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Tobacco Cessation Treatment: Knowledge, Attitude and Practices of Physician in Karachi, Pakistan: A Cross Sectional Study

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Abstract

Introduction

Tobacco smoking is a public health problem leading to substantial morbidity and mortality with around 80% of the deaths occurring in developing countries. Physician intervention has been shown to increase cessation rates. The study aims to assess knowledge, attitudes and practices of physicians in tobacco cessation treatment in Karachi Pakistan.

Methods

A descriptive cross sectional study was carried out between June to December 2013. All practicing physicians from Karachi were recruited. Survey questionnaire was distributed among randomly selected physicians after obtaining their consent. The study was approved by ethics review committee of The Aga Khan University Hospital.

Results

A total of 189 physicians were approached and 163 consented to take part. Around 58.3% of the physicians reported high levels of confidence for discussing tobacco cessation, 40.5% of them developing tobacco cessation plan and only 26.4% were confident in recommending pharmacological treatment. Regarding knowledge of pharmacotherapy on a five-point scale majority (45.4%) rated themselves four or five. However, very Low rates of correct answers were noted for objective knowledge assessment (5.5%). Most physicians (78.5%) reported that they identify every patient's tobacco use status. Most physicians (61.4%) reported always or almost always advising tobacco users to quit.

Conclusion

Majority of the physicians believed in the importance of tobacco cessation treatment and understand their primary role. Most feel they have adequate knowledge regarding smoking cessation but lacked the skills required to implement tobacco cessation treatment strategies. Effective training is required to enhance physicians' capacity to intervene in the field of tobacco cessation.

Keywords: Tobacco, physicians, knowledge, attitudes, practice, developing countries

1. Introduction

Tobacco is one of the leading causes of morbidity and preventable death worldwide.[1] According to WHO it is responsible for about six million deaths worldwide each year which includes around 600,000 deaths due to the effects of second hand smoke. It is associated with morbidity, disability and death from not just non-communicable diseases but also from communicable diseases.[2, 3] Unfortunately, all premature tobacco-

attributable deaths are projected to rise from 5.4 million in 2004 to 8.3 million in 2030, which would be approximately 10% of all deaths worldwide,[4] with more than 80% of them occurring in low and middle income countries.[5]

Worldwide, approximately 1.3 billion people currently use tobacco products and 82% of these live in the developing countries.[6] The global prevalence of smoking is estimated at 21%, and is higher in men (36%) than women (7%). [7] The national household survey of adults conducted in 2012 estimated prevalence of tobacco smoking among Pakistani men and women as 34.9% and 5.1% respectively [8] whereas, in Karachi (the biggest city of Pakistan) the combined prevalence is reported as 36.9%.[9] Almost 58% of all head and neck cancers are found to be in South and south east Asia.[10] In addition, Karachi south region has the highest incidence in the world for oral cancers.[11]

There is good evidence that quitting smoking at any age results in significant health gains.[12] Physicians hold a strategic position in helping their patients to quit not only by assessing their smoking status, employing the brief quit advice but also prescribing pharmacological treatment when required. It is estimated that at least 70% of smokers see a physician each year, but only about half of these are asked about tobacco use, and even fewer advised to quit.[13] Smokers cite a physician's advice to quit as an important motivating factor and this brief advice has shown a spontaneous quit rate of 2-4 percent.[14-16] One important approach for reducing smoking and its adverse health impact on society is improving the capacity and willingness of healthcare providers to intervene with their patients who use tobacco.[17] Studies have shown that cessation advice is given infrequently[18] or only given to diseased patients.[19]

Practice guidelines from the United States[17] and United Kingdom [20] recommend that physicians should advise every smoker to quit smoking. However, a lack of knowledge and inappropriate attitudes has been reported as major barriers.[21, 22] The US Public Health Service released an updated clinical practice guideline to implement a treatment strategy aimed at different stages of tobacco quitting. Also known as 5A's:1: Ask for tobacco use at every visit, 2: advise all tobacco users to quit, 3: assess user's willingness to quit, 4: assist with treatment and referrals and 5: arrange follow-up contacts to support cessation efforts.[17, 23]

Such interventions would be particularly important in a developing country setting. However, there is lack of data regarding the knowledge, attitude and practice of local Pakistani physicians regarding smoking cessation. It would be useful to improve the capacity and willingness of healthcare providers to intervene among smokers. In this study, we aimed to examine the knowledge, attitude and practice concerning smoking cessation of physicians from Karachi, Pakistan.

2. Methods

2.1Sample and data collection

This was a descriptive cross sectional questionnaire based study carried out between June –Dec 2013. All doctors registered with the Pakistan Medical & Dental Council and practicing in Karachi were eligible (regardless of where they received their medical training, site of practice, age, gender or ethnicity). List of doctors was obtained from PMDC and a random sample was selected. The survey instrument was disseminated personally by volunteers trained for data collection among randomly chosen physicians after obtaining verbal consent. It took 10-15 minutes for the physicians to complete the self-administered survey instrument. The protocol was approved by the Ethical Review Committee of The Aga Khan University Hospital.

2.2Survey instrument

A previously validated structured self-administered questionnaire[24] was used to assess the knowledge of the doctors regarding tobacco cessation. From the original 27 item questionnaire, a modified version which included 19 items was agreed upon by a panel of university physicians with special interest in smoking cessation. It excluded items which were not relevant/available to the local population e.g. questions on quit lines, writing or phone contacting patients, access to web sites, tailored made cessation programs, smoking cessation support groups, knowledge of local guidelines for physicians (which had not been developed at the time of the study) etc.

2.3Tobacco cessation knowledge

Subjects' knowledge pertaining to tobacco use and cessation methods was assessed by a total of seven questions, of which four were subjective self-assessment items and three objective knowledge-based questions. Three of the self-assessment items, which employed a four-point scale ("Not very comfortable" to "Very comfortable"), asked the clinicians to rate their comfort in discussing cessation, helping their patient to make a quit plan, and recommending pharmacotherapy. A fourth question using a five-point scale ("Not very knowledgeable" to "Very knowledgeable") was used to assess self-rated pharmacotherapy knowledge. The three objective knowledge-based items used a multiple choice format with one correct answer.

2.4Tobacco cessation attitudes

Attitudes toward smoking cessation were assessed by using six questions. Five questions employing a self-rated four-point scale ("Strongly agree" to "Strongly disagree") asked the subjects to rate their agreement in terms of the importance of discussing tobacco use by a physician, serious negative health consequences of tobacco use, adequacy regarding skills/knowledge to treat nicotine dependence, effectiveness of tobacco cessation methods in reducing morbidity/mortality and the efficacy of a brief intervention (3 min) for tobacco cessation. A sixth question listed five barriers to implementing tobacco cessation treatment practices and asked clinicians to indicate which of these limited their ability to counsel tobacco users during each visit.

2.5Tobacco cessation treatment practice

Treatment practices were evaluated using six questions. Three of these questions focused on identification of tobacco users attending the surgeries, assessment of their tobacco use and the frequency of this assessment. The three remaining questions evaluated how often tobacco users were advised to quit, assessed with regards to their willingness to quit and the methods of assistance provided in the quit plans.

2.6Data Analysis

Descriptive analysis was done using Statistical package for social sciences (version 19.0. Chicago, Illinois, USA). Mean with standard deviation was computed for continuous variables and frequency with percentages was reported for categorical variables.

3.Results:

3.1Characteristics of Respondents

A total 189 physicians were approached out of which 163 consented and completed the questionnaire translating to a response rate of 86.2%. Out of 163 physicians, 133(81.6%) were men. Amongst all, 89 (54%) were general physicians, 26 (16%) were chest physicians and 48 (29%) from other specialties. About 62 (38%) of physicians had a practice experience of more than 10 years, 40 (24.5%) between 5 to10 years and 61 (37%) less than 5 years (Table 1).

3.2Subjective Knowledge of Tobacco Cessation Treatment

More than half of the physicians, 95 (58%) showed very high level of confidence in discussing tobacco cessation issues with their patients, while 38(23%) reported moderate level of confidence. In developing cessation plan with their patients, 66 (40.5%) were very confident and 60 (36.8%) moderately confident. When asked about recommending appropriate pharmacological treatment only a quarter physicians were very confident 43 (26.4%) and 67 (41.1%) were moderately confident.(Figure 1) But when asked to rate their knowledge of pharmacotherapy for tobacco cessation on a five-point scale (1 = not very knowledgeable to 5 = very knowledgeable), 74(45.4%) rated themselves as either knowledgeable or 'very knowledgeable'.

3.3Objective Knowledge of Tobacco Cessation Treatment

On objective knowledge assessment of the physicians which employed three multiple choice items (covering factual information about tobacco use and cessation strategies) only 9 (5.5%) doctors correctly answered all the three questions; whereas 24 (14.7%) answered two and 76 (46.6%) answered only one question correctly.

3.4Attitudes toward Tobacco Cessation Treatment

Most physicians showed agreement regarding the perceived seriousness of tobacco use for health outcomes with 128 (78.5%) 'Strongly agreeing' while 20 (12.3%) 'Somewhat agreeing'. In the importance of the physician's role in discussing the issue with patients, 130 (79.8%) strongly agreed and 19 (11.7%) somewhat agreed. When asked about the skills of treating nicotine dependence only 57 (35%) doctors perceive that they have sufficient knowledge to treat this condition. Physician demonstrated moderate to high level of agreement in that tobacco cessation treatment in general is effective in reducing morbidity and mortality, 93 (57.1%) strongly agreed while 47 (28.8%) somewhat agreed. On the contrary fewer doctors agreed that brief intervention (3 min) for tobacco cessation would be an effective tobacco cessation treatment strategy, 40 (24.5%) strongly agreed, 72 (44.2%) somewhat agreed (Figure 2). When asked about factors (specific barriers) that limit their ability to counsel tobacco users during each visit, lack of time was cited as the commonest barrier 60 (36.8%) followed by the fear that patients might seek another provider if tobacco use is discussed with them 43 (26.4%) and then lack of expertise in counseling the patients 35 (21.5%) (Table 2).

3.5Tobacco Cessation Treatment Practices

Regarding the current tobacco cessation treatment practices, most physicians 128(78.5%) reported that they identified every tobacco user attending the practice. Most doctors 113(69.3%) utilized identification method by

asking verbally about tobacco use during consultation visit; then followed by recording it as a 'vital sign' 26(16%). Very few doctors 6(3.7%) reported that they do not ask about smoking status at all, while 18(11%) physicians do ask about tobacco use status of their patients but they don't any routine method for it.

Forty nine percent (n= 80) physicians reported that they 'always' or 'almost always' make an assessment of their patients tobacco use and another 51(31.3%) performing it 'sometimes' while only 32(19.6%) reported 'rarely' or 'never asking'. More than half of the physicians 100(61.4%) reported 'always' or 'almost always' advising tobacco users to quit while only 6.7% reported 'rarely' or 'never' doing so.

When asked to choose the option that most closely described their practices regarding method of assessing tobacco user's willingness to quit, only 16(9.8%) reported assessing it at every visit, while 47(28.8%) reported assessing during routine check-ups. At the patient's initial visit 34(21%) physicians reported to assess willingness to quit while 53(32.5%), when the patient presented with a tobacco-related health problem (Table 3).

For assisting tobacco user to quit the most often recommendation ('always' and 'almost always') chosen by the physicians was encouraging the patient to use current social support (48.5%), followed by providing practical counseling and problem-solving (32.5%), recommending pharmacotherapy (31.3%), providing educational materials (28.8%) and helping the patient develop a tobacco cessation plan (19.8%) (Figure 3).

4. Discussion

Physicians are uniquely positioned to address the issue of tobacco use in the wider society and in particular helping in patients to quit. It has been estimated that at least 70% of smokers visit a physician each year[15] and a similar number express a desire to quit and make at least one serious attempt to do so.[16] Additionally, smokers cite a physician's quit advice as an important motivating factor and this brief counseling has shown to increase rates of smoking cessation in the general population [25] and lead to a spontaneous quit rate of 2-4%.[14]

Studies across the globe suggest that a patient's desire to quit smoking is correlated with a doctor's instruction to quit.[26, 27] A meta-analyses of 26,000 smokers also confirmed that very brief advice from a physician would significantly increase the rate of quitting smoking among patients. [28, 29] International guidelines recommend that all physicians should inquire about their patients smoking habits at every contact, advice smokers to quit, and use recommended strategies that take only a short time to perform. [17] However, there is a large gap between what is ideal and what is being practiced. Anda and colleagues reported that only 50 percent of the smokers seeing a primary care physician in the past year were asked about their smoking [30] even a smaller proportion was counseled to quit. It is therefore imperative to understand the extent to which local physicians implement effective tobacco cessation treatment practices and identify factors which might help them to do so more rigorously and effectively.

An Australian survey [21] of 311 general practitioners (GPs) demonstrated that doctors lacked the appropriate skills and confidence in providing smoking cessation service and only a fifth of them were confident about discussing a quit date (21.5%) or using evidence-based smoking cessation techniques (19.3%). In contrast, a study from Italy reports a positive attitude by primary care physicians to provide smoking cessation however there is a need to improve their knowledge and skills. [31] Another study from Italy reported only 20% of the patients receiving counseling and only 12% receiving pharmacotherapy.[32] Similarly, in United States, 20.9% received tobacco cessation counseling and 7.6% received pharmacotherapy.[33]

The current study although primarily focused on the smoking knowledge, attitudes, and behavior of practicing Pakistani physicians it also attempted to examine how this impacted there smoking cessation practices. It provides a useful insight into the factors that may influence the promotion of smoking cessation in the clinical setting of our local physicians' knowledge, attitudes & practices and patient population/culture.

The results of this study demonstrate that in general local physicians understand their role in smoking cessation. A fairly high proportion of them perceived the seriousness of the issue around tobacco use and agreed that tobacco cessation is an effective method of reducing morbidity and mortality. However, they did not feel completely confident in the effectiveness of their intervention and lacked specific knowledge and skills about the key elements of interventions (only 5.5% were able to correctly answer all questions based on knowledge and only 26.4% were very confident in recommending appropriate pharmacotherapy). Similar results have been reported in a study by Quinn and colleagues [23] in which patients reported fairly high rates of being asked about smoking status (90%) and being advised to quit (71%), as in our study, but the use of intervention in terms of providing practical help to those attempting to quit was moderately low(49%). Studies on physicians from the US [34] and Hong Kong [35] report that two thirds of them ask their patients about the tobacco use but only 20%-29% advise them to actually quit. We believe that our finding duplicate this, where 78.5% of the physicians ask about tobacco use and only 35% advise them on every visit to quit. This stems from the physicians not having sufficient confidence and specific knowledge pertaining to the interventions and skills required to successfully implement and manage smoking cessation.

For effective and successful tobacco cessation treatment physicians require strong knowledge and belief

in the long term efficacy of treatment strategies. Various studies demonstrated the importance of physicians' thorough tobacco cessation knowledge, established office systems and availability of specific resources that support physicians' for implementation of effective tobacco cessation intervention.[17, 36, 37] Majority of our respondents found to be generally comfortable with discussing tobacco cessation with their patients, but their comfort level to develop a smoking cessation plan and recommending appropriate pharmacological treatment was lower.

Some limitations of the study are that it relies on self-reported questionnaire which can be biased for some social reasons. There may be a recruitment bias as physicians with interest in the smoking related issues may have consented. Furthermore, this study surveyed physicians from only one city and results may not be representative of the physician all over the Pakistan.

5. Conclusion

Majority of local physicians recognize the seriousness of problem around tobacco use and the pressing need to address it in their clinical practice. They understand the magnitude of benefit from smoking cessation and their pivotal role in implementing it. Although, they feel that they possess the knowledge and information related to smoking cessation they are unaware of the effective methods and lack the skills to implement the tobacco cessation treatment strategies consistently. . Therefore effective physicians' training skill building through practical training in order to improve their capacity to intervene in the field of tobacco cessation is required.

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Contributions:
MN has contributed to conception and design, interpretation of data, drafting the manuscript and revising it critically for important intellectual content. MI has made contributions to conception and design, interpretation of data, drafting the manuscript and revising it critically for important intellectual content. MM has made contributions to interpretation of data and drafting the manuscript. ZW has made contributions to acquisition and interpretation of data; and in drafting the manuscript. ASH has made contributions to acquisition and interpretation of data; and in drafting the manuscript. ABZ has made contributions to analysis and interpretation of data and in drafting the manuscript. JAK supervised the overall project and helped in finalizing the manuscript. All authors read and approved the final manuscript.
Competing Interests: The authors declare no conflict of interest

Table 1: Demographic profile of the study participants

Variables	n (%)
Gender	
Male	133(81.6)
Female	30(18.4)
Number of years of practice	
<5 years	61(37.4)
5-10 years	40(24.5)
>10 years	62(32)
Specialty of practice	
General physician	89(54.6)
Chest physician	26(16)
Others	48(29.4)

Table 2: Barriers to Tobacco Cessation Treatment Practices among physicians

Self-reported barriers	Percentage
• I don't have enough time	36.8
• Patient might seek another provider if I discuss tobacco use with him/her	26.4
• Lack of experties	21.5
• Tobacco cessasion is low priority for me	21.5
• Respect of patient privacy	5.5

Table 3: Physician's tobacco cessation treatment practices

Variables	n(%)
Identifying every patient for tobacco use	
Yes	128(78.5%)
No	35(21.5%)
How do you assess tobacco use status	
Asking verbally during examination	113(69.3%)
Record it as a vital sign at each visit	26(16.0%)
No routine method	18(11.0%)
Generally donot asses	6(3.7%)
Frequency of assessing patient for tobacco use	
Never	11(6.7%)
Rarely	21(12.9%)
Sometimes	51(31.3%)
Almost always	50(30.7%)
Always(every visit)	30(18.4%)
Frequency of advise on tobacco cessation	
Never	11(6.7%)
Rarely	17(10.4%)
Sometimes	35(21.5%)
Almost always	43(26.4%)
Always(every visit)	57(35%)
Frequency of assessing tobacco user's willingness to quit	
Initial visit	34(20.9%)
During routine check-ups	47(28.8%)
When patient presents with a tobacco related health problem	53(32.5%)
At every visit	16(9.8%)
No routine time	11(6.7%)
Generally donot asses	2(1.2%)

Figure 1: Physician's level of confidence regarding tobacco cessation strategies

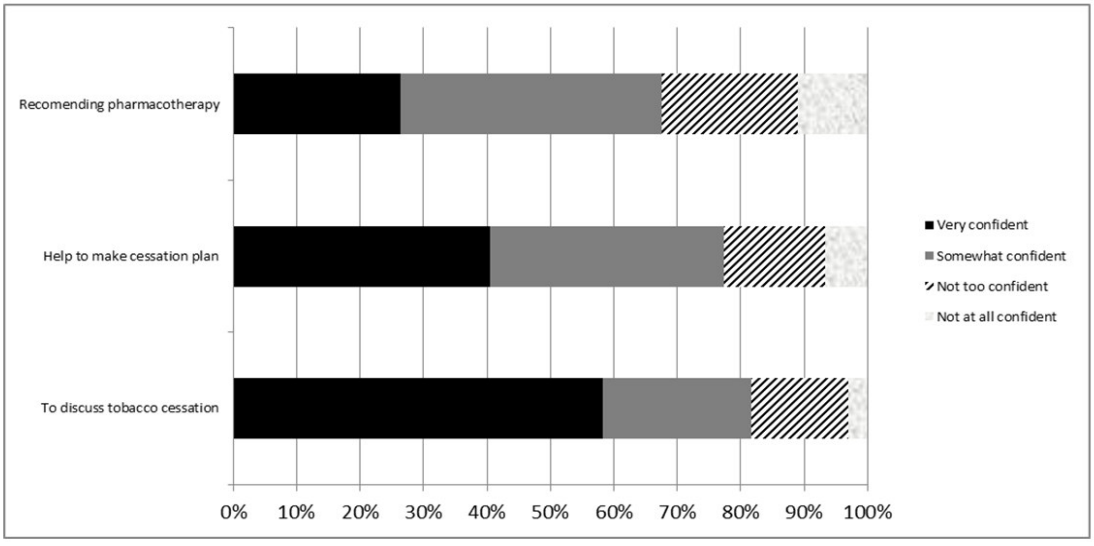


Figure 2: Percentage of responses indicating attitudes towards tobacco cessation treatment

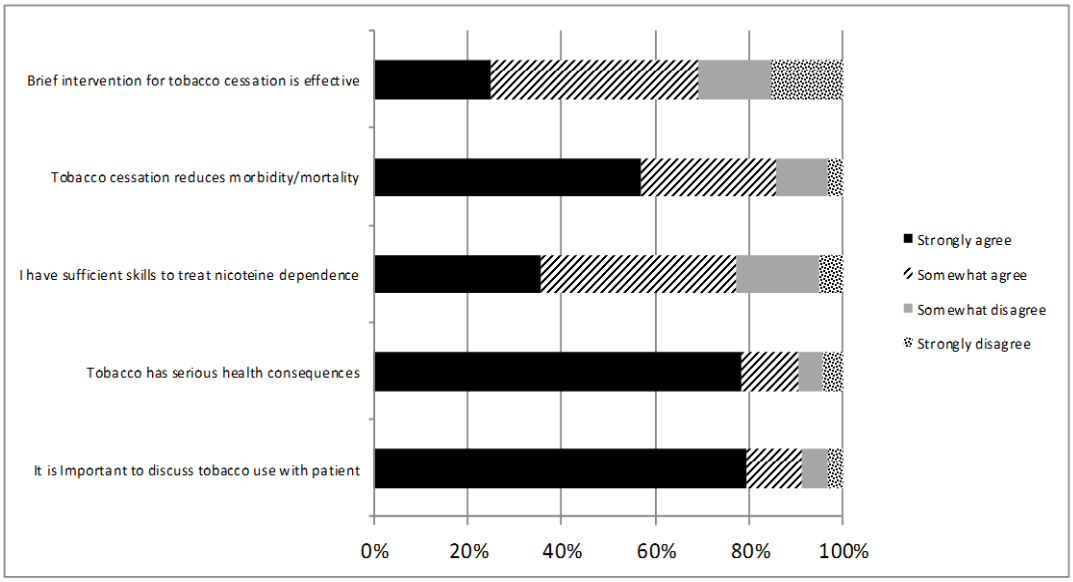
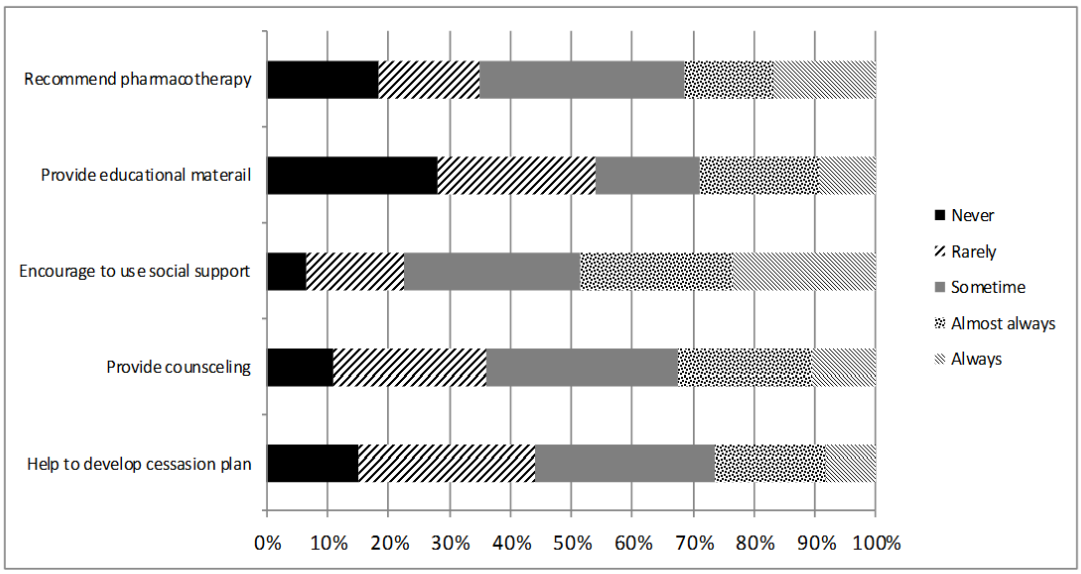


Figure 3: Tobacco cessation treatment practices: percentage of measures taken by physicians to assist their patients in smoking cessation



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