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Tobacco Use, Knowledge, Attitude And Perceptions Regarding Tobacco Among Fishermen Population In Pondicherry

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INTRODUCTION

Tobacco use is a major health problem with rising prevalence and mortality rates in some parts of the world, especially in developing countries. Worldwide, the annual incidence exceeds 3,000,000 new cases. Prognosis of oral cancer differs significantly between specific oral locations, with carcinoma of the lip, for example having a much better prognosis than at the base of the tongue or on the gingiva. Prognosis of intra-oral cancer is generally poor, with a five-year survival of less than 50 percent [(1)].

In India cancer of the oral cavity is one of five leading sites of cancer in either sex [(2)]. For a long time, in fact, since the beginning of this century, the frequency of oral cancer was known to be high in India [(3)]. Several oral lesions such as leukoplakia, erythroplakia and lichen planus carry an increased risk for malignant transformation in the oral cavity. Oral submucous fibrosis (OSMF), a potentially oral malignant condition has increased manifold especially among the younger generation in South Asia [(4)]. In India, about 5 million people suffer from this disease [(5)]. Indian subcontinent with an incidence rate as high as 30-40% posing a significant challenge to health services, both preventive and diagnostic [(6)]. Data from the National Cancer Registry Programme of

the Indian Council of Medical Research has confirmed the fact that oral cancer is indeed a common form of cancer in India [3]. It is the most prevalent cancer in males as well as the third most common in females [7].

The main risk factors for oral cancer are tobacco and alcohol. A variety of tobacco habits are prevalent in India and they differ from region to region [8]. The use of tobacco in any form increases the risk of oral cancer. The most widespread is the chewing of betel-quid with tobacco and this has been demonstrated as a major risk factor for cancers of the oral cavity. It has been shown that the risk for chewing betel-quid with tobacco is much higher compared to the risk without tobacco which is either insignificant or much lower [9]. Smoking of cigarettes or bidi (a crude form of cigarette with about 0.2 g of coarsely ground tobacco wrapped in a specific tree leaf) has also been shown to be a risk factor for oral cancer [2].

A fisherman or fisher is someone who captures fish and other animals from a body of water or gathers shellfish. Worldwide, there are about 38 million commercial and subsistence fishermen [10]. Fisherman has prolonged hours of continuous work, which are found to be correlated with high cigarette and alcohol consumption [11]. Lower Socioeconomic status has an independent effect on the health status of populations. It has also been found to be associated with a higher risk for adverse habits such as tobacco and alcohol use [12]. The NSSO report-1994 [13] shows the current prevalence of any form of tobacco use among men above 10 years in rural Tamil Nadu as 14.6 percent. Smoking prevalence was found to be considerably higher among the rural population and certain marginalised groups like the fishermen community.

Increased use of tobacco has resulted in an increased prevalence of oral cancers among the coastal community. In a study carried out in Thiruvananthapuram city and surrounding areas in Kerala, it was found that the incidence of oral cancer was higher in the industrial zone which included coastal regions (34.3 percent) as compared to commercial and residential zones which had oral cancer prevalence of 24.54 percent and 10.7 percent respectively[14]. Further, belief systems that position tobacco use as acceptable compound this vulnerability. It is highly likely that both these factors affect the oral health status of community members synergistically.

Materials and methods:

Study type: cross-sectional study

Study area: pondicherry.

study population:

Fishermen population residing in the coastal regions of pondicherry.

Inclusion criteria:

Fishermen residing in the coastal regions of pondicherry are included in the study.

Non-fishermen residing in the coastal regions of pondicherry are included in the study.

Exclusion criteria:

People who were not residing in the coastal regions were not included in the study.

Fishermen and non-fishermen who are not willing are not included in the study.

Ethical clearance:

Before the start of the study ethical clearance was obtained from the institutional ethics committee, saveetha university.

Written informed consent was obtained from the study participants (annexure-2)

The anonymity of the participants was maintained.

Scheduling:

data collection was scheduled in september and october 2016.

Sample size:

the sample size was calculated as 315 as per a study done by saravanan et al published in the year 2011 using the formula $z\alpha^2pq/l^2$.

P = 54.9; q =45.1; $z\alpha^2$ = 3.84;l=5.49

Sampling: a multi-stage random sampling was employed to select the study population. Four zones of the pondicherry are divided as follows:

Survey instrument:

The first section collected demographic information of the participants such as age in years, gender, occupation, frequency of fishing and time spent on fishing. The second section consists of questions to assess the use of tobacco both smokeless and smoking forms, successful quitting, second-hand smoking and knowledge, attitude and perception regarding tobacco use.

RESULTS:

Figure.1 Distribution of study subjects based on age and gender

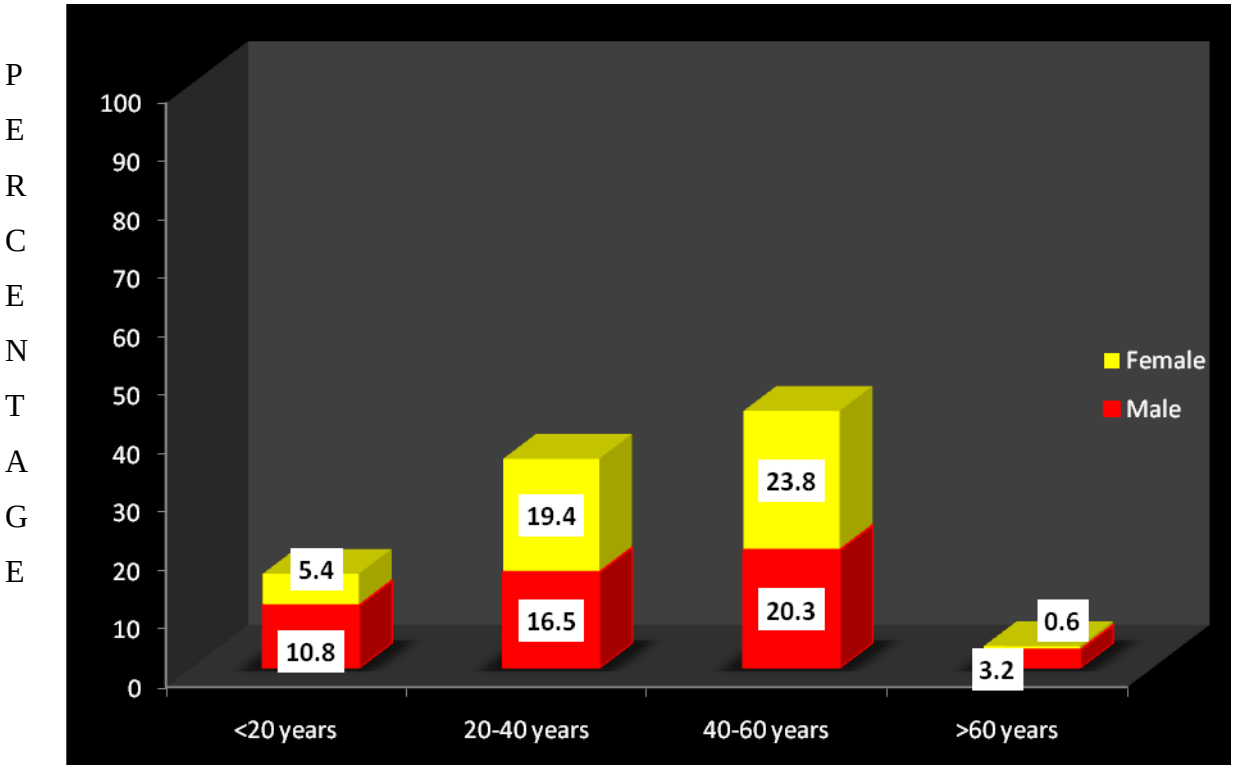

Figure 1 depicts distribution of study subjects based on age and gender. The study sample consisted of 315 subjects of which 16.2% (10.8% male and 5.4% female) were below 20 years of age, 35.9% (16.5% male and 19.4% female) were between 20-40 years age group, 44.1% (20.3% male and 23.8% female) were between 40-60 years age group and 3.8% (3.2% male and 0.6% female) were above 60 years of age.

Table 1: Association between use of tobacco products among different age groups

Age in years	Tobacco use					
	No		Yes		Total	
	n	%	n	%	n	%
<20 years	51	16.2	0	0	51	16.2
20- 40 years	103	32.7	10	3.2	113	35.9
40-60 years	114	36.2	25	7.9	139	44.1
>60 year	11	3.5	1	0.3	12	3.8
Total	279	88.6	36	11.4	315	100

Table 1 depicts the association between use of tobacco products among different age groups. In the age group of less than 20 years 51 (16.2%) had not used tobacco. In the 20- 40 years age group 103(32.7%) had not used tobacco products and 10 (3.2) had used some form of tobacco products. In the 40-60 years 114 (36.2%) had not used tobacco products and 25 (7.9%) had used some form of tobacco products. In the age group of above 60 years 11 (3.5%) had not used tobacco products and 1 (0.3%) uses tobacco products. The association was found significant statistically. ($p \leq 0.05$)

Table 2: Association between use of tobacco and gender

Gender	Tobacco use					
	No		Yes		Total	
	n	%	n	%	n	%
Female	149	47.3	6	1.9	155	49.2
Male	130	41.3	30	9.5	160	50.8
Total	279	88.6	36	11.4	315	100

Table 2 depicts the association between use of tobacco products and gender. Among the study subjects 149 (47.3%) females had not used any form of tobacco whereas 6 (1.9%) of females had used some form of tobacco. Among males, 130 (41.3%) had not used any form of tobacco products, whereas 30 (9.5%) had used some form of tobacco. The association was not found significant statistically. ($p \leq 0.05$)

Table 3: Association between use of tobacco products and occupation

Occupation	Tobacco use					
	No		Yes		Total	
	n	%	n	%	n	%
Fishermen	64	20.3	18	5.7	82	26
Non-fishermen	215	68.3	18	5.7	233	74
Total	279	88.6	36	11.4	315	100

Table 3 depicts association between use of tobacco products and occupation. Among the fishermen, 64 (20.3%) had not used any form of tobacco and 18 (5.7%) had used some form of tobacco. Among

the non-fishermen 215 (68.3%) had not used any form of tobacco and 18(5.7) used some form of tobacco. The association was found significant statistically.

use of tobacco products and oral lesions

Occupation	Tobacco use					
	No		Yes		Total	
	n	%	n	%	n	%
No lesion	258	81.9	19	6.1	277	88
Leukoplakia	10	3.2	8	2.5	18	5.7
Lichen planus	6	1.9	7	2.2	13	4.1
Ulceration	5	1.6	2	0.6	7	2.2
Total	279	88.6	36	11.4	315	100

Table 4 depicts the Association between use of tobacco products and oral lesions. Among the non-smokers 10(3.2%) had leukoplakia, 6(1.9%) had lichen planus and 5 (1.6%) had ulcerations. Among smokers 8(2.5%) had leukoplakia, 7 (2.2%) had lichen planus and 2 (0.6%) had ulcerations. The association was found significant statistically.

Table.5. Distribution of study subjects based on successful quitting rate and exposure to second hand smoking

Tobacco use	Overall (%)	Male (%)	Female (%)	Fisherman (%)	Non-fisherman (%)
Successful quitters					
Former daily tobacco users who are currently non users	2.2	2.2	0	2.2	0
Former daily smokers who are currently non	2.3	2.3	0	2.3	0

smokers					
Former daily users of smokeless tobacco who are currently non-users	6.7	1.9	4.8	1.8	4.9
Second-hand smoking					
Exposed to second hand smoke at home	2.2	0	2.2	0	2.2
Exposed to second hand smoke at work	0	0	0	0	0
Exposed to second-hand smoke at public	6.3	4.1	2.2	4.1	2.2

Table.5 depicts distribution of study subjects based on successful quitting rate and exposure to second hand smoking. About 2.2% of the study subjects were Former daily tobacco users who are currently non users. 2.3% were Former daily smokers who are currently non-smokers. 6.7% were Former daily users of smokeless tobacco who are currently non-users. 2.2% of the study subjects were exposed to second hand smoke at work. 6.3% of the study subjects were exposed to second hand smoke at public.

Table.6. Knowledge attitude and perceptions regarding use of tobacco products among study subjects.

Knowledge, Attitude and Perceptions	Overall (%)	Male (%)	Female (%)	Fishermen (%)	Non-fishermen (%)
Do you believe smoking causes serious illness	94.7	37.5	37.2	22.1	52.6
Do you believe exposure to second hand smoke causes serious illness to non-smokers	50	28.9	21.1	15.6	34.4
Do you believe smokeless tobacco causes serious illness	70.7	33.3	37.4	18	52.7

Table.6 depicts the Knowledge attitude and perceptions regarding use of tobacco products among study subjects. 94.7% of the study subjects believe smoking causes serious illness. Only 50% of the study subjects believe exposure to second hand smoke causes serious illness to non-smokers. 70.7% of the study subjects believe smokeless tobacco causes serious illness.

DISCUSSION

Oral cancers are preceded by a variety of premalignant lesions for varying lengths of time. Even though only a small proportion of these premalignant lesions actually progress to oral cancer, this development forms a symptom for over 70 percent of oral cancers in India [(15)] As there is a paucity of literature regarding the association between tobacco use and oral mucosal lesions among fishermen population, a study was conducted to assess the association between tobacco use and oral lesions among fishermen population in Pondicherry.

A total of 315 study subjects were selected from a coastal village of Pondicherry (Veerampattinam). Among 315 study subjects 50.8% were male and 49.2% were female and 16.2% were below 20 years of age, 35.9% were between 20-40 years age, 44.1% were between 40-60 years age and 3.8% were above 60 years of age.

In our study, the prevalence of tobacco use was found to be 11.4% which is similar to the prevalence obtained by GATS survey (10.1%-20%) [(20)].

The present study demonstrated that the prevalence of tobacco was increasing with increase in age. Similar results were obtained in the study done by Kailash Asawa et al which demonstrated that the prevalence of tobacco usage was increasing subsequently with age [(16)]. This change in of tobacco use based on age is attributed to the fact that young people generally have relatively low incomes with a high proportion of it available for discretionary expenditure, so that changes in income are more likely to affect their tobacco consuming patterns [(17)]. The present study demonstrated the prevalence of tobacco was 9.5% among male and 1.9% among female. Among them all the female used smokeless tobacco. Similar results were obtained in GATS survey which showed the prevalence of tobacco use among male and female as 24.3% and 2.9% respectively [(20)]. The reason for decreased prevalence may be that smoking is not culturally accepted in South Indian communities.

In our study association was found between occupation and use of tobacco. Prevalence of tobacco use was 21.95% among the fishermen group whereas only 7.7% was found among non-fishermen. Similar results were obtained in the study done by Saravanan et al [(18)] with maximum prevalence of Tobacco habit 10.4 % among fishermen as against 6.5%of the Non-fishermen. The reason for

increased prevalence among fishermen may be attributed to occupational stress. In our current study, leukoplakia was the most common mucosal condition with a prevalence of 2.5% among tobacco users followed by lichen planus and ulcerations with 2.2% and 0.6% respectively. However the association was not significant when compared to non-smokers. This may be due to the reason that there are several other pre disposing factors such as over exposure to U-V radiation, alcohol consumption and poor diet lacking in nutrition [(18)].

In our study, 2.2% of the study subjects were Former daily tobacco users who are currently non users, 2.3% were Former daily smokers who are currently non-smokers, 6.7% were Former daily users of smokeless tobacco who are currently non-users. The results were similar to the GATS survey which also showed a quit rate of below 12% for all forms of tobacco [(20)].

In our study, 2.2% of the study subjects were exposed to second hand smoke at work, 6.3% of the study subjects were exposed to second hand smoke at public. The results are not similar to GATS survey. The reason for this may be attributed to low prevalence of smoking in Pondicherry 10% [(20)].
In our study, 94.7% of the study subjects believe smoking causes serious illness and 70.7% of the study subjects believe smokeless tobacco causes serious illness. Similar results were obtained in GATS survey [(20)]. Only 50% of the study subjects believe exposure to second hand smoke causes serious illness to non-smokers which are not similar to GATS survey [(20)]. The reason for this may be the knowledge regarding second hand smoking is very poor among rural people and more importance should be given on educating the people regarding ill effects of second hand smoking.

CONCLUSION

The prevalence of tobacco consumption was high among fishermen population when compared to the non-fishermen residing in the same coastal regions. Health education regarding the ill effects of tobacco should be provided and periodic oral cancer screening programs should be conducted.

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