



Nicotine Dependence among Housekeeping Staff of Tertiary Care Centre of Odisha, India

Mr. Nanda Kumar Paniyadi^{1*}, Mr Sam Jose², Dr. Asha P Shetty³, Ms Mansi Bajaj⁴, Ms Roshna Lytton⁴, Ms Vrinda Prasad⁴, Ms Anita Bhuriya⁴, Ms Dipthisha Mondal⁴

¹Nanyang Technological University, 50 Nanyang Ave, Singapore

²⁻⁵University of Tehran Enghelab Square, 16 Azar St, Iran

ABSTRACT: Tobacco intake associated with fitness dangers, morbidity and mortality have been growing. The prevalence of tobacco uses and nicotine dependence is very high among sanitary workers as compared to the general population. Nicotine dependence is one of the major public health problems in developing and developed countries. Very few studies were examined to assess nicotine dependence among housekeeping staff in hospitals. This study aimed to assess the nicotine dependence among housekeeping staff of AIIMS Bhubaneswar and to find the association between nicotine dependence and demographic characteristics such as age, gender, education, experience, duration of use, age of initiation and last use. A cross-sectional study was conducted to assess the nicotine dependence among the housekeeping staff of AIIMS Bhubaneswar. The information was collected using a demographic proforma, screening tool, Nicotine dependence tool- (a) Fagerstorm Test for Nicotine Dependence-(FTND) and (b) Fagerstorm Test for Nicotine Dependence -Smokeless Tobacco (FTND-ST) by self-reporting. Among 338 participants screened, 224 users showed nicotine dependence. Among 224 housekeeping staff, 58 users consume pan, 63 users use cigarettes and 103 consume both (Pan and Cigarette). Nicotine dependence is significantly associated with economic status and age of initiation and not significantly associated with demographic variables such as age, gender, education, marital status, religion, and job experience. Study concluded that Hospital-led control effort works required to make behavioural changes and prevention of tobacco use among housekeeping staff to save their lives, protect health and beat tobacco consumption to support National goal of ‘Nasha Mukht Bharat’.

Keywords: Tobacco use, Nicotine dependence.

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RESEARCH PAPER

***Corresponding Author:**
Mr. Nanda Kumar Paniyadi
Nanyang Technological University, 50 Nanyang Ave, Singapore

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INTRODUCTION

Hospital Housekeeping Services (HHS) is vital in health establishments. The workers of the cleaning staff of a medical institution are answerable for the organisation of the environment, cleansing of gadget and facilities, contributing to lessen the hazard of contamination and promoting patient safety (Beltrame *et al.*, 2014).

Nicotine is an alkaloid found in tobacco plants and activate Central Nervous System. It causes stimulation either through ganglionic stimulation in low doses or ganglionic blockage in high doses (A. Mishra *et al.*, 2015). The tobacco use is one of the biggest public health threats that the world has ever encountered killing approximately 6 million people in a year (G. A. Mishra *et al.*, 2012). There about 3 million premature deaths in a year are already attributed to

tobacco smoking. Tobacco is responsible for all cancer death in developed countries (Oppeltz & Jatoti, 2011).

According to WHO there are 1.337 billion tobacco users in the world in that 1.093 billion are males (82% of current tobacco users), 244 million are female users and 43 million are children (WHO Launches New Report on Global Tobacco Use Trends, n.d.). According to the Global Adult Tobacco Survey India 2016- 2017, 19% of men, 2% of women and 10.7% of adults are currently smoking tobacco. 29.6% of men, 12.8 % of women and 21.4% of all adults currently use smokeless tobacco. 42.4% of men, 14.2% of women, 28.6% of all adults currently use smoke or smokeless tobacco (Global-Adult-Tobacco-Survey-Second-Round-India-2016-2017.Pdf, n.d.).

According to the Global Adult Tobacco Survey conducted in Odisha 13.9% of men, 0.1% of women and 7% of all adults currently use tobacco.

52.1% of men, 33.6% of women and 49.9% of all adults currently use smokeless tobacco. 57.6% of men, 37.6% of women and 45.6% of adults either use tobacco or use smokeless tobacco (*Odisha GATS-2 Factsheet.Pdf*, n.d.).

OBJECTIVES

The following study was planned to assess the Nicotine Dependence among housekeeping staff of AIIMS Bhubaneswar and to find an association between nicotine dependence and demographic variables such as age, gender, education, experience, duration of use, age of initiation and last use.

METHODOLOGY

Research Design

In this study, a cross-sectional descriptive research design was adopted. The housekeeping staffs were interviewed using a pretested Performa after obtaining their consent.

Research setting and Population

The research setting for this study was housekeeping staff who are having nicotine dependence in AIIMS, Bhubaneswar. In this study, the population is all housekeeping staff in AIIMS, Bhubaneswar.

Sample Size: The sample size of our study is 220.

Inclusion Criteria

- All housekeeping staff are willing to participate in this study.

Exclusion Criteria

- Housekeeping staffs who did not offer consent to take part in research and those who were not available at the time of data collection excluded.

Sampling Technique

The sampling technique in our study is Non-probability convenient sampling.

Data Collection Tool

Description of the Tools

Tool-1: Demographic Data:

It consists of questions related to demographic data such as name, age, sex, education, marital status, religion, economic status, job experience, age of initiation of substance, duration of use of the substance and last use.

Tool 2: Fagerstorm Test for Nicotine Dependence- (FTND)

The Fagerstorm Test for Nicotine Dependence is a standard tool for assessing the intensity of physical addiction to nicotine. It includes six items that compare the amount of cigarette consumption, the compulsion to use, and dependence. The items are summed to yield a

total score of 0-10. In FTND yes or no items are scored from 0 to 1 and multiple-choice items are scored from 0 to 3. The higher the Fagerstorm score the more intense is patient's physical dependence (Instrument: Fagerstrom Test for Nicotine Dependence (FTND) | NIDA CTN Common Data Elements, n.d.)

Tool 3: Fagerstorm Test for Nicotine Dependence - Smokeless Tobacco (FTND-ST)

A score of 5 or more indicates significant dependence, while a score of 4 or less indicates moderate dependence (Agrawal *et al.*, 2011)

Data Collection

- Step 1- Took permission from the head of collection medical science and principal of the college of nursing.
- Step 2 – Ethical clearance was obtained from IEC AIIMS, Bhubaneswar.
- Step 3 – Detailed description of the study had given to the participants.
- Step 4 – Selection of the sample was done by convenient sampling.
- Step 5- Informed consent was obtained after explaining the reason of study.
- Step 6- Administered the tool and data were collected by face-to-face interview method.
- Step 7- Participants were referred to appropriate department if any fitness trouble was recognized.
- Step 7- Data analysis was done using SPSS version 21.

Operational Definitions

Dependence- In this study dependence means an urge or a tendency to take nicotine in smoking or smokeless form with a value of 1 or more according to Fagerstrom Test for Nicotine Dependence.

Nicotine: In this study, nicotine means a substance in tobacco that may be smoking or smokeless form which may tend in people to use it regularly with value 1 or more according to Fagerstrom Test for Nicotine Dependence.

Housekeeping staff: of AIIMS, Bhubaneswar; staff doing cleaning tasks (sewing, mopping and transporting waste) in AIIMS Hospital Bhubaneswar.

Nontobacco users: Never used tobacco products or every so often used tobacco.

Current user: The use of tobacco regularly inside 1 month prior to data collection.

Data analysis: -

The data analysis was done with descriptive and inferential statistics.

Ethical justification

Investigators are aware of the ethics in biomedical research policy of ICMR (2006). The ethical clearance was taken from the Institutional ethical committee and also obtained permission from head of the department (Principal College of Nursing), housekeeping staff In charge. Informed consent from all housekeeping staffs were attained before collecting any information.

RESULTS

Characteristics of Participants

The data presented in Figure 1 shows 66% of housekeeping staffs using tobacco in smoking and smokeless forms. In this study, out of the total 338 housekeeping staffs, 282 (83.4%) were males and 56 (16.6%) were females. After screening of 338 hospital housekeeping staff, 224(66%) users who showed dependence on nicotine were selected for the study. The

demographic proforma contains information on age, gender, education, marital status, religion, economic status, job experience and age of initiation. The data presented in Table-1 shows that, out of 224 users, the majority of the nicotine-dependent housekeeping staffs 92% were males. Most of the nicotine dependents are (73%) aged between 20-39years. The mean age of housekeeping staffs was 34.90 years. The education background of housekeeping staff ranged from not studied (14.7%) up to higher secondary (83%) and 2.2% have completed above Higher Secondary education. The majority of the study population (76.8%) were married. According to the economic status of population, 47.3 % (106) belongs to the APL category and 52.7 % (118) belongs to the BPL category. As to the distribution of job experience, 32.6 % (73) have 25-48months and 28.6% (64) have 49-72 months. The majority of the age of initiation of substance use among housekeeping staffs (68%) were between 16-25years.

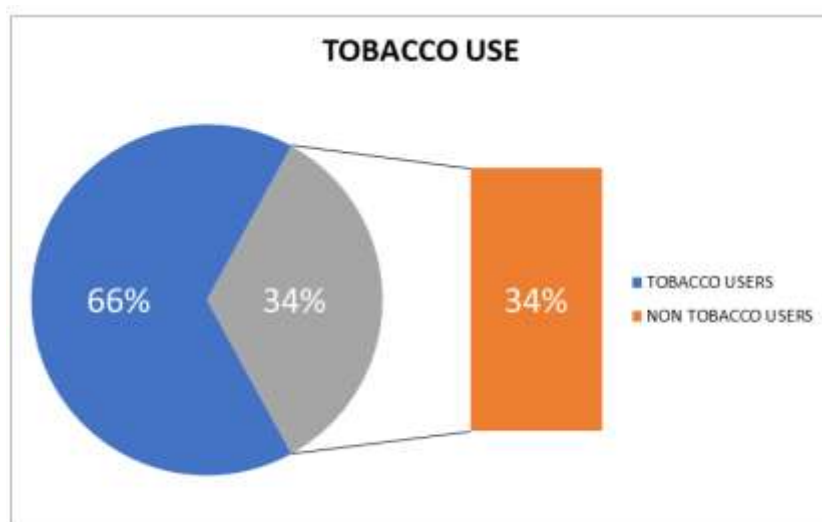


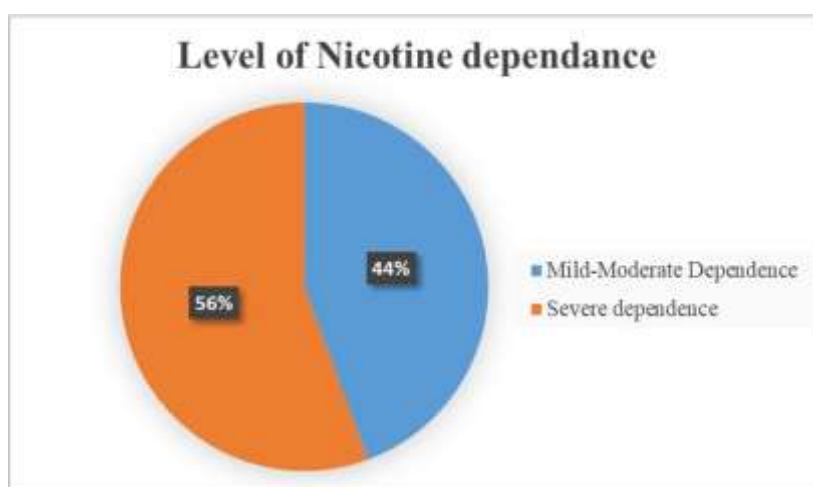
Figure 1: Tobacco use among hospital housekeeping staffs

Table-1: Demographic characteristics of hospital housekeeping staff (N=224)

SL.NO	Sample Characteristics	Frequency	Percentage
1	Age (in years)		
	20-29	58	25.9
	30-39	105	46.9
	40-49	55	24.6
2	50-59	6	2.7
	Gender		
	Male	205	91.5
	Female	19	8.5
3	Education		
	Not Studied	33	14.7
	Up To Higher Secondary	186	83.0
4	Above Higher Secondary	5	2.2
	Marital Status		
	Married	172	76.8
5	Unmarried	52	23.2
	Religion		
	Hindu	212	94.6
6	Muslim	6	2.7
	Others	16	2.7
	Economic Status		
7	APL	106	46.7
	BPL	118	53.3
8	Job Experience (in months)		
	1-24	81	36.2
	25-48	73	32.6
	49-72	64	28.6
9	73-96	6	2.7
	Age of Initiation of Substance (in months)		
	11-15	14	6.3
	16-20	102	45.5
	21-25	50	22.3
	26-30	42	18.8
	31-35	11	4.9
35-40	5	2.2	

Among the 224 users, 46% of subjects consume both types of tobaccos (smoking as well as smokeless). Whereas 28.1% (63) were using cigarettes (with the smoke) and 25.9% (58) smokeless tobacco.

There was a statistically significant association between age of initiation, economic status, and nicotine dependence (Table-2).

**Figure 2: Level of nicotine dependence (n=224)**

The data recorded in Figure 2 shows Fagerstrom nicotine dependence among housekeeping staffs that 44.2% (99) were mild-moderate dependent, and 55.8 % (125) were severely nicotine dependent. As the frequencies of mild and moderate dependence were

low and to get the proper association of nicotine dependence with the demographic variables, the frequencies of mild and moderate dependence as per the tool have been clubbed.

Table 2: Association between the level of nicotine dependence with demographic variables (N=224)

SL. NO	Sample Characteristics	Mild-Moderate	Severe	χ^2	df	S
1	Age (In Years)					
	20-29	23	35	5.469	3	NS 0.140
	30-39	53	52			
	40-49	19	36			
	50-59	4	2			
2	Gender			1.340	1	NS 0.247
	Male	93	112			
	Female	6	13			
3	Education			1.222	2	NS 0.543
	Not Studied	15	18			
	Up To Higher Secondary Above Higher Secondary	83 1	103 4			
4	Marital Status			0.413	1	NS 0.520
	Married	74	98			
	Unmarried	25	27			
5	Religion			2.232	2	NS 0.328
	Hindu	96	116			
	Muslim Others	2 1	4 5			
6	Economic Status			4.825	1	S 0.028
	APL	55	51			
	BPL	44	74			
7	Job Experience(in months)			4.158	3	NS 0.245
	1-24	33	48			
	25-48	39	34			
	49-72	24	40			
	73-96	3	3			
8	Age of initiation(in months)			13.900	5	S 0.016
	11-15	5	9			
	16-20	37	65			
	21-25	20	30			
	26-30	27	15			
	31-35	8	3			
	36-40	2	3			

A Chi-square test was used to evaluate the associations among nicotine dependence and the demographic variables.

The data presented in Table 2 shows that severity index nicotine dependence is not significantly associated with demographic characteristics such as age, gender, education, marital status, religion, and job experience and is significantly associated with economic status and age of initiation. Age of initiation of tobacco use between 16-20 has prevalence of severe nicotine dependence.

DISCUSSION

The present study was designed to assess nicotine dependence among housekeeping staff of

AIIMS, Bhubaneswar. The prevalence of tobacco use in this study among housekeeping staffs was found to be 66%. According to this study, among 224 subjects, 25.8% (58) participants consume a smokeless form of tobacco, 28.1% (63) consume a smoking form of tobacco and 45.9% (103) consume both smoking and smokeless form. Nicotine dependence was significantly associated with economic status and age of initiation. Whereas Nicotine dependence is not significantly associated with demographic variables such as age, gender, education, marital status, religion, and job experience.

The findings of the study have been discussed concerning the objectives of other studies. Present study 66.2% of housekeeping staff identified as nicotine

dependent. A similar type of study conducted by Soumita Ghose *et al.*, (2019) found 70% having nicotine dependence, (Ghose *et al.*, 2019) K J Divinakumar *et al.*, (2017) found 50.7% found nicotine dependent (Divinakumar *et al.*, 2017) and Moawia M Khatatbeh *et al.*, (2019) found nicotine dependence 51.2% (ALBashtawy *et al.*, 2019), which supports the present study. Nidhi Prasad *et al.*, (2018) found 43.4% have nicotine dependence (Prasad *et al.*, 2020), Salvi A *et al.*, (2015) found 30.55% nicotine dependence (Salvi *et al.*, 2019) and Geethu Mathew *et al.*, (2017) found 40.0% have nicotine dependence which contradicts our present study.

In the present study among 224 participants, 25.8% (58) users consume smokeless form, 28.1% (63) consumes smoking form and 45.9% (103) consume both (Smoking and Smokeless) form of tobacco. K J Divinakumar *et al.*, (2017) found 27.3% consume smokeless form and 23.4 consume smokeless form and 9.7% consume both (Smoking and Smokeless). Jennifer O' Loughlin *et al.*, (2003) found 16.6% consumes smokeless and 4.6% consumes a smoking form of tobacco. Geethu Mathew *et al.*, (2017) found 52.9% consumes smoking form.

In the present study, nicotine dependence is significantly associated with economic status and age of initiation. Whereas not significantly associated with demographic variables such as age, gender, education, marital status, religion, and job experience. Salvi A *et al.*, (2015) found that nicotine dependence is significantly associated with the age of initiation and nicotine dependence is not significantly associated with demographic variables such as age, gender, education, marital status, religion, economic status and job experience. Md Shariful Islam *et al.*, (2020) found nicotine dependence is significantly associated with age, economic status and education and not significantly associated with marital status and religion. Mamta Parashar *et al.*, (2019) found that nicotine dependence is significantly associated with economic status, education and age of initiation and nicotine dependence and was not significantly associated with demographic variables such as age, gender, marital status, religion, and job experience which support our study.

CONCLUSION

The existing look at displays the excessive occurrence of tobacco use among housekeeping staff. More than half of housekeeping staffs are the usage of tobacco in smoking and smokeless varieties which is very excessive in contrast to general population. Based on the study, it is concluded that among 338 housekeeping staff 66.2% (224) were nicotine dependent. There is a need for non-stop tobacco awareness programmes in health care institutions, periodic fitness check-up,

lung function examinations and additionally referral of housekeeping staffs using tobacco to de addiction centres.

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