

A study on tobacco consumption habit among the elderly population

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Abstract

Introduction: Tobacco use is serious public health problems in many countries including India because of the associated health hazards. It is essential to bring down the health related risk behaviors among elderly population for promotion and prolongation of healthy life. **Aim:** To assess health related risk behaviors and tobacco consumption among the geriatric population and making comparison of rural and urban elderly people. **Material and method:** A pretested, semi-structured questionnaire pertaining to socio-demographic information and three common risk behaviour practices and tobacco consumption was used for data collection. **Results:** Overall, 9.6% rural and 6.8% urban elderly were current gutkha users. 19.6% rural and 12.8% urban elderly were current smokers while 20.4% rural and 14.0% urban elderly were current khaini tobacco users. Proportions of males were significantly higher among tobacco user elderly participants in both rural and urban areas. Proportions of rural elderly were significantly higher among tobacco chewers. **Conclusion:** Overall prevalence of health risk behaviors was high among the study population. No significant difference found between rural and urban elderly people in relation to habit of tobacco.

Keywords: Tobacco, Smoking, Risk Behaviors

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Introduction

Tobacco and alcohol use are serious public health problems in many countries including India because of the associated health hazards.

Smoking causes a vast spectrum of diseases, many of which could result in death. There are over 50 diseases that are caused, increased or exacerbated by smoking [1]. World Health Organization reports that the consumption of tobacco has been growing at the rate of 2% to 5% per annum and six million people are currently estimated to die annually from tobacco use. Tobacco use accounts for 7% of all female and 12% of all male deaths globally and it is projected to increase to 8 million deaths per year by 2030, or 10% of all deaths projected to occur that year [2]. There is a casual relationship between alcohol consumption and more than 60 types of diseases and injury. 20%–30% of esophageal cancer, liver cancer, and cirrhosis of the liver, homicide, epilepsy and motor vehicle accidents are caused by alcohol use. Worldwide, 1.8 million deaths and 5.83 million DALYs are attributed to the use of alcohol [3]. Ageing is a natural and inevitable process. For the past century and more mankind has been adding years to life.

Approximately 142 million people or 8% of the population of WHO's South-East Asia Region are above the age of 60 years. The number of aged people will double by 2025 and triple by 2050 compared to 2000. According to the 2011 census, India has 104 million elderly persons (defined as 60 years and above), constituting 8.6% of the total population. The expectancy of life at birth in India during 1996-2001 was 62.3 years for males and 63.39 years for females. The

projected data for the periods 2011-2016 are 67.04 and 68.8 years respectively for males and females [5]. It is essential to bring down the health related risk behaviors among elderly population for promotion and prolongation of healthy life. Most of the studies on health risk behaviors have been carried out among adolescents and adults. Studies focusing on the smoking, alcohol and tobacco consumption among geriatric populations are infrequent and limited. With this background, the present study was conducted to assess health related risk behaviors viz. smoking, tobacco and other addiction consumption among the geriatric population and making comparison of rural and urban elderly population of Nalanda District of Bihar.

Material and Method

This prospective, cross sectional study was conducted at Department of PSM, Nalanda Medical College and Hospital, Patna and Vardhman Institute of Medical Sciences, Pawapuri, Nalanda, Bihar. The study was conducted for a period of 12 months from June 2020 - May 2021. The study was approved by the institutional research and ethical committee. An informed and written consent was taken from all the participating subjects prior to the commencement of the study. The study population comprised of elderly people aged 60 years or more, residing in rural areas of Nalanda district of Bihar. Overall 250 elderly persons aged 60 years and above, attending outpatient departments of our satellite centers and who were willing to participate in the study, were selected from each field practice area for the present study. A pretested, semi-structured questionnaire was used for collection of socio-demographic data and information about three common risk behavior practices i.e. smoking, smokeless tobacco use and other addiction. Study was anonymous and full audio visual privacy was maintained during data collection. Current smokers were defined as all those who gave the history of smoking any tobacco product either daily or occasionally at the time of survey. Those who had given up smoking for more than one year were labeled as past-smokers. Never smokers were defined as persons who never smoked a tobacco product in their lifetime [6].

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Similarly, current khaini tobacco users were defined as those who were consuming chewable tobacco products: *khaini* (tobacco-lime mixtures), either daily or occasionally [7]. Current *gutkha* (tobacco with betel nut, lime, and flavorings) users were defined as who at the time of survey consume *gutkha* either daily or occasionally. Past users were defined as persons who had *gutkha* in past but had not done so for a period of one year preceding the survey [3].

Data was entered in MS excel 10 and analyzed using epi info 7 software. Chi square test was applied as statistical test and p value <0.05 was considered as statistical significant

Results

Among 250 elderly from urban area 133 (53.2%) were male and 117 (46.8%) were female. Out of 250 rural elderly people, 153 (60.8%) were male and 97 (39.2%) were female. Among rural participants, 24 (15.7%) males were current *gutkha* users either regular or occasional. 21 (13.7%) males reported *gutkha* use in past but currently they were not consuming since at least many years. Among urban geriatric participants, 17 (12.8%) males had current *gutkha* habit and 19 (14.3%) males had past *gutkha* addictions. None of the elderly female participants reported *gutkha* consumption either in past or in current in both rural and urban area. No significant difference found between rural and urban elderly people in relation to habit of addictions (Table 1).

Table 1: Distribution of study subjects according to habits of gutkha consumption

Gutkha	Rural						Urban					
	Male (n=153)		Female (n=97)		Total (n=250)		Male (n=133)		Female (n=117)		Total (n=250)	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Never	108	70.6	97	100.0	205	82.0	97	72.9	117	100.0	214	85.6
Current	24	15.7	0	0.0	24	9.6	17	12.8	0	0.0	17	6.8
Past	21	13.7	0	0.0	21	8.4	19	14.3	0	0.0	19	7.6

Among the rural participants, 43 (28.1%) males and 8 (8.2%) females were using khaini at the time of study either daily or occasionally. 24 (15.7%) males and 3 (3.1%) females were past users of khaini.

Among urban geriatric participants, 28 (21.1%) males and 7 (6.0%) females were current khaini chewers while 16 (12.0%) males and 2 (1.7%) females were past khaini tobacco user. Proportions of males

were significantly higher among khaini user elderly participants as compared to female elderly participants in both rural and urban areas (p<0.05).

Proportions of rural elderly were significantly higher among khaini as compared to urban elderly (p<0.05) (Table 2).

Table 2: Distribution of study subjects according to Khaini use.

Khaini consumption	Rural						Urban						P value
	Male (n=153)		Female (n=97)		Total (n=250)		Male (n=133)		Female (n=117)		Total (n=250)		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Never	86	56.2	86	88.7	172	68.8	89	66.9	108	92.3	197	78.8	0.03
Current	43	28.1	8	8.2	51	20.4	28	21.1	7	6.0	35	14.0	
Past	24	15.7	3	3.1	27	10.8	16	12.0	2	1.7	18	7.2	

Among rural elderly, 42 (27.5%) males and 7 (7.2%) females were current smokers while 16 (10.5%) males and 2 (2.1%) females were past smokers while among urban geriatric participants, 30 (22.6%) males and 2 (1.7%) females were current smokers while 19 (14.3%) males were past smokers. Proportions of male smokers were

significantly higher as compared to female smokers among geriatric study participants in both rural and urban areas (p<0.05).

No significant difference found between rural and urban elderly people in relation to habit of smoking (Table 3).

Table 3: Distribution of study subjects according to smoking habits.

Smoking habit	Rural						Urban						P value
	Male (n=153)		Female (n=97)		Total (n=250)		Male (n=133)		Female (n=117)		Total (n=250)		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Never	95	62.1	88	90.7	183	73.2	84	63.2	115	98.3	199	79.6	0.11
Current	42	27.5	7	7.2	49	19.6	30	22.6	2	1.7	32	12.8	
Past	16	10.5	2	2.1	18	7.2	19	14.3	0	0.0	19	7.6	

Discussion

The present study was conducted to assess health related risk behaviors among the geriatric population and making comparison of rural and urban elderly people. 250 elderly people were assessed from each area in present study to make comparison in health risk behavior practices among rural and urban elderly people. In present study, overall, 9.6% rural and 6.8% urban elderly were current *gutkha* users while 8.4% rural and 7.6% urban elderly were past *gutkha* users. All rural and urban elderly female participants reported that they didn't take *gutkha* ever. No significant difference found between rural and urban elderly people in relation to habit of *gutkha* use. A study by Srinivasan et al (2010) [8] in Bengaluru revealed that among males, 65.5% in rural areas as compared to 55.6% in urban areas gave history of alcohol intake. There was no intake of alcohol among females. 47.50% respondents were consuming alcohol in the study by Barman et al (2014) [9] in urban area of Kishanganj, Bihar.

In present study, overall, 20.4% rural and 14.0% urban elderly were currently chewing khaini while 10.8% rural and 7.2% urban elderly were past khaini tobacco users. Proportions of males were significantly higher among khaini tobacco chewers elderly participants as compared to female elderly participants in both rural and urban areas (p<0.05). Proportions of rural elderly were significantly higher among khaini tobacco chewers as compared to urban elderly. In contrast to our study, 30.0% urban elderly were chewing khaini tobacco in the study by Barman et al [9]. In study by Bhatt et al (2011) [10], 26.60% urban elderly were addicted to different forms of tobacco. Durgawale PM et al (2012) [11] reported that 75% of rural people were addicted to tobacco, of which majority being female population (43%) and minority being male (32%). Overall, 19.6% rural and 12.8% urban elderly were current smokers while 7.2% rural and 7.6% urban elderly were past smokers in present study. Proportions of male smokers were higher as compared to female smokers among geriatric study participants in both rural and

urban areas ($p < 0.05$). No significant difference found between rural and urban elderly people in relation to habit of smoking. In contrast to our study, 36.6% of the study population was smokers (38.5% in rural areas and 34.7% in urban areas) in a study by Srinivasan K et al (2010)[8].

Survey report of the research project, Building a Knowledge Base on Population Ageing in India (BKPAI)[12] revealed that prevalence of risky health behaviors is quite high among the elderly. Around 30 percent of the elderly were currently smoking, chewing tobacco or drinking alcohol and the incidence was particularly high among males in their reports.

Conclusion

Overall prevalence of health risk behaviors was high among the study population. No significant difference found between rural and urban elderly people in relation to habit of smoking and gutkha consumption.

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