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Assessment of Knowledge, Attitude, and Practice among Subjects Visiting the Tobacco Cessation Clinic

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ABSTRACT

Objectives: The study mainly aims to assess the knowledge, attitude, and practice of subjects who attend the smoking cessation clinic and thereby, study and document the drug management in smoking cessation.

Material and Methods: This was an observational study conducted among 160 patients for 8 months. A knowledge, attitude, and practice questionnaire was prepared and validated. All the details and directions for filling out the questionnaire were explained to the patients by the investigator. The questionnaire was given to the patients and all the required data were collected and analyzed.

Results: A total of 160 male patients were enrolled in the study. Majority of the participants had a good knowledge of the harmful effects of tobacco consumption. Around 96% knew that smoking could heighten their risk for different types of cancer and 93.8% were aware that smoking was a leading cause of many serious diseases. Majority of the patients (98.1%) had an attitude that quitting smoking was an individual choice and 96.3% were supportive of the fact that smoking in public places is an offense. Concerning their practice, 89.4% have attempted to quit smoking in the past and 78.8% have received advice from physicians earlier to cease smoking.

Conclusion: The study revealed the good knowledge of patients and the majority of them tried to quit smoking as advised by their physician.

Keywords: Cancer, KAP questionnaire, Patient Counseling, Smoking cessation clinic

INTRODUCTION

Tobacco is one of the biggest health threats faced by the public according to the World Health Organization.[1] In addition to cigarette smoking, there are alternatives to tobacco available that include hookah or water pipe, electronic cigarettes, and chewing tobacco as well as cigars.[2] Annually, around 6 million deaths are attributed to smoking.[1,3] According to the Global Youth Tobacco Survey report, the prevalence of cigarette smoking among 58% of boys and girls has no significant difference.[4] According to the estimation by the WHO, globally, about 30% of adult men smoke. Each year, more people are dying because of tobacco use than those from AIDS, alcohol, car crashes, suicides, murders, and drug abuse. Five million people die prematurely because of smoking related diseases.[5] Tobacco is considered to have a severe negative impact on one's health.[6] The main health effects occurring due to the active use of tobacco include

cardiovascular and respiratory diseases, different kinds of cancers, low birth weight in infants, nicotine dependence, and periodontal diseases.[3] Tobacco dependence is often the chronic consequence of tobacco use and requires timely intervention. Apart from behavioral counseling programs provided in different ways, there is also a very high demand for pharmacotherapy to quit tobacco. For adults, over the counter use of nicotine gum, patches, lozenges and use of nicotine nasal spray, nicotine inhaler, and Bupropion with the aid of a prescription are approved by food and drug administration.[7] First line pharmacotherapy for smoking cessation mainly includes bupropion, nicotine gum, nicotine inhaler, nicotine nasal spray, and nicotine patches.[8] Numerous health risks can be accounted to the use of tobacco. This is the burden of tobacco use and the KAP of the public. Tobacco users need to be assessed to make better policies and develop references for further research. Due to the urgent need for intervention and information in this domain, the objective of the study was to assess the knowledge, attitude, and practice concerning tobacco use in subjects who attend the smoking cessation clinic.

MATERIAL AND METHODS

Study design and site, ethical considerations, and sample size

This was a prospective, questionnaire-based, and observational study carried out for 8 months from August 2018 to April 2019, among the patients of either gender of any age attending the tobacco cessation clinic of Justice KS Hegde Charitable Hospital, Mangalore. Patients who were not willing to consent or those who had mental illnesses were excluded from the study. The study was approved by the Institutional Ethics Committee of NGSMIPS (Ref. No: NGSMIPS/IEC/11/2018-19). The minimum required size was calculated as 160 patients. The sample size was agreed on by considering the availability of patients based on the previous data available at the medical records department of the hospital.

Development and validation of data collection tools

The patient's informed consent form was developed in English and translated into the local languages (Kannada and Malayalam). The suitable data collection tool was prepared to consist of two categories. The first category collected information about the patient's sociodemographic details while the second category was concerning the treatment given to the patient. Similarly, a self-administered questionnaire consisting of 15 questions that were divided into three categories (knowledge, attitude, and practice) was developed by referring to various primary, secondary, and tertiary sources. Each category carried five different questions with three different choices for choosing the most appropriate one among them. The questions were developed based on the objectives and need for the data in the study. The developed questionnaire was then validated by physicians (n = 3), nurses (n = 1), and academic pharmacists (n = 2). It was corrected by incorporating all the scientific suggestions provided by the validators. Spelling and logical errors in the questionnaire were also corrected before the data collection. Pre-testing of the questionnaire was conducted by providing it to five participants who attended the tobacco cessation clinic. After the validation and formatting process was completed, the finalized questionnaire was translated into the vernacular languages for an easy understanding of the study subjects. At the end of the translation, back translation of the questionnaire was carried out by a language expert for confirming the appropriateness of the questionnaire.

Data collection and statistical analysis

The investigator attended the tobacco cessation clinic on a day-to-day basis and the patients were assessed for their eligibility based on the inclusion and exclusion criteria of the study. The patients meeting the inclusion criteria and willing to give their consent were explained about the further proceedings of the study. The patients were provided with the self-administered questionnaire and allowed to fill the questionnaire within 15 min. The filled questionnaire was checked for complete and valid data. The information was entered into Microsoft Excel and then transferred to SPSS. Qualitative data were summarized using frequency and percentage and the quantitative variable was documented using mean and standard deviation. A P value of < 0.05 was considered to be statistically significant.

Risk and confidentiality

There was no risk associated with the study and the patient's confidentiality was maintained throughout and after the study.

RESULTS

Sociodemographic details of patients attending tobacco cessation clinic

A total number of 160 outpatients were enrolled in the study. All participants were males. In the age-wise distribution, majority of patients belonged to the age category of 60–79 years, n = 69 (43.12%), followed by 40–59 years, n = 55 (34.43%) and 20–39 years, n = 32 (20%). The age group above 80 years had the least number of patients, n = 4 (2.5%). Among 160 participants, the frequency of people consuming alcohol was found to be n = 103 (64.4%).

Similarly, *n* = 101 (63.1%) smoked *bidi*, *n* = 49 (30.6%) smoked cigarettes, and *n* = 10 (6.3%) smoked both *bidi* and cigarette. Among them, *n* = 10 (6.3%) patients were consumers of other forms of tobacco too. While assessing the education of patients, majority of the study subjects, *n* = 102 (63.8%) have educational qualifications below 10th grade, *n* = 51 (31.9%) were qualified above intermediate level (Above 12th), and only *n* = 7 (4.4%) had an intermediate level of education. With regard to one's domiciliary status, *n* = 111 (69.4%) were from rural and *n* = 49 (30.6%) were from urban areas. Tobacco intake also has a close association with occupation and stress. On evaluation of the occupation of patients, majority of them were found to be laborers, *n* = 77 (48.1%), followed by businessmen *n* = 28 (17.5%), farmers *n* = 22 (13.8%), drivers *n* = 10 (6.3%), private jobs *n* = 4 (2.5%), government employees *n* = 3 (1.9%), and students *n* = 29 (1.3%). *n* = 14 (8.85) were not having any jobs.

Drugs prescribed for management in smoking cessation

The frequency of use of bupropion as well as *nicogum* was found to be 4 (2.5%) each. There was no drug prescribed for the majority of patients *n* = 152 (95%). Instead of pharmacological management, majority of them were provided with non-pharmacological treatment, *n* = 152 (95%).

Assessment of knowledge, attitude, and practice of study subjects

As per the first criteria of the knowledge questionnaire, 93.8% of the patients noticed the anti-tobacco warning messages appearing over tobacco products. One hundred and ten study subjects (68.8%) were aware that the lungs would be affected more because of tobacco smoking and 31.3% knew that the heart would be affected as well. About 96.3% knew the effects of smoking on the health of their family members. In the study sample, 93.8% knew that tobacco smoking was a leading cause of premature death and many serious disease conditions and merely 1.3% disagreed with this. About 96.3% of participants were aware of the fact that smoking could significantly contribute to increasing their chances for different types of cancer. The detailed knowledge assessments are given in [Table 1].

Table 1: Distribution of study subjects based on knowledge.

Questions	*n* (%)
Do you ever notice any warning messages in tobacco products?	
Yes	150 (93.8)
No	9 (5.6)
Do not remember	1 (0.6%)
Which organ of the body will be more affected because of smoking?	
Heart	50 (31.3)
Lungs	110 (68.8)
Kidney	0 (0)
Do you know that your smoking habit can affect the health of your family members?	
Yes	154 (96.3)
No	4 (2.5)
Do not know	2 (1.3)
Do you know that tobacco smoking is one of the leading causes of many serious diseases?	
Agree	150 (93.8)
Disagree	2 (1.3)
Do not know	8 (5)
Are you aware that smoking can increase the chance of different types of cancer?	
Yes	154 (96.3)
No	2 (1.3)
Do not know	4 (2.5)

While assessing the attitude of the study subjects, 98.1% supported that quitting tobacco smoking was an individual choice and only 1.3% were in disagreement. About 96.3% of the study subjects agreed on the fact that smoking in public places was an offense according to Indian rules. About 78.8% of study subjects believed that advertisements appearing on television and in magazines could control smoking up to an extent. In contrast, 19.4% disagreed with the former. About 93.8% had a feeling that their family members, friends, and colleagues believed that they should not smoke. About 90.6% of study subjects supported campaigns for a smoking ban in their town whereas 4.4% were not in agreement. The attitude assessment of our study population is discussed in detail in [Table 2].

While considering the assessment of practice among the study subjects, 89.4% of participants have attempted to quit smoking in the past. About 78.8% received advices from physicians motivating them to quit smoking whereas 20.6% never received any. About 47.5% of study subjects needed a smoke within 15–30 min after waking up whereas 41.9% required a smoke in <15 min. Only a few (10.6%) needed to smoke within 30 min to 2 h. About 54.4% of study participants used to smoke <10 cigarettes or *beedis* per day, 39.4% smoked 10–20, and 6.3% smoked more than 20. They are eligible to be regarded as chain smokers. About 6.2% consumed other forms of tobacco (1.2% *gutka*, 4.4% betel quid, and 0.6% cannabis). The assessment of practice is discussed in detail in [Table 3].

Correlations of various factors with knowledge, attitude, and practice

There was a significant correlation between the age of the study subjects and the time duration to smoke as soon as they woke up (*P* = 0.046). The study also found a significant

Table 2: Distribution of study subjects based on attitude.

Questions	*n* (%)
Do you believe that quitting smoking is an individual choice?	
Yes	157 (98.1)
No	2 (1.3)
Do not know	1 (0.6)
Are you aware that smoking in a public place is an offense according to Indian rules?	
Yes	154 (96.3)
No	4 (2.5)
Do not know	2 (1.3)
Do you believe anti-smoking advertisements on TV and in magazines can control smoking of an individual up to an extent?	
Yes	126 (78.8)
No	31 (19.4)
Do not know	3 (1.9)
Do you feel that your family members, friends, and colleagues believe that you should not smoke?	
Yes	150 (93.8)
No	8 (5)
Do not know	2 (1.3)
Will you support a smoking ban in your town?	
Yes	145 (90.6)
No	7 (4.4)
Unsure	8 (5)

Table 3: Distribution of study subjects based on practice.

Questions	*n* (%)
Have you ever tried to quit smoking in the past?	
Yes	143 (89.4)
No	15 (9.4)
Unsure	2 (1.3)
Did you ever receive any advice from physicians to quit smoking?	
Yes	126 (78.8)
No	33 (20.6)
Unsure	1 (0.6)
How soon after waking up do you need a smoke?	
<15 min	67 (41.9)
15 min–1/2 an h	76 (47.5)
Within 2 h	17 (10.6)
How many cigarettes or beedis will you smoke per day?	
<10	87 (54.4)
10–20	63 (39.4)
>20	10 (6.3)
Did you ever try any other type of tobacco apart from cigarettes or beedis?	
Yes	10 (6.2)
No	146 (91.3)
Unsure	4 (2.5)

correlation between an individual's educational qualification and their use of beedi or cigarettes ($P = 0.001$). Similarly, the correlation between the qualification of study subjects and the consumption of other forms of tobacco ($P = 0.026$) was also statistically significant. Subjects who were highly qualified had a good knowledge of the harmful effects of tobacco use and, hence, the extent of beedi or cigarette use, and other forms of tobacco were found to be comparatively less.

DISCUSSION

Tobacco is one of the primary preventable causes of death across the globe. The main aim of the present study was to assess the KAP regarding tobacco smoking in subjects who attend a smoking cessation clinic using a self-administered questionnaire. All the study participants were males. In the study, the majority of study subjects belong to the age group of 60–79 years. The result from this study showed a resemblance with the study conducted by Patel *et al*. Among the study subjects, ten consumed different forms of tobacco.[9] The study conducted by Multani *et al*. and Sakore *et al*. was also closely related to that of the present study.[5,10] Among the smokers, majority smoked beedis which were similar to the results of a study conducted by Mannapur *et al*. This might be due to the easy availability and the low cost of beedi compared to cigarette and hookah.[11]

In this study, majority of the patients noticed the anti-tobacco warning messages appearing above the tobacco product and were supportive of the fact that tobacco could cause health issues and that the act of smoking in a public place was an offense. Similar results were obtained from the study conducted by Tubachi *et al*., in which 94% of participants were in agreement with the fact that tobacco was harmful to one's health.[12] The study conducted by Al-Hawqi *et al*. also concluded that 88% of participants supported the ban on smoking in public places. Majority of our study subjects had previously received advice from physicians regarding smoking cessation.[13] A similar result was obtained from the study conducted by Salgado *et al*., which documented that 30.9% of participants believed that medical devices played a limited role in their smoking cessation behavior.[14]

Many of our participants already had possession of the knowledge that tobacco smoking could lead to different types of cancer and premature death. However, only 143 study subjects attempted to quit smoking in the past. Similar results were obtained from the study conducted by Adhikari *et al*., in which only a few tried to quit smoking despite knowing the harmful effects of consuming tobacco. About 2.5% of the participants were prescribed with nicotine and

bupropion each. The availability of nicotine patches (Nicotine Replacement Therapy) and bupropion for those who wanted to get rid of smoking from tobacco cessation clinics was mentioned in the study conducted by Adhikari *et al*.[15]

In the present study, it was found that there is a statistical correlation between the person's age and question 13 (How soon after waking up do you need a smoke?) of the knowledge, attitude, and practice questionnaire ($P = 0.046$). The age of the subject had a statistical correlation with the qualification of the study sample. A meaningful relation among age, use of beedi or cigarette by study sample, qualification, and use of other tobacco forms was established. A similar study was conducted by Shojaeifar *et al*., where they found a significant relationship between attitude and age of the study sample.[3] Pre- and post-assessment after counseling related to smoking cessation with the use of the newly developed KAP questionnaire was not carried out due to the short duration of the study which is also the major limitation of our study.

CONCLUSION

The study developed and validated a structured knowledge, attitude, and practice questionnaire for assessing the use of tobacco in subjects who attended the smoking cessation clinic. The present study found that the majority of the study subjects were manual laborers by vocation and that they smoked beedi more than cigarettes. Majority of the smokers satisfied with basic educational qualifications and 69.4% originated from a rural background. As per the KAP questionnaire, majority of the patients had sufficient knowledge regarding the harmful effects of tobacco smoking. Hence, it is understood that the well-being of these patients and the incidence of long-term complications in them can significantly decrease with further patient counseling, a routine follow-up coupled with interventional programs led by pharmacists. Such programs are guaranteed to have a direct impact on the attitude, practice, and well-being of tobacco users.

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Declaration of patient consent

Institutional Review Board (IRB) permission was obtained for the study.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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