Tobacco prevention: Knowledge and attitude of oncology nurses in a tertiary care hospital of the national capital of India

Jithin Thomas Parel Mr
Metro College of Nursing, Greater Noida, Uttar Pradesh, jithuparel@gmail.com

Deepika C. Khaka Ms
College of Nursing, All India Institute of Medical Sciences, New Delhi

Y PS Balhara
College of Nursing, All India Institute of Medical Sciences, New Delhi

Tobacco prevention: Knowledge and attitude of oncology nurses in a tertiary care hospital of the national capital of India

Jithin Thomas Parel*, Deepika C Khakha, YPS Balhara

Email: jithuparel@gmail.com

Abstract

Introduction: Tobacco use has alarmingly increased over the years across the world. Nurses have a pivotal role in facilitating comprehensive care in tobacco prevention. It ensures to curb the mortality and morbidity of tobacco related diseases including cancer. Therefore, the knowledge and attitude of nurses is an indispensable ingredient in delivering effective health education especially in oncology settings. **Methods:** A descriptive survey was undertaken on a sample of 45 nurses working in the Department of Medical Oncology of All India Institutes of Medical Sciences (AIIMS), New Delhi after obtaining institutional ethical clearance. The subjects were assessed using self-developed knowledge questionnaire and 5-point Likert attitude scale. Reliability and validity of the tool were established. Reliability was evaluated by test-retest method and the Chronbach alpha was found to be 0.88 for knowledge questionnaire and 0.86 for attitude scale. The data were analyzed using descriptive and inferential statistics. **Results:** More than half had moderate knowledge about the prevention of tobacco use 31 (69%) followed by good knowledge with 8 (18%) and 6 (13%) had poor knowledge. Majority of the oncology ward nurses 32 (71%) had positive attitude and 13 (29%) had neutral attitude. There was a weak positive correlation found between present experience and knowledge regarding prevention of tobacco use.

Key words: Tobacco, oncology, nurses, knowledge, attitude

Introduction

Tobacco use kills almost six million people across the globe per year. According to the World Health Organization (WHO) statistical report, about 100 million deaths were reported as premature due to the use of tobacco in the 20th century and if the same situation continues, the death rate can be expected up to one billion by the 21st century (WHO 2011).

Tobacco consumption in any form is a silent killer, which causes havoc in human lives with its procession of diseases including cancer, lung disorders, respiratory problems, and even addictive behaviours. Here comes the significance of tobacco prevention. Oncology nurses are in a better position to promote tobacco prevention strategies while dealing with their patients and caregivers. However, it is an irrefutable fact that the current tobacco prevention and cessation practices focuses only on motivated smokers who are ready to quit, but the vast hidden majority of smokers are neither motivated nor willing to stop tobacco use. This means the strategies and procedures which are currently on practice are ineffective and insensitive for a large number of people with tobacco dependence (Kelland, 2013; Sarna & Bialous, 2005).

Nurses have a leadership role in collaborating these services with other healthcare professionals in concerned area of practice (Malone, 2006). Moreover, they can take up a predominant position in motivating their patients. All primary care providers including nurses

Jithin Thomas Parel¹, Deepika C Khakha², YPS Balhara³

¹*Assistant Professor, Metro College of Nursing, Greater Noida, Uttar Pradesh*

²*Faculty, College of Nursing, All India Institute of Medical Sciences, New Delhi*

³*Associate Professor of Psychiatry, Department of Psychiatry, All India Institute of Medical Sciences (AIIMS), New Delhi*

can take part in laying and building the foundation of tobacco control strategies and follow up services for their patients. Nurses have a key role to assist patients to change their attitude and behaviour related to the deleterious repercussions of tobacco use and they can lend a hand to the patients to bow out tobacco use. Nevertheless, oncology nurses' factual knowledge and positive attitude regarding tobacco prevention is needed to cater to the needs of the patients' grave concerns pertaining to harmful usage.

Banu (2014) conducted a study among staff nurses in a multispecialty hospital at Bangalore to determine the self-reported prevalence of smoking status, knowledge towards health risk of smoking and practicing smoking cessation care to the patients among the nurses. Irrespective of gender, nurses possessed good knowledge, but male subjects' practice was significantly (χ^2=2.254, *p*=.132) high than female. The mean score was 31.69± 6.260 and 28.7 ±8.35 for knowledge and practice, respectively. There was positive correlation between knowledge and practice (*r* = .400 at *p*= .01 level).

Similarly, Chan (2007) carried out a cross-sectional survey among 2,888 nurses from four main cities (Beijing, Shanghai, Guangzhou, and Chongqing) in China revealed the knowledge, attitude, and practice (KAP), regarding perception of competency in instituting smoking-cessation strategies. Nurses who were trained previously reported greater proficiency in translating smoking-cessation strategies and persistent application of the same. But majority of the nurses in China reported some knowledge and seldom practice in smoking-cessation interventions. The author recommended to include tobacco control and cessation knowledge in nursing curricula in China to reduce tobacco related mortality and morbidity in the country.

Lally, Chalmers and Johnson (2008) analysed the smoking pattern and patient education strategies among nurses working in oncology from six different countries. The author urged that nurses need to actively participate in directing human talent as well as material resources towards public awareness, which require intensive training. Salter (2006) reported in a study that the attitude and knowledge of nurses towards the use of tobacco and its cessation have a positive impact on

assessing smoking pattern, giving brief counseling, the follow up treatment and proper referral services by the health professionals.

Houghton, Marcukaitis and Marienau (2008) conducted a survey to evaluate the current care practices and approach of certified registered nurse anaesthetists (N= 439) toward tobacco interventions. Majority of the subjects (92%) reported a favourable attitude in practicing a routine assessment of their patients' smoking behaviours in their clinical areas. However, most do not routinely practice the same because of the shortage of time to intervene and inexpertness.

Rice (2004) concluded in his study that prevention of tobacco related morbidities, disability and mortality could be attained through the prevention of tobacco use, stopping consumption, assisting the smokers to quit, abstain and to avoid exposure to passive smoking. The author recommends nurses to deliver evidence based interventions focusing on tobacco dependence and thereby reduce tobacco use significantly. Schultz (2006) conducted a cross sectional survey among 365 registered nurses to describe their views of and practice related to tobacco reduction. The nurses honestly reported a feeling of unpreparedness and limited institutional support in tobacco prevention practices.

In this context, the current study aimed to assess the knowledge and attitude of nurses towards prevention of tobacco working in the Department of Medical Oncology, AIIMS, New Delhi. The present study examined the various factors like age, sex, religion, educational qualification, total work experience, experience in the oncology ward, pre-service education and in-service education that can influence nurse's knowledge and attitude regarding prevention of tobacco use. The key concept of this study was to explore the mutual interaction of nurse's knowledge and attitude regarding prevention of tobacco use and their interaction with selected variables. To be more precise, as the knowledge increases there is likely to be more influence on the development of attitude and vice–versa. The objectives of the study were to assess the knowledge and attitude towards prevention of tobacco use among nurses in medical oncology ward and associate and correlate knowledge and attitude with selected demographic variables of the nurses in

the Department of Medical Oncology, AIIMS, New Delhi.

Materials and Methods

The present study used a cross-sectional design in a quantitative approach. Nurses who were working in the Department of Medical Oncology, AIIMS, New Delhi, with a minimum of one year experience were selected for the study through the total enumeration technique. Based on the objectives of the study, self-administered structured questionnaires and rating scale were developed by the researcher.

Tool 1: Structured questionnaire (30 items) had two parts. Part-1 was designed to elicit the socio-demographic details of the subjects and some selected variables specific for the study. The part-2 consisted of items to explore the knowledge level of nurse regarding prevention of tobacco use. The main domains identified were tobacco constituents, physiological effects, and adverse effects, laws pertaining to tobacco, psychological interventions of tobacco prevention, and pharmacological interventions for tobacco prevention. The scores (maximum score= 30) were graded as, very good knowledge >86%, good knowledge 70-85%, moderate knowledge 50-69% and poor knowledge <50%.

Tool 2: An attitude scale was developed by the researcher with 15 items that makes assessment on five point Likert scale. The positively worded items were seven and negatively worded items were eight. It measured the attitude of subjects regarding prevention of tobacco use. Score ranges from 5 to 0 for positively worded items, which ranges from strongly agree, agree, uncertain, disagree and strongly disagree and for negatively worded items it is 0 to 5 which ranges from strongly agree, agree, uncertain, disagree and strongly disagree. Total score is 75. The scores were graded as, Positive attitude >70%, Neutral attitude 50-70%, and Negative attitude <50%.

Validity and reliability: Content validity of knowledge questionnaire and attitude scale was established by five experts. Reliability of tool 1 and tool 2 was established by test-retest method and the Chronbach' alpha was found to be .88 for knowledge questionnaire and .86 for attitude scale.

Ethical clearance: Ethical clearance was obtained from ethical committee of AIIMS. Pilot study was conducted in AIIMS hospital Department of Medical Oncology on 10 subjects to assess the feasibility of the study written informed consent was taken from the subjects.

Data analysis: The data were analysed using statistical package SPSS17.0 and appropriate descriptive and inferential statistics were used. Inferential statistics i.e. independent t-test

(was done to compare the means of two different variables like male and female), one way ANOVA (used to compare means of more than two different variables), Pearson's correlation (parametric test used to find out the correlation between the variables) and Spearman's correlation (non-parametric test used to find out the correlation between the variables). $p < 0.05$ level was considered to be significant.

Results

Demographic and experience profile of the nurses were assessed with descriptive statistical methods. Variables analysed were age, sex, education, years of experience and designation.

Table 1:
Demographic and Experience Profile of the Nurses

N=45

Variables	Oncology nurses Mean ± SD
Age (In years)	30.93 ± 6.93
Total Experience (in years)	7.13 ± 6.66
Experience in their concerned area (in years)	4.02± 4.031
Variables	**Frequency (percentage)**
Sex	
Male	14(31)
Female	31(69)
Education	
GNM	17(38)
BSc	23(51)
BSc(PC)	4(9)
MSc	1(2)
Designation	
Sister Grade -1	3(7)
Sister Grade-2	41(91)
ANS	1(2)

As shown in Table No 1, the mean age of the medical oncology nurses was 30.93±6.93 in years. With regard to gender majority were females with a percentage of 69% and males with 31%. With respect to educational status more than half completed BSc Nursing (51%) and most of them (91%) are with designation of Sister grade-2. Nurses in Medical Oncology department (36%) agreed that knowledge of tobacco is moderately important in their work. Majority 42(93%) of medical oncology nurses had not attended in-service education.

Table 2:
Knowledge Regarding the Prevention of Tobacco Use among Medical Oncology Nurses

N=45

Knowledge category	Frequency	Percentage	Mean ± SD	Min - Max
Very good knowledge (> 86)	0	0		
Good knowledge (70-85)	8	18	17.78 ± 3.528	9-25
Moderate knowledge (50-69)	31	69		
Poor knowledge < 50	6	13		

As depicted in the Table 2, knowledge score of medical oncology nurses was 17.78±3.528 out of a maximum possible score of 30. More than half had moderate knowledge 31(69%) followed by good knowledge 8(18%), 6(13%) had poor knowledge.
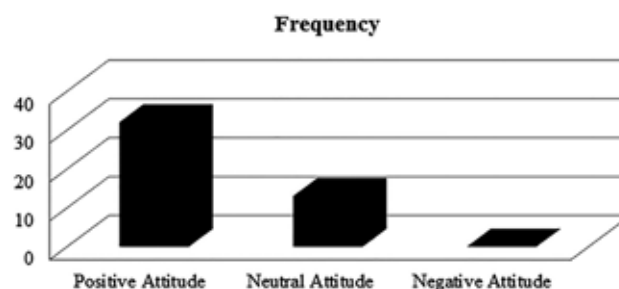

Figure 1: Bar diagram elucidates the attitude regarding prevention of tobacco use among medical oncology nurses

(N=45)

As shown in Figure 1, the mean attitude score of oncology nurses towards prevention of tobacco use was 57.27±7.46 out of maximum possible score of 75. Majority of the oncology ward nurses 32(71%) had positive attitude, 13(29%) had neutral attitude.

Table 3:
Association of Knowledge and Attitude Score of Medical Oncology Nurses with Selected Variables

N=45

Variable	Frequency	Mean knowledge score ± SD	F value	p value	Mean attitude score ± SD	F value	p value
Sex[a]							
Male	14	16.71±3.60	0.255	.174	59.92±8.93	0.109	.343
Female	31	18.25±3.44			56.05±6.51		
Education[b]							
GNM	17	18.29±3.78			55.52±6.70		
BSc	23	17.39±3.56	0.203	.894	58.26±6.31	2.213	.101
BSc (PC)	4	17.75±3.20			55.00±13.08		
MSc	1	18			73		
Designation[b]							
Sister Grade-I	3	20.33±3.21	1.085	.347	51.33±6.022		
Sister Grade-II	41	17.53±3.53			57.36±7.22	2.864	.068
ANS	1	20.00	1.085	.347	71.00		
In-service education[a]							
Yes	3	19.33±2.08	0.790	.436	61.66±9.01	0.024	.879
No	42	17.66±3.59			56.95±7.37		

a- Independent t test, b- ANOVA, p< .05

As shown in Table 3, there was no significant association between sex, education and designation of nurses with knowledge and attitude of nurses working in medical oncology towards prevention of tobacco use.

Table 4:
Correlation of Knowledge and Attitude Score of Medical Oncology Nurses with Selected Variables

Variables	Knowledge		Attitude	
	r value	*p* value	*r* value	*p* value
Age in years[a]	.236	.118	-.075	.626
Total experience[b]	.226	.147	-.128	.403
Present experience[b]	.331	**.026***	.08	.626

a - *Pearson's correlational coefficient*, b-*Spearman's correlational coefficient*, **p<.05*

As shown in Table 4, there was a weak positive correlation found between present experience and knowledge regarding prevention of tobacco use with p value of .02. There was no significant positive correlation found between age and total experience.

Discussion

The majority of study participants were females (69%) with a mean age of 30.93±6.93 years with a total experience of 7.13± 6.66 years which is apparently comparable with the Sreedharan, Muttapallymyalil and Venkatramana (2010) who carried out a cross sectional study among 108 nurses and assessed their attitude in providing tobacco cessation counseling. They reported that the 87% nurses were females, in an age group between 25 and 34 years and most of them had a work experience of less than 5 years (46.3%).

The major finding in the current study was that more than half had moderate knowledge 31(69%) followed by good knowledge 8(18%), 6(13%) had poor knowledge. Similarly, Chan, Sarna, Wong and Lam, (2014) reported that most of the nurses underestimated the risk of tobacco use where they believed that tobacco use is roughly similar to air pollution (89.7%) or the consequences are similar to the alcoholism (48.2%), which demands further continuous educational programs on tobacco prevention.

Majority of the oncology ward nurses in the current study 32 (71%) had positive attitude, 13(29%) had neutral attitude, which revealed the mutual interaction of knowledge and attitude regarding prevention of

tobacco use and promoting tobacco cessation in their patients. The study findings were in accordance with Sreedharan et al. (2010) where the researchers found that majority (99%) of nurses felt that the hospital stay is as an appropriate time to create awareness on tobacco cessation to the patients and they had a favourable positive attitude towards tobacco prevention strategies. Only 0.9% had a negative attitude towards creating awareness on tobacco cessation and health as they felt that patients might not be interested in that.

In the present study, there was a weak positive correlation between present experience and knowledge regarding prevention of tobacco use at p<0.05. A similar finding was reported by Lally, Chalmers and Johnson (2008). While many nurses (74%) reported a routine assessment of smoking status of patients, only 50% had discussed cessation strategies with their patients who smoke. Although a great number of respondents (80%) felt comfortable in asking their patients about their smoking behaviour, among them, only 23% felt it as a part of nurse's role. The findings signify that while oncology nurses recognize their role in smoking cessation practices, internationally, significant room for improvement exists in decoding this into practice.

Conclusion

A competent professional who can facilitate smoking cessation not only needs sufficient knowledge but also serves as a role model with a positive attitude towards smoking cessation. The World Health Organization (WHO) encourages health professional including physicians, nurses and pharmacist to take a leadership role in reducing the use of tobacco. As most of the nurses (71%) had positive attitude towards the prevention of tobacco use, they can easily facilitate cessation practices in both outpatient and inpatient oncology settings.

References

Banu., M. R. (2014), Nurses' Smoking Status, Smoking Related Knowledge and Practice on Smoking Cessation Care to the Patients. *International Journal of Healthcare Sciences*,2(1), 79-87, retrieved from: http://www.researchpublish.com.

Chan, S. S., Sarna, L., & Wong, D.C. (2007). Nurses' tobacco-related knowledge, attitudes, and practice in four major cities in China. Journal of Nursing scholarship 39:46-53.

Houghton, C. S., Marcukaitis, A. W., & Marienau, M.E.S. (2008), Tobacco intervention attitudes and practices among certified registered nurse anesthetists. *Nurse Researcher*, 57, 123-7.

Sreedharan, J. Muttapallymyalil, M. & Venkatramana, M. (2010). Nurses attitude and practice in tobacco cessation care to the patients. *Journal of Preventive Medicine and Hygiene,51,* 57-61.

Kelland, K. (2013). Huge Tobacco use in India. (online) retrieved on 12/9/2013 from http://www.reuters.com/article/2013/09/12/us-india-tobacco- .

Lally, R. M., Chalmers, K. I. & Johnson, J. (2008). Smoking behavior and patient education practices of oncology nurses in six countries. *European Journal of Oncology Nursing, 12*, 372-9.

Malone, R. E. (2006). Nursing's involvement in tobacco control: historical perspective and vision for the future. *Nursing Research Journal, 55*(4 Suppl), S51-7.

McEwen, A. & West, R. (2001). Smoking cessation activities by general practitioners and practice nurses. *Tobacco Control,10* (1):27-32.

Rice, V. H. & Stead, L. F. (2004) Nursing interventions for smoking cessation. *Cochrane Database of Systematic Reviews*; Issue 1. Art. No...CD001188.pub3

Sarna, L. & Bialous, S. (2005), Tobacco control in the 21st century: a critical issue for the nursing profession. *Research and Theory for Nursing Practice,* 19, 15-24.

Schultz, A. S., Johnson, J. L., & Bottorff, J. L. (2006). Registered nurses' perspectives on tobacco reduction: views from Western Canada. Canadian Journal of Nursing Research, 38(4), 192-211. PubMed - indexed for MEDLINE 17290963

Slater, P., McElwee, G., & Fleming, P. (2006). Nurses' smoking behaviour related to cessation practice. *Nursing Times*, 102 (19), 32-7.

Chan, S., Sarna, L., Wong, D.C.N., & Lam, T. (2014). Nurses' Tobacco-Related Knowledge, Attitudes, and Practice in Four Major Cities in China. *Journal of Nursing Scholarship*, *39*(1), 46-53. Retrieved from: https://www.researchgate.net/publication/51377384

The MPOWER package, (2011) warning about the dangers of tobacco. Geneva: WHO; WHO Report on The Global Tobacco Epidemic (online) retrieved from: http://www.who.int/tobacco/global_report/2011/en/