RESEARCH ARTICLE

STUDY OF KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS TOBACCO USE IN GERIATRIC POPULATION

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ABSTRACT
Background: Addiction to tobacco in the form of tobacco smoking or chewing is very common in every age group in India; elderly people are no exception. They are more likely to suffer adverse effects of tobacco, but are unaware of its side effects and also unwilling to quit.
Aims & Objective: To find out knowledge, attitude and practices of tobacco use in geriatric population.
Materials and Methods: This was a Community based, Cross-sectional study including 250 study subjects above the age of 60 years in the urban field practice area of Shri Vasantrao Naik Government Medical College. Subjects were interviewed for knowledge, attitude and practices about tobacco use.
Results: 110 out of 113 males (97.34%) and 111 out of 137 females (81.02%) females knew that tobacco is injurious to health. Still 125 (50%) of the study subjects were using tobacco either by smoking or tobacco chewing. Overall 34 (13.6%, 95% CI= 9.3-17.9) and 91 (36.4%, 95%CI=30.5-42.3) out of 250 study subjects were smoker and tobacco chewers respectively. Though knowledge of harmful effects was significantly more in males (χ^2=16.09, P=0.0001), prevalence of use was also more in males. Knowledge of anti-tobacco was significantly more in males as compared to females (χ^2=16.34, P=0.0001).
Conclusion: Even then more than half of males and quarter of females were using tobacco.
Key Words: Tobacco Use; Geriatric Population; Tobacco Chewing; Tobacco Prohibition

Introduction

Tobacco use is a major preventable cause of premature death and disease, currently leading to over five million deaths each year worldwide which is expected to rise to over eight million deaths yearly by 2030.[1] The percentage of use of tobacco in old age group is very large and is continuation of habit in younger age group. Some are facing the adverse effects of tobacco use and some not. In one way this is the indicator of addiction in younger age group. It is very well known that longer the use of tobacco, more are the side effects, which hold true for elderly people.[1,2] The elderly will pass on habit to their next generation. Risk of morbidities and death are higher among older smokers than among their non-smoking counterparts.[1-3] These people are less aware of the potential harms of tobacco use and sometimes find smoking beneficial also, so are more resistant to quit tobacco.[2-4] Further it was found that quitting tobacco in older smokers can reduce the risk of myocardial infarction, death from coronary heart disease, and lung cancer.[4-6] Older people are likely to use tobacco longer because they have smoked longer and continue to be heavier smokers and more likely to have chronic diseases.[7-10] There are large number of tobacco control programmes, none of which are targeted at the geriatric population. WHO has put MPOWER policy for decreasing the burden of diseases caused by tobacco and effective tobacco control interventions.[11,12] The present study was done to assess the knowledge, attitude and practices of geriatric population regarding tobacco use and its side effects and also regarding the tobacco prohibition act.

Aims and Objectives: To find out knowledge, attitude and practices of tobacco use in geriatric population.

Materials and Methods

This was community based cross-sectional study conducted in the urban field practice area of community medicine department, Shri Vasantrao Naik Government Medical College Yavatmal. Institutional ethical committee approval was obtained prior. Study subjects included persons above the age of 60 years. From the pilot study on 50 study subjects, it was found that 88 % of the study subjects were aware of tobacco being injurious to health. By taking 88% as prevalence and 5% as allowable error, sample size was calculated as 218. In total 250 elderly persons were included in the study. The urban health centre caters health services to five different areas with 1800 families. From each of these five areas, 50 persons above the age of 60 years were selected for the study. Systematic random sampling was adopted for the study by selecting, every alternate house from each of the

study areas. Persons above the age of 60 years at each house were interviewed, only after their informed consent. However, if no person above the age of 60 years was present at the location; next house was chosen for the study.

Questions on knowledge, attitude, and practices regarding the use of tobacco, its health effects and anti-tobacco laws were asked in detail. Tobacco use was divided into viz: tobacco chewing in any form such as khaini, betel lime, mawa, snuff, paan or gutkha and also smoking in the form of bidi, cigarette, and hookah (Global Adult Tobacco Survey, 2009-10). Non-smokers were defined as those who had not smoked anytime in the life. Ex-smokers were defined as those persons who had quit smoking but previously smoker daily. Current smoker was the person currently smokes at least one tobacco product every day, over a period of one month or more. Same classification was applied for tobacco chewing (Global Adult Tobacco Survey, 2009-10). Statistical test for analysis included percentages, χ^2 test, 95% CI.

Results

Out of total 250 study subjects, 113(45.2%) were males while 137(54.8%) were females. Table 1 shows the distribution of study subjects according to the knowledge about the adverse health effects of tobacco and anti-tobacco laws. Of the overall population studied 221 out of 250 (88.4%, CI=0.48-1.28) was aware that tobacco is injurious to health, of which 97.34% were males and 81.02% were females. The difference in knowledge about tobacco in males and females was statistically significant (χ^2=16.09, P=0.0001). 28.47% of males and 8.57% females knew about laws related to tobacco. This difference was also significant (χ^2=16.34, P=0.0001). It was found that 46.9% of the males knew about prohibition of tobacco smoking in public places while only 17.51% females knew it. Thus knowledge about the adverse health effects of tobacco as well as laws against tobacco was more in males than females.

86.73% males and 75.91% females thought it was not harmful to smoke or chew tobacco in public places. 20.35% males and 8.75% females found it to be not harmful to chew or smoke in front of the family members. 59.29% of males and 16.79% of females thought that strict control is needed for abstinence of tobacco. While very less subjects thought that laws as wells as doctor's advice is required for control of tobacco use.

Table-1: Distribution of Elderly Person Regarding Knowledge of health effects and about laws against Tobacco

Knowledge	Male (n=113)	Female (n=137)	Total (n=250)	*P* Value
Tobacco is injurious to health	110 (97.34)	111 (81.02)	221 (88.40)	0.0001
Health effects due to tobacco consumption				
Cancer	101 (89.38)	79 (57.66)	180 (72.00)	0
Heart attack	85(75.22)	67 (48.91)	174 (69.60)	0
Stroke	53 (46.90)	34 (24.82)	87(34.80)	0.0003
Peripheral vascular disease	10 (8.85)	6 (4.38)	16 (6.40)	0.1507
Respiratory diseases	24 (21.24)	16(11.68)	40 (16.00)	0.0402
Reproductive problems	4 (3.54)	5 (3.64)	9(3.60)	0.963
Fractures	5 (4.42)	3(2.19)	8 (3.20)	0.3177
Knowledge about law*				
Prohibition of smoking in public places	32 (28.47)	12 (8.57)	44 (17.60)	0.0001
Prohibition on advertisement of cigarette and other products.	53 (46.90)	24 (17.51)	77 (30.80)	0
Prohibition on sale of tobacco near educational institutes.	23 (20.53)	7 (5.10)	30 (12.00)	0.0002
Mandatory depiction of warning on tobacco packets	18 (15.93)	10(7.30)	28 (11.2)	0.0313

* Ministry of Health and Family Welfare, 2003

Table-2: Attitude of the Study Subjects towards Tobacco Use

Attitude	Males (n=113)	Females (n=137)	P value
It is not improper to smoke or chew tobacco in public places	98 (86.73)	104 (75.91)	χ^2=4.67, P=0.0307
There is nothing odd in smoking or chewing tobacco in front of family members.	23 (20.35)	12 (8.75)	χ^2=6.91, P=0.085
Strict self-control is needed for abstinence of tobacco	67 (59.29)	23 (16.79)	χ^2=48.55, P=0.000
Laws are required to control tobacco use	5 (4.42)	10 (7.30)	χ^2=0.91, P=0.3409
Doctor's advice is necessary to quit smoking or chewing	10 (8.85)	8 (5.84)	χ^2=0.84, P=0.3595

Table-3A: Practices of Study Subjects regarding Tobacco Use

Practices		Male (N=113)	Female (N=137)	Total (N=250)	P Value
Tobacco use	Yes	90 (66.67)	35(25.55)	125 (50.00)	χ^2=72.49, P=0.0000
	No	23 (33.33)	102 (74.45)	125 (50.00)	
Tobacco smoke	Current smoker	34 (30.08)	0	34 (13.60)	χ^2=44.33, P=0.0000
	Ex-smoker	45 (39.82)	1(0.73)	46 (18.40)	
	Non-smoker	34 (30.08)	136 (99.67)	170(68.00)	
Tobacco chewing	Current user	56 (49.56)	35 (25.55)	91(36.40)	χ^2=18.05, P=0.0000
	Ex-user	23 (20.53)	24 (17.52)	47(18.80)	
	Non-user	34 (30.08)	78 (56.93)	112(44.80)	

Overall 50 % of the elderly individual including males and females were using tobacco in either form of tobacco smoking or tobacco chewing. Overall 34 (13.6%, 95% CI= 9.3-17.9) and 91 (36.4%, 95%CI=30.5-42.3) out of 250 study subjects were smoker and tobacco chewers respectively. Chewing tobacco was present in 49.56% males and 25.55% females. Most common form of tobacco chewing was tobacco with lime (khaini) in both sexes. 68% males and 44.80% females had never used tobacco. As seen in Table 3B, 61.11% males had initiated tobacco use before the age of 18 years while 77.14% of the females had initiated tobacco use after the age of 18

years. This difference was highly significant. (χ^2=25.28, p=0.0000). Thus males had started tobacco use earlier than females and the difference was statistically significant (χ^2=16.09, p=0.0001). Relatives were more often source of information in males than in females. 7.78% males and 22.86% females were using tobacco for more than 10 times per day. The difference in the frequency of use of tobacco between males and females was non-significant (χ^2=3.57, p=0.059). 87.78% of the males were spending up to 500 rupees a month on tobacco while all the females were spending less than 500 rupees. The difference for money spent on tobacco was statistically significant (χ^2=4.69, p=0.0303). A majority of persons 77.78% males and 60.00% of females had never tried of quitting tobacco. 22.23 % males and 40% females had never tried to quit tobacco of which 5.56% males and 28.57% females were abstinent for 1 year. This difference was found to be significant (χ^2=4.02, p=0.0449).

Table-3B: Practices of Study Subjects towards Tobacco Use

Practice	Male (N=90)	Female (N=35)	Total (N=125)	P value
Age of starting tobacco				
Less than 10	10 (11.11)	2 (5.72)	12 (9.60)	χ^2=25.28, P=0.0000
Oct-18	55 (61.11)	6 (17.14)	61 (48.80)	
More than 18	25 (27.78)	27 (77.14)	52 (41.60)	
Source of information*				
Parents	9 (10)	0	9 (7.20)	χ^2=16.09, P=0.0001
Sister or brother	13 (14.44)	5 (14.29)	18 (14.40)	
Friends	45 (50.00)	30 (85.71)	75 (60.00)	
At workplace	52 (57.78)	23 (65.71)	75 (60.00)	
Media	67 (74.44)	6 (17.14)	73 (58.40)	
Frequency of use				
1-3 times a day	7 (7.78)	5 (14.29)	12 (9.60)	χ^2=3.57, P=0.059
4-6 times a day	60 (66.67)	15 (42.85)	75 (60.00)	
7-10 times a day	16 (17.78)	7 (20.00)	23 (18.40)	
>10 times a day	7 (7.78)	8 (22.86)	17 (13.60)	
Money spent over tobacco				
Less than 100	34 (37.78)	30 (85.71)	64 (51.20)	χ2=4.69, P=0.0303
100-500	45 (50.00)	5 (14.29)	50 (40.00)	
500-1000	10 (11.11)	0	10 (8.00)	
More than 1000	1 (1.11)	0	1 (0.80)	
Practice of quitting tobacco				
Have ever tried quitting tobacco	15 (16.67)	4 (11.43)	19 (15.20)	χ^2=4.02, P=0.0449
Have been abstinent for 1 year or more	5 (5.56)	10 (28.57)	15 (12.00)	
Have never tried of quitting tobacco	70 (77.78)	21 (60.00)	91 (72.80)	

Table-4: Reasons for Non-Quitting of Tobacco

Reasons	Males (N=90)	Females (N=35)	P Value
Had faced no side effects of tobacco	63 (70.00)	23 (65.71)	χ^2=0.22, p=0.6424
Quitting tobacco at the elderly age is of no benefit.	15 (16.67)	7 (20.00)	χ^2=0.19, p=0.6604
When tried to quit, faced withdrawal symptoms	10 (11.11)	3 (8.57)	χ^2=0.22, p=0.6424
Tobacco use was beneficial	2 (2.22)	2 (5.72)	χ^2=0.99, p=0.3192

As shown in Table 4, most common reasons for non-quitting of tobacco was that the subjects did not face any side effects of tobacco and also the belief that quitting tobacco at the elderly age is of no benefit.

Discussion

MPOWER policy by WHO suggests the use of different indicators like Monitor tobacco use and prevention policies, Protect people from second-hand smoke, Offer help to quit tobacco use, Warn about the dangers of tobacco, Enforce bans on tobacco advertising or promotion, Raise taxes on tobacco in order to decrease the burden of diseases caused by tobacco and effective tobacco control interventions.[11] Information about knowledge, attitude and practices towards tobacco use of the people is important while implementation activities.[12]

Most of the other studies on tobacco use are targeted to adolescent and adult age; very few studies take into consideration the tobacco use in elderly individuals in whom tobacco use is more dangerous and is a result of, continuation of habit in the younger age. The elderly are more affected by side effects of tobacco. Geographic and traditional variation in the use of tobacco does occur.[12,14,15,17,18] Different studies in different geographical regions yield no similar results.

In our study more than 80% of individuals knew that tobacco in any form is injurious to health, specific health effects of tobacco were known to fewer people. Less than half individuals knew about the law related to tobacco. More males had knowledge of both subjects than females which were similar to findings in global adult tobacco survey (56.3% in males and 7.1% females)[12], Soni P et al[14], Reddy KS et al[15], Rani M et al[16], Nasir K et al[17], Shah SM et al[18]. Most of the subjects knew that tobacco consumption causes cancer i.e. lung cancer (99.23%), followed by oral cancer. Very few subjects were aware of other side effects which was similar to findings of GATS [12] in India. It was found that 30% subjects knew about prohibition of tobacco use in public places, but 86.73% of males and 75.91% females didn't consider it to be harmful. As compared to other studies on adolescents, adults and women, knowledge of harmful effects was more among older people, but still willingness to quit was less.

In our study, 66.67% males and 25.55% females were using tobacco in any form. In global adult tobacco survey[12], it was found 55.7% males and 40.2% females were using tobacco in any form. While 22.1% males in GATS[12] and 38.6% in NFHS-3 survey[20] were smokers,

6.3% females in GATS[12] and 5.3% in NFHS-3 survey[20] were smokers. In NSSO survey[21], it was 39.5% in males and 13% in females. Marinho V et al[1] performed meta-analysis for studying smoking in elderly and found overall prevalence of 22.5% in males and 8.7% in women. In this study, no female was smoker. Mean age of starting tobacco was 18 years and in females was 17 years. 77% females had started tobacco use after 18 years. This was attributed to the fact that parents did not allow the use of tobacco. This is contradictory to GATS[3] survey where about 63% females had started tobacco use before 17 years. Among smokers, bidi was most common product used. Hence parents were also source of information in 10% males but not in females. Most common product chewed was tobacco with lime (khaini), but 9.1% females were using sniff, mishri also. Overall 36.9% had made an attempt to quit tobacco use in the past one year. In GATS[12], 21.3% males and 6.0% females thought quitting of tobacco after knowing side effects. While 50% were not interested in quitting tobacco. In most of the persons, source of information were friends at household and at workplace and also media. Quitting of tobacco was more in females than males which was opposite to the findings in GATS.[12]

Though the study subjects belonged to lower class, appreciable amount of money was spent on tobacco. More money was spent by males than females. Elderly females are more dependent in all aspects, mainly economically. Moreover no female was smoker. So monthly expenditure on tobacco was less than 100 rupees in females. In GATS[12], average monthly expenditure of the current smoker on cigarette is 399 and on bidi is 93.

Many elderly individuals don't quit because they have not faced any side effects of tobacco or if sometimes they felt they don't attribute them to tobacco. Many older adults say they do not quit smoking because doing so offers no benefit at an elderly age. However, there is strong evidence that smoking cessation even late in life not only adds years to life, but also improves quality.[1-3]

Conclusion

Knowledge of side effects of tobacco as well as laws against tobacco use was more in males than females. Even then more than half of males and quarter of females were using tobacco. More than 60% had started tobacco before 18 years of age. Anti-tobacco laws are implemented since 2003; knowledge about law is very less. About ¾ of the people had never tried of quitting tobacco which is a serious issue.

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