

Tobacco Abuse among Support Staff and Effectiveness of Planned Teaching Programme in Terms of Knowledge, Attitude and Practice of Tobacco Abuse

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Abstract

Tobacco is one of the most widely abused drugs in the world making it leading cause of preventable death. A two-phase study was done to identify the prevalence of tobacco abuse and to develop and evaluate the effectiveness of planned teaching programme in terms of knowledge, attitude and practice among the support staff in a selected hospital in New Delhi. During phase-I of the study, 200 support staff were selected based on total enumeration sampling technique. Structured tools containing socio-demographic variables, prevalence assessment tool, knowledge questionnaire, attitude scale, and practice scale were administered as a pre-test. During phase-II of the study, administration of the planned teaching programme was done for all the 200 support staff. A post-test was conducted for 66 tobacco abusers identified during phase-I of the study based on the prevalence. The study results revealed that the prevalence rate of tobacco abuse among the support staff was 33 percent. Out of this 33 percent of the tobacco abusers, 26.5 percent were smokeless tobacco users and 6 percent were smoking tobacco abusers. The mean difference of pre-test and post-test knowledge, attitude, and practice scores were found out to be 2.95, 1.99, and 0.69 respectively. The planned teaching programme was effective in increasing the knowledge score of the tobacco abusers but there was no effect of PTP on attitude and practice score. The demographic variables such as age, sex, gender, educational qualification, marital status, and monthly income were found to be significantly associated with tobacco abuse among the support staff.

Key words: Tobacco abuse, Planned Teaching Programme, Support staff

India's battle against tobacco addiction has been an extended one as its usage within the country dates back to 2000 BC. India is the second-largest consumer of tobacco in the world, with over 300 million people actively using tobacco products that range from premium cigarettes to locally-made beedis (Dunga & Adamu 2015). Nicotine is the main addictive chemical in tobacco. It triggers an increase in dopamine. Dopamine stimulates the pleasure and reward sensations in brain. Like any other drug, the use of tobacco over time can cause physical and psychological addiction. This is also true of smokeless forms of tobacco, such as snuff and chewing tobacco (Tyler, 2018).

According to the Global Adult Tobacco Survey during 2016-2017 (Kulkarni, 2019), 232.4 million adults in India use tobacco daily in some form. The most commonly used tobacco product with-

in the country is khaini, followed by beedi and gutkha respectively. The survey by the Ministry of Health & Family Welfare further reveals that every tenth adult in India smokes tobacco 11.9 percent in rural areas and 8.3 percent in urban areas. In addition to this, second-hand smoke is steadily becoming a serious concern in India.

Purpose of the study

Beaver et al (2016) in their research focus on the scope of the burden of disease and death that cigarette smoking imposes on the public health, which is extensive. Cigarette smoking causes chronic diseases that appear at older ages, like carcinoma besides short-term adverse health effects. The immediate and short-term adverse health effects of cigarette smoking are less likely to be directly fatal than the long-term health effects. Nevertheless, they are important public health indicators because they cause suboptimal health status throughout the life course in smokers and since many of the short-term physiologic effects mechanistically contribute to the aetiology of smoking-caused diseases that sometimes don't

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become clinically apparent until late adulthood. The short-term adverse health effects caused by cigarette smoking are often observed in smokers immediately or soon after they start smoking. The health effects of cigarette smoking thus begin at or near the age of initiation of cigarette smoking, which is typically in adolescence.

Thousands of people die needlessly each year from the consequences of tobacco use. As health education is an important nursing activity, nurses can discharge their role in tobacco cessation by taking an active part in educating their clients or selected target population in all settings. Therefore, the investigator felt the need to conduct this study to evaluate the effectiveness of a planned teaching programme on prevention and management of tobacco abuse in terms of gain in knowledge, attitude & practice in a selected hospital in New Delhi.

Objectives

The study was set with following objectives.

- To assess the prevalence of tobacco abuse among the support staff in a selected hospital in Delhi.
- To develop a planned teaching programme on prevention and management of tobacco abuse for support staff.
- To assess and evaluate the effectiveness of the planned teaching programme in terms of gain in knowledge, attitude & practice.
- To find out the association between tobacco abuse with selected demographic variables.

Hypotheses

H1: There is a significant difference between the mean pre-test and the post-test knowledge score of support staff regarding the prevention & management of tobacco abuse at $p < 0.05$ level of significance.

H2: There is a significant difference between the mean pre-test and post-test attitude scores of support staff regarding the prevention & management

of tobacco abuse at $p < 0.05$ level of significance.

H3: There is a significant difference between the mean pre-test and post-test practice scores of support staff regarding the prevention & management of tobacco abuse at $p < 0.05$ level of significance.

H4: There is a significant association between tobacco abuse and selected demographic variables of support staff at $p < 0.05$ level of significance.

Methodology

The present study was conducted in two-phases and the research design used was:

In phase-I: Descriptive survey design

In phase-II: Pre-experimental one group pre-test post-test group design.

Fig 1: O1: Pre-test of the tobacco abusers; O2: Pre-test of non-tobacco abusers; X: Administration of planned teaching programme; O3: Post-test of tobacco abusers after 7 days of administration of PTP.

Development of Tool

The tool was designed in 5 sections.

Section I: Socio-Demographic Data of Support Staff: The socio-demographic proforma comprised of 11 items; age (in years), gender, religion, educational qualification, marital status, type of family, monthly Income (in rupees), area of residency, family history of smoking, whether consuming tobacco possesses a health hazard and source of information regarding ill effects of tobacco on health.

Section II: Structured prevalence questionnaire for tobacco abuse: It consisted of structured questions to assess the prevalence of tobacco abuse. The questions were: Do you consume tobacco in any form, Preference of tobacco use, Forms of smokeless tobacco used, Brand names of smokeless tobacco used, Smokeless tobacco consumption by selected tobacco abusers per day, Forms of smoking tobacco used, Smoking tobacco consumption by tobacco abusers per day

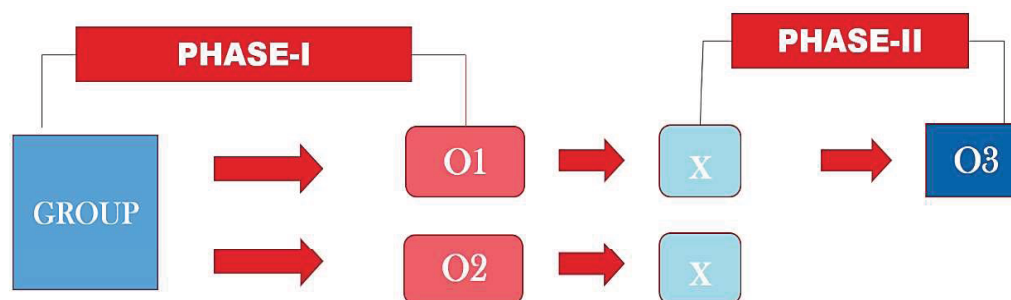


Fig 1: Schematic diagram of research design

and Total duration of tobacco abuse.

Section III: Structured knowledge questionnaire on tobacco abuse: It was a structured questionnaire about the prevention and management of tobacco abuse. It consists of 20 multiple-choice questions. Each correct response was given a score of 1 and for an incorrect response there was a score of zero. The maximum score was 20.

Section IV: Attitude scale on tobacco abuse: It was a five-point Likert scale ranging from “strongly agree” to “strongly disagree”. It comprised of 20 statements. The total score was 100. [Attitude Scale Scoring system: Strongly Agree=5, Agree= 4, Neutral=3, Disagree= 2, Strongly Disagree= 1]

Section V: Practice scale: It was a structured practice 3-point Likert scale used to assess the practice of support staff regarding tobacco use. The practice scale comprised of 15 questions that focused on the amount and frequency of tobacco use with options Always (score=2), Sometimes (score=1) and Never (score=0).

The total score of practice scale was 30. A higher score means poor practice, indicative of high tobacco use by the participant.

Table 1: Frequency and percentage of pre-test and post-test knowledge scores in phase- II (n=66)

Knowledge Score						
Criteria	Good knowledge		Average knowledge		Poor knowledge	
Test	(f)	(%)	(f)	(%)	(f)	(%)
Pre-test	0	0%	22	33.33%	44	66.66%
Post-test	16	24.24%	32	48.48%	18	27.27%

Table 2: Frequency, percentage, mean, standard deviation, and t-test value of the effectiveness of PTP in terms of gain in knowledge of the tobacco abusers among the support staff in phase- II (n = 66)

Test	Mean	Mean difference (MD)	Standard deviation (SD)	Standard Error of mean difference	df	t-Value	Tabulated value at p< 0.05
Pre-test	8.26	2.95	2.426	0.299	65	8.463*	1.990
Post- test	11.21		3.466	0.427			

t (65) = 1.990, at p< 0.05, *= Significant at p< 0.05 level of significance.

Table 3: Frequency and percentage of pre-test and post-test attitude scores in phase – II (n=66)

Attitude Score						
Criteria	Favourable attitude		Undecisive attitude		Unfavourable attitude	
Test	(f)	(%)	(f)	(%)	(f)	(%)
Pre-test	2	3.03%	61	92.42%	3	4.54%
Post-test	4	6.06%	60	90.90%	2	3.03%

Data Collection

For phase I, descriptive survey was conducted for 200 support staff based on total enumeration sampling to identify the prevalence of tobacco abuse and knowledge, attitude and practice of support staff related to tobacco abuse. A planned teaching programme was developed and administered on both non-tobacco and tobacco users regarding prevention and management of tobacco abuse.

For phase II, based on the prevalence of tobacco abuse, out of 200 support staff 66 were identified as tobacco abusers which were taken as sample for phase-II, and pre-experimental (one group pre-test post-test) design was considered based on purposive sampling technique to assess the effectiveness of PTP in terms of gain in knowledge, attitude and practice score of these tobacco users.

Results

Sample characteristics

Majority of the support staff i.e.31 percent were in the age group of 29-38 years; 67.5 percent were males belonging to Hindu religion (58%). Most of them had completed Higher Senior Secondary Education (44%) and were married (75.5%), living in a nuclear family system (66%), in urban area (73%); 40 percent were having family members with a history of smoking/ smokeless tobacco use. Out of this 40 percent, the majority (21%) were using smoking tobacco. The majority of them (30.5%) reported that their father used to consume tobacco. All of the support staff agreed that tobacco is harmful to health. For the response to getting information regarding the ill effects of tobacco on health, majority of support staff (53.5%) got it from the health professionals.

Prevalence of tobacco abusers among the support staff

Prevalence rate of tobacco abuse was found out to be 33 percent among the support staff; 18.18 percent were using smokeless tobacco and 80.30 percent were using smokeless tobacco. The forms of smokeless tobacco used were Gutka (37.73%), Pan Ma-saala (28.30%), Gutka/ Pan Masaa-la (7.54%), Snus (26.41%). Forms of smoking tobacco used were Bidi (38.46%), and Cigarette (61.53%). The majority of the tobacco abusers

Table 4: Frequency, percentage, mean, standard deviation, and t-test value of the effectiveness of PTP in terms of gain in attitude scores of the tobacco abusers among the support staff in phase- II (n=66)

Test	Mean	Mean difference (MD)	Standard deviation (SD)	Standard error of mean difference	df	't' - Value	Tabulated value at p<0.05
Pre-test	61.39	1.98	8.023	0.988	65	1.827	1.990
Post-test	63.38		6.770	0.833			

t(65)=1.990, at p<0.05, *= Significant at p<0.05 level of significance.

(34.84%) were using tobacco for last 16-20 years.

Effectiveness of planned teaching programme in terms of gain in knowledge score

To test the effectiveness of planned teaching programme in increasing the knowledge of the support staff following hypothesis was formulated:

H01: There is no significant difference between the mean pre-test score and post-test knowledge score of support staff regarding the prevention and management of tobacco abuse at p< 0.05 level of significance (Table 1).

Table 2 shows the significant difference between the mean knowledge pre-test and post-test scores. The mean and standard deviation of the pre-test knowledge scores were 8.26 and 2.426 respectively and the post-test mean and standard deviation were 11.21 and 3.466 respectively. This shows that the pre-test knowledge scores were lower than the post-test scores.

The paired 't' value was 8.463 and the table value for this at p<0.05 level of significance with the degree of freedom (df) 65 is 1.990 (less than the calculated t value). This shows that the test is statistically significant and the researcher fails to accept the null hypothesis.

Thus, there exists a significant difference between mean pre-test and post-test knowledge score, and the planned-teaching programme was effective in increasing the knowledge of the support staff regarding prevention and management of tobacco abuse.

Effectiveness of PTP in terms of gain in attitude score

To test the effectiveness of planned teaching program in increasing the attitude of the support staff following hypothesis was formulated.

H02: There is no significant difference between the mean pre-test and post-test attitude score of support staff regarding prevention and management of tobacco abuse at p<0.05 level of significance.

Table 4 shows the significant difference between the mean pre-test and post-test attitude scores. The mean and standard deviation of the pre-test attitude scores were 61.39 and 8.023 respectively and the post-test mean and standard deviation were 63.38 and 6.770 respectively. This shows that the pre-test attitude scores were lower than the post-test attitude scores. The paired 't' value was 1.827 and the table value for this at p<0.05 level of significance with a degree of freedom (df) 65 is 1.990 (greater than the calculated t value), which shows that the result is statistically insignificant and the researcher fails to reject the null hypothesis. Thus, there exists no significant difference between the mean pre-test and post-test attitude scores of support staff regarding the prevention and management of tobacco abuse at a p<0.05 level of significance.

Effectiveness of planned teaching programme in terms of gain in practice score

To test the effectiveness of planned teaching programme in increasing the practice score of the support staff following hypothesis was formulated:

H03: There is no significant difference between the mean pre-test and post-test practice scores of Support Staff regarding the prevention and management of tobacco abuse at p<0.05 level of significance.

Table 6 shows the significant difference between the mean pre-test and post-test scores. The mean and standard deviation of the pre-test self-expressed practice scores were 17.44 and 4.755 respectively and the post-test means

Table 5: Frequency and percentage of pre-test and post-test practice scores in phase- II (n+66)

Test	Practice Score					
	Good practice		Fair practice		Poor practice	
	Criteria					
	(f)	(%)	(f)	(%)	(f)	(%)
Pre-test	0	0	38	57.57	28	42.42
Post-test	0	0	39	59.09	27	40.90

Table 6: Frequency, percentage, mean, standard deviation, and t-test value of the effectiveness of PTP in terms of gain in practice scores of the tobacco abusers among the support staff in phase- II (n=66)

Test	Mean	Mean difference (MD)	Standard deviation (SD)	Standard error of mean difference	df	't' value	Tabulated value at p< 0.05
Pre-test	17.44	0.69	4.755	0.585	65	1.758	1.990
Post-test	18.14		4.107	0.506			

t (65) = 1.990, at p< 0.05, *= Significant at p< 0.05 level of significance.

and standard deviation were 18.14 and 4.107 respectively. This shows that the pre-test scores were lower than the post-test scores. The paired 't' value was 1.758 and the table value for this at p<0.05 level of significance with a degree of freedom (df) 65 is 1.990, which shows that the result is statistically insignificant and the researcher fails to reject the null hypothesis. Thus, there exists no significant difference between the mean pre-test and post-test practice scores of support staff regarding the prevention and management of tobacco abuse at p<0.05 level of significance.

Association between the tobacco abuse and selected demographic variables

To test the association between tobacco abuse and the selected demographic variables following hypothesis was stated.

H04: There is no significant association between tobacco abuse and selected demographic variables of support staff at p<0.05 level of significance.

The findings revealed that there was a significant association between tobacco abuse with age, gender, religion, educational qualification, marital status, and monthly income. Whereas there was no significant association between tobacco abuse and type of family, area of residence, family history of tobacco use, and source of information for tobacco use.

Discussion

The present study assessed the prevalence of tobacco abusers among the support staff and the effectiveness of a planned teaching programme in terms of knowledge, attitude, and practice of a selected hospital in New Delhi. Major findings of the present study have been discussed with the references of the results obtained by the researcher in the same aspect and it is seen that the prevalence rate of tobacco abuse was 33 percent among the support staff and the planned teaching programme on prevention and management of tobacco abuse was effective in increasing the knowledge score whereas there was no effect of

PTP in increasing the attitude and practice scores of the support staff. The findings of the present study were consistent with of those Fernandez et al (2013) and Antonio et al (2012).

Fernandez et al (2013) aimed to evaluate the effectiveness of a tobacco control course in the reduction of prevalence and the improvement of knowledge and attitudes among students and revealed

that the improvement of the knowledge mainly included academic courses and background. Concerning opinions and beliefs, tobacco use was not influenced, being associated in general with the academic course. A specific tobacco control course did not change the prevalence of tobacco, nicotine dependence, and motivation to give up. The improvement in knowledge was associated with the academic course on both campuses.

Hill et al (2014), conducted a study to examine the impact of tobacco control interventions on socioeconomic inequalities in smoking in 2010. Data from 77 primary studies and seven reviews were synthesised via narrative review. The results showed strong evidence that increases in tobacco price have a pro-equity effect on socioeconomic disparities in smoking. Evidence on the equity impact of other interventions is inconclusive, except for non-targeted smoking cessation programmes which have a negative equity impact due to higher quit rates among more advantaged smokers. There is a need for more research evaluating the equity impact of tobacco control measures, and the development of more effective approaches for reducing tobacco use in disadvantaged groups and communities.

Implications

For Nursing Education

- Nurse educators must conduct in-service educational classes on identifying the cases of substance abuse.
- Nurse educators and nursing staff working in the hospital should be role models for students so that student's attitudes towards substance abusers can be made positive.
- Nurse educators can teach brief interventions to the nursing staff for the management of substance abuse.
- Nurse educators can arrange educational classes for the support staff to motivate them to quit tobacco.

For Nursing Administration

- The nurse administrators should arrange for a programme to increase the knowledge of nursing personnel regarding the prevention and management of tobacco abuse.
- Educational programmes can be organised in health care set-ups and communities by the nurse administrators.
- Nurse administrators can organise awareness camps regarding the management of substance abuse for the support staff of the hospital.

For Nursing Practice

- Nurses can detect cases of substance abuse and can motivate people to quit it.
- Nurses can spread awareness among the community about the prevention and management of tobacco abuse.
- Nurses should explain to the other nursing staff the importance of the nurse-patient relationship while caring for the substance abusers.
- Nurses should work to use innovative approaches for consistent quality patient care to substance abusers.

For Nursing Research

- As a nurse researcher, promote more researches on the effectiveness of planned teaching programs for increasing the knowledge among the clients.
- Nurses working in the hospitals should contribute towards educating clients about the effects of tobacco on health.
- It is important to conduct studies that test the effectiveness of non-pharmacological methods to add evidence-based practice in nursing.

Recommendations

Based on the findings of the study, it is recommended that:

- A study may be conducted in a community setting covering a large population for better generalisation.
- Other interventions like interviews and group discussions can also be used.
- Similar studies can be conducted with different kinds of substance abusers.
- A follow-up study can be conducted to assess the effect of a planned teaching programme vs other interventions in increasing knowledge, attitude, and practice among substance abusers.

Conclusion

The present study was an attempt to identify the prevalence of tobacco abusers and the effectiveness of a planned teaching programme on prevention and management of tobacco abuse in terms of knowledge, attitude, and practice among the support staff in a selected hospital in New Delhi. The study revealed that 66 out of 200 tobacco abusers were not adequately informed about the prevention and management of tobacco abuse. There was an increase in the knowledge score of the tobacco abusers after the administration of the planned teaching programme whereas there was no effect of PTP in increasing the attitude and practice scores of the support staff. Also, there was a significant association between the tobacco abusers with Age, Gender, Religion, Educational Qualification, Marital Status, and monthly income.

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