0.05.

RESULTS

The general characteristics of the study participants are shown in table-1. Nearly two-thirds (62%) of the participants were female. A total of 66% presented illnesses; with 40% having hypertension and 20.5% reported current smoking. Over two-thirds (68.5%) had QoL at moderate level, followed by high level (29.5%) and low level (2%) as shown in table-2. One-thirds of elderly (31.7%) had consumed alcohol in their lifetime, and 15.7% of them were current drinkers. The average age of first time drinking was 21.5 years (SD± 6.9). Among those who drank, male had higher number of alcohol consumption than female

(22.5% vs.9.3%). Average alcohol consumption was 0.5–1 standard drink per episode. Most of the current drinkers (34.92%) reported to drink less than once a month (Table-3). Their most preferred beverage was beer.

Following univariate analysis, seven factors included gender, working, sickness, smoking, quality of life (QOL), daily activities and economic recession were identified as being significantly associated with drinking (*p*<0.05) as shown in table-4.

Multivariate analysis revealed four factors to be predictive of alcohol among elderly people: gender (OR=6.02, 95% CI=3.58–10.13), smoking (OR=4.34, 95% CI=2.57–7.34), economic recession (OR=2.79, 95% CI=1.66–4.71), and QOL (OR=1.86, 95% CI=1.09–3.16). (Table-5)

Table-1: Socio-demographic characteristics of elderly in Phayao province, Thailand (n=400).

Socio-demographic factors	n	%
Gender		
Male	152	38.0
Female	248	62.0
Age (min=60; max=97; mean=71.9; SD=8)		
60–79	323	80.8
≥80	77	19.2
Education		
Primary school	390	97.5
Higher than primary school	10	2.5
Working		
Not working	297	74.3
Working	103	25.7
Income, US\$ per month		
≤100	347	86.7
>100	53	13.3
Present illness		
No	136	34
Yes	264	66
-Hypertension	160	40
-Musculoskeletal diseases	72	18
-Diabetes	57	14.3
Alcohol consumption in their life time	273	68.3
Never consumed		
Has consumed	127	31.7
-Current drinkers	63	15.7
Participating in elderly club		
No	231	57.7
Yes	169	42.3
Activity Daily Living (ADL)		
Low level (0–11 scores)	16	4
High level (≥12 scores)	384	96

Table-2: Number and percentage of the Quality of Life among elderly in Phayao province (n=400)

Quality of Life	n	%
Low level (24–55 scores)	8	2.0
Fair level (56–88 scores)	274	68.5
High level (89–120 scores)	118	29.5

Table-3: The frequency of drinking reported among current drinkers (n=63)

Frequency	n	%
Less than once a month	22	34.92
1–3 times/month	9	14.29
1–5 days/week	14	22.22
5–6 days/week	18	28.57
Total	63	100.00

Table-4: A breakdown of proportions between elderly who have consumed alcohol (n=127) and those who have never drank (n=273)

Characteristic	Never drank	Ever drank	p-values
Gender, n (%)			
Male	62 (15.5%)	90 (22.5%)	<0.001*
Female	211 (52.75%)	37 (9.25%)	
Working			
Not work	220 (55.0%)	77 (19.25%)	<0.001*
Work	53 (13.25%)	50 (12.5%)	
Present Illness			
No	84 (21.0%)	52 (13.0%)	<0.046*
Yes	189 (47.25%)	75 (18.75%)	
QoL			
Low	133 (33.25%)	41 (10.25%)	0.002*
High	140 (35.0%)	86 (21.5%)	
Activity Daily Living			
Low	81 (20.25%)	26 (6.5%)	0.05*
High	192 (48.0%)	101 (25.25%)	
Economic recession			
Low	167 (41.75%)	46 (11.5%)	<0.001*
High	106 (26.5%)	81 (20.25%)	
Smoking			
No	195 (48.75%)	36 (9.0%)	< 0.001*
Yes	78 (19.5%)	91 (22.75%)	

*Significant at p-value<0.01

Table-5: Factors predictive of alcohol consumption among elderly people in a rural community (n=400) using multivariate logistic regression analysis

Factors	Group definition (compared, reference)	B	OR	95%CI
Gender	male, female	1.79	6.02*	3.58–10.13
Smoking	yes, no	1.47	4.34*	2.57–7.34
Economic recession	high, low	1.03	2.79*	1.66–4.71
QoL	high, low	0.62	1.86*	1.09–3.16

*Significant at p-value<0

DISCUSSION

Findings revealed that nearly one-thirds of elderly had consumed alcohol in their lifetime, and few of them were current drinkers. Among those who drank, male gender had higher number of alcohol consumer than female. As this is only a provincial survey, hence; this prevalence is lower than national statistics indicated by the Centre for Alcohol Studies in Thailand that revealed 18.6% of current drinkers among persons aged over 60 years in 2011, and male were more likely to drink than female.⁷ Moreover, among current drinkers, most of them were identified as low-risk drinkers since their reported average alcohol consumption was 0.5–1 standard drink per episode. Their most preferred beverage was beer which is the same as most drinkers in Thailand.¹² Male was the strongest influence on alcohol consumption among elderly which is in line with research that reported, men drink more alcohol and have higher alcohol-related problems than women.¹³ Smoking also influences alcohol consumption among elderly. Alcohol and smoking are often done together. It was reported that people who smoke are more likely to drink, as well as people who drink are more likely to smoke.¹⁴ In addition, people with

alcohol dependence are three times more likely than those in the general population to be smokers, and smokers are four times more likely to be dependent upon alcohol than non-smokers.¹⁵ Quality of life among elderly was found to be a predictive factor of alcohol consumption. According to Hongthong *et al*¹⁶, villagers who have better quality of life would have more chance to participate in community activities which is leading to social drinking (drinking three or less standard drinks or moderate drinking). From this study, nearly one-thirds of elderly (31.759%) had consumed alcohol in their lifetime, and 15.75% of them were current drinkers who reported average alcohol consumption as 0.5–1 standard drink per episode which is considered as moderate drinkers. Hence, this supported that quality of Life among elderly can predict moderated drinking among elderly.

The study has some limitations. The sample in this study was not a representation of the whole province; therefore, findings may not be generalized to other areas. Secondly, the interview process may affect the accurate reporting of alcohol consumption due to recall bias. Therefore, future studies should involve more people from different areas to get more consolidated evidence.

CONCLUSIONS

This study brought to light some of the risk factors associated with alcohol consumption among elderly in Phayao province. There are four factors to be predictive of alcohol consumption among elderly in the rural community: gender, smoking, economic recession and QOL. It can be seen that gender (male) and smoking were strongly predictive factors of elderly alcohol consumption. Hence, an effort to reduce alcohol consumption should be place on male elderly and those who smoke.

ACKNOWLEDGEMENTS

We would like to thanks the Higher Education Research Promotion and National Research University Project of Thailand, Office of the Higher Education Commission (WCU-56-AS-57) for providing partial financial support for the study, and thanks to the participants for taking part in the study.

Declaration of interest: The authors alone are responsible for the content and writing of this article.

AUTHOR'S CONTRIBUTION

RS conceived the study design. DH and PW did the data analyses and drafted the successive drafts of paper. RS, RK and DH conducted the critical review and added the intellectual content to the paper. All authors read and approved the final draft.

REFERENCES

1. United Nations Global Issues: Ageing 2002 [Internet]. [cited 2015 Feb 13]. Available from: <http://www.un.org/en/globalissues/ageing/>.
2. National statistical office of Thailand: Population aging in Thailand. 2014. [Internet]. [cited 2014 May 30]. Available from: http://www.oppo.opp.go.th/pages/statistic/stat_0101.html.
3. International Centre for Alcohol Policies (ICAP): Alcohol and the elderly. 2015. [Internet]. [cited 2015 May 30]. Available from: <http://icap.org/PolicyTools/ICAPBlueBook/BlueBookModules/23AlcoholandtheElderly/tabid/181/Default.aspx>
4. World Health Organization. Global status report on alcohol and health. Geneva: WHO; 2011.
5. Assanangkornchai S, Sam-Angsri N, Rerngpongpan S, Lertnakorn A. Patterns of alcohol consumption in the Thai population: results of the National Household Survey of 2007. *Alcohol* 2010;45(3):278–85.
6. Chaisong S, Pakdeesetakul K, Thummarungsri T. Provincial alcohol report 2011. Nontaburi: The Centre for Alcohol Studies; 2013.
7. Office of the National Economic and Social Development Board. The expectation of the number Thai population in 2010–2014. 2012.
8. Hongthong D, Somrongthong R, Ward P. Factors influencing the Quality of Life (QoL) among Thai older people in a rural area of Thailand. *Iran J Public Health* 2015;44(4):479–85.
9. Yamane Taro. *Statistic: An Introductory Analysis*. Harper International Edition, Tokyo, 1973.
10. Department of Provincial Administration, Thailand. Provincial population statistic. 2010.
11. World Health Organization. WHO-QoL Old manual. *Cph WHO Eur off* 2004;551–8.
12. Alcohol drinks: Beer in Thailand. 2013. [Internet]. [Cited 2015 Feb 13]. Available from: <http://www.euromonitor.com/beerin-thailand/report>
13. Nolen-Hoeksema S. Gender differences in risk factors and consequences for alcohol use and problems. *Clin Psychol Rev* 2004;24(8):981–1010.
14. Bobo JK, Husten C. Sociocultural influences on smoking and drinking. *Alcohol Res Health* 2000;24(4):225–32.
15. Grant BF, Hasin DS, Chou SP, Stinson FS, Dawson DA. Nicotine dependence and psychiatric disorders in the United States: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Arch Gen Psychiatry* 2004;61(11):1107–15.
16. Hongtong, D, Ananchaipattana, N, Wongchaiya, P. Drinking patterns and their predictive factors: a case study of a community in Phayao province, Thailand. *J Health Res.* 2015;29(4):243–9.

Address for Correspondence:

Donnapa Hongthong, Boromrajonani College of Nursing Phayao, Muang District, Phayao province-Thailand 56000

Email: Donnapah@hotmail.com