

## ORIGINAL RESEARCH

# Assessment of Knowledge Regarding Hazards of Tobacco use among Indo Tibetan Border Police Personnel Stationed at Bhanu, Panchkula (Haryana): A Cross-sectional Study

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## ABSTRACT

**Introduction:** Tobacco is a serious threat to health and ranks second as a cause of death globally. The worldwide tobacco-related mortality rate reached up to 4 million per year in 1998 and is expected to become 10 million per year in 2030. This is more than the total deaths from tuberculosis, malaria, maternal, and major childhood conditions combined.

**Objective:** The aim is to assess the level of knowledge regarding hazards of tobacco use among Indo Tibetan Border Police personnel stationed at Bhanu, Panchkula (Haryana).

**Methodology:** This study design was a cross-sectional study conducted at ITBP Station, Bhanu, Panchkula. Data involve 120 ITBP police personnel from different ranks from different states of India; the pilot study was done with 10% of a total sample size. The study data were collected through pre-tested structured questionnaire. Before collecting the data, the written informed consent was obtained from the ITBP personnel. Based on the objective, the data were analyzed using descriptive statistics.

**Results:** The 16.7% of ITBP personnel had the average knowledge and 80.8% were had good knowledge about the hazards of tobacco use.

**Conclusion:** The majority ITBP personnel had average and good knowledge about hazards of tobacco use.

**Keywords:** hazards, ITBP personnel, smoking, tobacco.

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## INTRODUCTION

Tobacco use is a serious public health challenge in several regions of the world.<sup>[1]</sup> It has assumed the dimension of an epidemic resulting in enormous disability, disease, and death. Globally, it is estimated that 5 million preventable deaths occur every year, attributable to tobacco use. At this rate, the number of such deaths is expected to double by 2020.<sup>[2]</sup> India has been very conscious and concerned about the harmful effects of tobacco use, disease burden and related social and economic costs of health care.<sup>[3]</sup> Trends of smoking are changing in developing and developed countries. Although smoking is declining in most of the developed countries due to intense public health awareness and measures, it is increasing in the developing countries due to massive promotional activities of cigarette companies.<sup>[4]</sup> According to the World Health Organization (WHO), there were 800 million smokers in the developing countries in 1997 as compared to 300 million in the developed world (WHO, 2002).<sup>[5]</sup>

In India, tobacco is used in a wide variety of ways: Smoking, chewing, sniffing, etc. Beedi smoking is the most popular form of tobacco use. Especially in a rural area due to low cost while cigarette smoking is more common in urban areas; hence, the tobacco industry is flourishing. India has over 100 million adult smokers, the second highest number of smokers in the world after China. About 1 million adult deaths occur from smoking per year.<sup>[6]</sup>

There is still the issue of passive smoking. Estimated 10% tobacco-related deaths are caused due to passive smoking. When the number of active smokers rises, it is also coupled with the threat of passive smoking. Over 40% of children have at least one smoking parent, and according to the WHO data, children accounted for 28% of the deaths attributable to passive smoke. Hence, a lot still needs to be done to

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bring down smoking rates.<sup>[5]</sup> One of the constituents of tobacco is nicotine which is highly addictive; it is the stimulant and contributes to the dependence to tobacco consumption.<sup>[5]</sup>

## Objective

The objective of the study was to assess the level of knowledge about tobacco use among ITBP personnel.

## METHODOLOGY

- This study design - a cross-sectional study
- Study population - 120 ITBP Personnel of all Ranks
- Study period - 5 months
- Data collection and tools - Data collected involves 120 ITBP police personnel from different ranks from different states of India; the pilot study was done with 10% of the total sample size. The questionnaire comprises two parts. The first part is about socio-demographic characteristics of participants and the second part is about knowledge regarding hazards of tobacco use.
- Ethical clearance obtained from the Institution of Ethical Committee of Swami Devi Dyal Hospital and Dental College, Barwala, Panchkula, Haryana.
- The pilot study was done on 10% of the total sample size. Before collecting the data, the written informed consent was obtained from the ITBP personnel. The sample size was calculated using the formula as follows.

## Sample Size

$$n = 4pq/d^2$$

Where  $n$  = sample size

$p$  = tobacco use rate among ITBP personnel 50%

$q = 100 - p$ ,  $q$  is 50

$d$  = Relative error 10% of

$p$  = approximately 10

Considering 20% attrition rate Total participants = 120

## Sampling Technique

In inspector (I), sub-inspector (SI), assistant SI (ASI), head constable (HC), and police constable (PC) out of 796 police personnel were recruited by proportionate sampling method as follows: Belagavi city 22 police stations are there, 796 police personnel are working in five different ranks like

$$PC = 466 \times 120 \div 796 = 70$$

$$HC = 210 \times 120 \div 796 = 31$$

$$ASI = 60 \times 120 \div 796 = 09$$

$$SI = 60 \times 120 \div 796 = 09$$

$$I = 12 \times 120 \div 796 = 01$$

## Data Analysis

Data were analyzed in SPSS Version 20 (IBM), and the question has been re-arranged according to the assessment of knowledge, regarding tobacco use among police personnel.

In this study, we considered the average knowledge score if the score was mean  $\pm$  1 standard deviation (SD), the good knowledge score was mean + 1SD, and poor knowledge score was mean - 1SD.

## RESULTS

In the present study, maximum ITBP PERSONNEL 45 (37.7%) were in the age group of 30–39 years, followed by 35 (29.2%) were in the age group of 40–49 years and 26 (21.7%) were of the age group of 50 and above years. Remaining 14 police officers (11.7%) were in the age group of 20–29 years. Of 120 participants, 83.3% of males and 16.7% were females. 108 (90%) were married and 12 (10%) were unmarried. 117 (97.5%) were Hindus followed by 2 (1.7%) Muslims and 1 (0.8%) belonged to others religion. 56 (46.7%) participants had completed pre university education, 6 (5%) studied high school education, 51 (42.5%) did under-graduation, and 7 (5.8%) had completed postgraduates degree. 3 (2.5%) were Inspector, 10 (8.3%) were SI, 9 (7.5%) were assistant sub-inspectors, 47 (39.2%) were HC, and maximum 51 (42.5%) were PC [Table 1].

Among 120 study participants, 119 (99.2%) were aware about the harmful effects of tobacco use, whereas 1 (0.8%) was unaware about the harmful effects of tobacco consumption. 116 (96.7%) were aware that smoking will harm the nonsmoker (passive smoker) nearby smoker and 4 (3.3%) were unaware about the passive smoker. 116 (96.7) knew about the law regarding tobacco use and 4 (3.3%) were unaware about it. 102 (85%) were aware about nicotine content in tobacco product and 18 (15%) were unaware about it [Table 2].

Maximum 97(80.8%) of the study participants had good knowledge, 20 (16.7%) had average knowledge, and 3 (2.5%) had poor knowledge about hazards of tobacco use [Table 3].

## DISCUSSION

The present study was conducted among ITBP personnel, and the results are discussed with other similar studies in different places worldwide.

## Sociodemographic Detail

In this study, of 120 participants, 14 (11.7%) participants were in the age group between 20 and 29 years, 45 (37.7%) participants were between 30 and 39 years, and 35 (29.2%)

**Table 1:** Demographic profile

Sociodemographic variables	ITBP personnel's, n (%)
Age (years)	
20–29	14 (11.7)
30–39	45 (37.5)
40–49	35 (29.1)
>50	26 (21.7)
Sex	
Male	100 (83.3)
Female	20 (16.7)
Marital status	
Married	108 (90)
Unmarried	12 (10)
Religion	
Hindu	117 (97.5)
Muslim	2 (1.7)
Others	1 (0.8)
Education	
High school	6 (5.0)
Pre-university	56 (46.7)
Undergraduate	51 (42.5)
Postgraduate	7 (5.8)
Rank of ITBP services	
Inspector	3 (2.5)
SI	10 (8.3)
Assistant SI	9 (7.5)
HC	47 (39.2)
Police constable	51 (42.5)

SI: Sub-inspector, HC: Head constable

**Table 2:** Knowledge toward hazards of tobacco use

Knowledge questions	n (%)
Tobacco use is harmful	
Yes	119 (99.2)
No	1 (0.8)
Harmful effect by passive smoking	
Yes	116 (96.7)
No	4 (3.3)
Law of tobacco use	
Yes	116 (96.7)
No	4 (3.3)
Tobacco contains nicotine	
Yes	102 (85.0)
No	18 (15.0)
Total	120 (100)

**Table 3:** Participant's level of knowledge on hazards of tobacco use

Knowledge level	n (%)
Poor (<1–2 score)	3 (2.5)
Average (3 score)	20 (16.7)
Good (≥4 score)	97 (80.8)
Total	120 (100)

respondents aged between 40 and 49 years, and 26 (21.7%) participants were above the age group of 50 years.

Similar study conducted among Pakistani soldiers it revealed that a maximum number of Pakistani

army soldiers belonged to the age group between 30 and 40 years.<sup>[6]</sup> Another study conducted among central reserve police personnel's 62.3% belonged to the age below 35 years, and 37.7% were of the age above 35 years.<sup>[7]</sup>

In our study, out of 120 police officers, 100 (83.3%) were males and 20 (16.7%) were females. Similarly, a study conducted in Mathura city, out of 475 participants 473 (99.6%) were males and 2 (0.4%) were females participants. These findings are similar to the present study findings in the study.

In our study, out of 120 police officers, 108 (90%) participants were married and 12 (10%) were unmarried. Whereas similarly study conducted at Lackland Air Force Base, San Antonio, Texas, most of them reported that 72.0% were married and 28% were unmarried.<sup>[7]</sup>

In our study, the majority of police officers, 117 (97.5%) were Hindus, 64 (53.3) study participants were from OBC, 56 (46.7%) participants had completed Pre-university Education, 51 (42.5%) did undergraduate degree, and 7 (5.8%) had completed postgraduate degree. The findings are similar to a study conducted at Lackland Air Force Base, San Antonio, Texas, revealed that 82% of the military participants had college or higher education.<sup>[7]</sup>

Knowledge toward hazards of tobacco use overall 97 (80.8%) of study participants had good knowledge, 20 (16.7%) had the average knowledge, and 3 (2.5%) had poor knowledge about hazards of tobacco use.

## CONCLUSION

The overall knowledge of police personnel regarding hazards of tobacco use was good. Most of the participants agreed to have a strict implementation of laws against tobacco use.

## Recommendation

The police personnel need to have training programs and continuous health education related to tobacco use for the police personnel regarding hazards of tobacco use.

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