ORIGINAL ARTICLE

Knowledge of female doctors about smoking risks and their attitude toward cessation in antenatal clinics — perspective from tertiary care hospitals in Karachi

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Abstract

Objective: To assess the knowledge and attitude of doctors with regard to smoking risks and cessation, and to identify factors associated with self- reported assessment of smoking.

Methods: This cross-sectional survey was performed in 5 hospitals of Karachi from February to April 2014, and comprised doctors providing antenatal care. Data was collected using a questionnaire. SPSS 21 was used for data analysis.

Results: Of the 164 respondents,150(91.5%) considered the assessment of smoking an integral part of their medical responsibilities, but only 53(32.4%) reported that they asked regarding smoking habit in 100% of patients and 77(47.3%) inquired about passive smoking. The mean knowledge score for risks and cessation was 2.57±0.278 and 2.12±0.457, respectively. A few misconceptions were also found, such as 94(57.3%) doctors were against the use of nicotine replacement therapy in pregnant females and 114(69.4%) falsely believed that smoking was associated with pre-eclampsia. Factors independently associated with good baseline knowledge were: formal training (p=0.01) and hospital's smoke-free policy (p=0.004). Doctors with formal training more frequently assessed smoking habit of their patients and were more confident while counselling patients for smoking cessation (p=0.05).

Conclusion: Basic misconceptions showed inadequate knowledge among doctors working in antenatal clinics.

Keywords: Smoking, Pregnancy, Postgraduate trainees. (JPMA 67: 1809; 2017)

Introduction

Tobacco smoke exposure during pregnancy is a major health concern globally. A survey assessing exposure of pregnant females to active and passive tobacco smoking from 9 developing nations including Pakistan was conducted by Bloch et al. Overall smoking frequency among pregnant females from Pakistan in that survey was 3%, but more than 90% of them reported positive approval for tobacco smoking within their home premises and 49.9% were frequently or always exposed to indoor tobacco smoking.[1] Recent data from Hyderabad, Pakistan, showed smoking prevalence of 60.57% among pregnant females while exposure to passive smoking was found to be 56%.[2]

Antenatal tobacco exposure is believed to cause adverse consequences in both mother and baby; most notable are premature labour, placental abnormalities, low birth weight, peri-natal mortality, and sudden infant death syndrome (SIDS).[2-5] The assessment of smoking status, advice and support for smoking cessation are critical part of antenatal care. Data supported higher quit rates and reduction in number of cigarettes smoked per day during pregnancy among females.[3,6] Quit rate was 21% among Australian women while additional 46% females reduced their smoking during pregnancy.[4] To date no study focusing on the behaviour and attitude of health care providers working in antenatal clinics with regard to smoking assessment and cessation advice has been done in Pakistan. The current study was planned to assess the mentioned fields among doctors working in antenatal clinics and also to identify factors associated with self-reported assessment of smoking.

Subjects and Methods

This cross-sectional study was conducted in five major tertiary care centres providing antenatal care in Karachi from February to April 2014, and comprised doctors.

Multi-stage sampling was used. In the first step, we selected the hospitals across the city. To the best of our knowledge, there were 10 major tertiary care hospitals in Karachi offering gynaecology services and postgraduate training programmes. These hospitals were located in different areas and catered to different socio-economic classes. For the generalisation of data we divided these hospitals according to geographical areas into five categories, and then randomly selected one hospital from each category and, therefore, covered all major areas of city. The hospitals we

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included in our study were Civil Hospital from Saddar town, Liaquat National Hospital from East district, Jinnah Postgraduate Medical Centre (JPMC) from South district, Sobraj from Kharadar and Ziauddin Hospital from North Nazimabad.

In the second step, we selected doctors from different designations providing antenatal care to female patients in selected 5 hospitals. The human resources department of each hospital was contacted before the data collection. Details of the number of postgraduate trainees working in all different programmes, i.e. Fellowship of the College of Physicians and Surgeons (FCPS) and Membership of the College of Physicians and Surgeons (MCPS), medical officers, house officers and consultants were taken from them. The number of doctors was 317, and 70% of them belonged to government hospitals and 30% to private hospitals. The sample size was calculated at confidence interval (CI) of 95% with 5% margin of error.

Doctors' selection was performed via convenience sampling method. The doctors were approached in outpatient department (OPD) before starting time. Questionnaires were distributed after taking verbal consent. The average time to fill the questionnaire was ten minutes and the researcher was present there during that time and collected it on the spot.

The questionnaire was inspired by a similar survey done in Australia in 2008-09.[3] For preparing the questionnaire, help was also taken from World Health Organisation's (WHO) Global Health Professional Survey, which was a self-administered questionnaire developed by Tobacco Free Initiative, a project of the WHO, Centres for Disease Control and Prevention and other partners.[7]

The questionnaire had 34 questions. Its initial part covered demographics of study population including biodata, i.e. age, gender, position and personal smoking status. Details of worksite smoking policies were also asked. The questionnaire had 3 sections covering: Knowledge regarding risks of smoking during pregnancy; Attitude in advising pregnant women to quit smoking; Knowledge regarding smoking cessation.

Questions inall 3 sections were presented as statements and the respondents were requested to express their view on a three-point Likert scale (agree, unsure, disagree). Later on, the percentages of respondents agreeing with the statements were calculated in score. Reliability of the questionnaire was checked through inter-item consistency and all Cronbach's alpha values were greater than 0.7. Validity was checked through factor analysis. High factor loading within factor confirmed convergent validity and low factor loading between factors confirmed divergent validity.

Ethical approval was taken from the ethics committee of the JPMC.

Statistical analysis was performed using SPSS 21. The association of different factors with acquired formal training was examined using chi-square univariate test for categorical variables and the non-parametric test for continuous variables.

Results

Of the 174 doctors, 164(94.3%) responded. Of them, 123(75%) belonged to the government sector while the remainder were from private. Moreover, 102(62.2%) doctors were postgraduate trainees, 12(7.3%) were non-training medical officers, 44(26.8%) were house officers and 6(3.7%) were consultants. All respondents were female doctors. The overall mean age was 27.29±3.99 years (range: 23-52 years). Besides, 109(66.5%) doctors had work experience of 5-10 years while 47(28.7%) doctors had less than a year. Only 6(3.8%) of the doctors reported positive personal history of smoking. Also, 150(91.5%) participants considered the assessment of smoking as an integral part of their medical responsibility, but 53(32.4%) reported that they asked regarding smoking habit in 100% of patients.

The overall mean scores for knowledge of smoking risks during pregnancy and knowledge regarding smoking cessation techniques were 2.57±0.278 and 2.12±0.457, respectively, but there was significant difference in subgroups. Score for attitude was comparatively low, i.e. 2.05±0.252 (Table-1).

A few major misconceptions were noted among

Table-1: Association of smoking polices with all 3 categories.

	Smoking not allowed (39.6%)	Smoking allowed (60.4%)	P-value
Knowledge score regarding risks during pregnancy (mean)	2.64	2.52	0.004
Attitude score	2.02	2.06	0.224
Knowledge regarding Cessation score	2.22	2.06	0.013

Table-2: Demographic characteristics of doctors.

Designation	Doctor who receive formal training (n%)	Doctors who never receive formal training	P-value
House officer	(16)25.4	(28)27.7%	
Medical officer	(6)9.5%	(6)5.9%	0.404
Postgraduate trainees	(37)58.7%	(65)64.4%	
Consultants	(4) 6.3%	(2)2%	
Type of hospital/service			
Government	(46)73%	(8219)81.2%	0.222
Private	(17)27%	(19)18.8%	
Duration of experience			
< 1 year	(18)28.6%	(29)28.7%	
1-5 years	(41)65.1%	(68)67.3%	0.798
5.1-10 years	(1)1.6%	(2)2%	
>10 years	(3)4.8%	(2)2%	
Frequency of assessment of smoking habit			
Always	(26)41.3%	(28)27.7 %	
Some times	(35)55.6%	(63)62.4%	0.07 (at 10%)
Never	(2)3.2%	(10)9.9%	

respondents. For instance, 114(69.4%) doctors reported incorrectly that smoking was associated with pre-eclampsia and 94(57.3%) doctors believed that nicotine replacement therapy (NRT) should not be used during pregnancy. Only 39(23.8%) doctors agreed that smoking should be stopped right away while 78(47.4%) thought it should be done gradually. Although 131(80%) doctors agreed that passive smoking was harmful during pregnancy, 86(52.7%) never inquired about it.

Difference in knowledge score was neither significant between doctors working in government versus private hospitals nor among doctors with different years of experience in the same institute.

Furthermore, 65(39.6%) doctors worked in hospital with strict no-smoking policy while 68(41.5%) had no proper anti-tobacco law and another 9(5.5%) doctors reported proper smoking rooms within their hospital premises. Knowledge scores were significantly high in group of doctors working in hospitals with strict no-tobacco smoking policies when compared to doctors who worked in hospital with no policy or have smoking rooms available (p=0.004) .

Only 60(38.4%) doctors received some kind of formal training in smoking cessation approaches. Of them, 27(6.7%) received it during medical schools, 31(19.2 %) during postgraduate training and 2(1.2%) attended special seminars or workshops. Knowledge regarding smoking cessation (p=0.013), knowledge regarding risks (p=0.073, CI 90%) and frequency of assessment during follow-ups visits was high in doctors who received any kind of formal training in the past.

When specific question was asked that how well prepared the doctors felt during smoking-related counselling, only 16(9.8%) felt very well prepared; among them, 12(75%) received formal training. Moreover, 98(59.8%) doctors said they were somewhat prepared and 50(30.55%) believed that they were not at all prepared (Table-2).

Discussion

Healthcare providers working in antenatal clinics are the best agents to assess, advice and support smoking cessation as they have multiple interactions with pregnant women,[3] but available data around the world does not reflect promising results in this regard.[5] Although 86% pregnant females disclosed being assessed for smoking behaviour on their first antenatal visit in an Irish study, only 18% reported being assessed in subsequent visits and 25% of smokers were given cessation advice.[5,8] Australian studies have also reported low cessation advice rate despite having high rates for smoking assessment.[5] Results in the present study are consistent with this observation with low scores for attitude in advising women to quit smoking.

Inadequate knowledge due to absence of structured training programme in smoking cessation techniques

among doctors has been repeatedly identified as an important barrier in effectiveness of smoking cessation counselling.[3,9,10] Djalaliani et al. in an Iranian study reported that only 28.3% doctors were found to be confident in handling counselling against smoking and young doctors, with better knowledge, were more willing to take part in these sessions.[10] Another study from Switzerland demonstrated similar results. Double number of patients received adequate counselling after the introduction of systematic training on smoking cessation among residents.[11] The present study strengthens this idea of introducing a formal training programme among doctors in smoking cessation techniques. The WHO also recommends adopting a training curriculum for antenatal health care providers.[12]

Doctors working in strict no-smoking environment appeared to be better informed about smoking hazards and cessation techniques. Hospitals are amongst the most influential institutions to promote smoke-free environment and should implement strict anti-tobacco laws on the premises with efforts to reach out to the masses to reduce prevalence of smoking.[13]

Moreover, pregnancy provides a unique window of opportunity for creating smoke-free families.[12,14,15] A Lebanese study reported that 40% husbands brought change in their smoking behaviour while their wives were pregnant.[16] Exposure of pregnant female to passive smoking has already proven to be a major concern in our country.[1,2] In the present study, although most doctors agreed to passive smoking being harmful for pregnant women, about half of the respondents admitted never inquiring about it. This issue needs to be addressed specifically while designing training curriculum for smoking cessation techniques.

Based on present study's finding, efforts should be made in teaching hospitals to include smoking assessment and cessation techniques in the postgraduate training curriculum. Seminars and workshops should be arranged targeting special situations like antenatal tobacco exposure consequences and management. Health care facilities should also revise their policies regarding implementation of strict no-smoking policy in and around the premises and display of antismoking posters should be encouraged in the clinics, as it would serve as a reminder for doctor as well as patients.

The current study had a few limitations. Firstly, it was a cross-sectional survey concentrating only on one city. Among pharmacological aides, only the use of nicotine replacement therapy has been focused. For more accurate assessment a country-wide survey should be undertaken.

Conclusion

Basic misconceptions showed inadequate knowledge among doctors working in antenatal clinics. There is a dire need of training our doctors in this particular field. This will increase their knowledge, confidence and ability in dealing with such issues and help in increasing the frequency and effectiveness of counselling. Also hospital policies need to be evaluated regarding prohibition of smoking on premises.

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