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AWARENESS AMONG PULMONARY CARCINOMA PATIENTS ON DANGERS OF SECOND HAND TOBACCO SMOKE IN KOTTAYAM DISTRICT, KERALA

CICILY JOHN M.Sc (N), MBA
Research Scholar Sri. JJT University, Jhunjhunu, Rajasthan, India
(Asso. Professor, Assisi College of Nursing, Erumeli. Kerala, India)
Email: cicijohnpsg@gmail.com

DR ACHAMMA VARGHESE
Guide & Faculty, Department of Nursing
Sri. JJT University, Jhunjhunu, Rajasthan, India
Email: achammavarghese70@gmail.com

DR. MALAVIKA KAIPPARETTU ABRAHAM MBBS
House Surgeon,
Govt. Medical College Calicut, Kerala, India
Email: mkaipparedan@yahoo.com

Abstract

Approximately one-third of persons globally are routinely exposed to Second Hand Tobacco Smoke (SHTS). Non-smokers exposed to SHTS at home or work face a 20–30% increased chance of developing pulmonary carcinoma among several other health concerns. The present study conducted among pulmonary carcinoma patients in Kottayam district of Kerala aimed to assess their awareness of the dangers of SHTS and the effectiveness of an educational campaign in enhancing their awareness. A pre-experimental research methodology was utilized to conclude the study. Sixty pulmonary carcinoma patients aged 18 to 45 were selected using non-probability purposive sampling. The results indicated that the mean preliminary knowledge test (PKT) score was 12.33, while the mean second knowledge Test (SKT) score was 21.5. The average difference was 9.17. The standard deviation of the PKT score was 2.87, while the standard deviation of the SKT score was 3.27. The computed 't' value is 14.80, the degrees of freedom (DF) is 59, and the p-value is 1.671. This indicates that the educational program successfully enhanced the pulmonary carcinoma patients' awareness of the implications of SHTS. The age and educational background of the pulmonary carcinoma patients shown a substantial correlation with the level of awareness in the PKT. Educational activities can be

effectively employed to raise awareness among pulmonary carcinoma patients about the detrimental impacts of SHTS.

Keywords: Awareness, Adverse Effects, Passive Smoking, pulmonary carcinoma patients

Background of the study

Globally, smoking constitutes a significant risk to public health. The health implications of SHTS remain little investigated and mostly unclear. According to Cao S, et al. evidence suggests that smoking, including active and SHTS, may increase the likelihood of acquiring various diseases, including pulmonary carcinoma, food allergies, allergic rhinitis, allergic dermatitis, and mammary carcinoma in women [1]. A meta-analysis review by Chen Y, et al. indicates that SHTS increases the risk of colorectal cancer [2]. Another study by Taylor R, et al. indicates that primary research and meta-analyses from residential and office environments demonstrate that non-smokers exposed to SHTS had an increased risk of acquiring lung cancer [3]. Smoking is associated with a heightened risk of allergy conditions in both children and adults, with SHTS correlating to an elevated risk of food allergies. A meta-analysis of four prospective cohort studies indicates that SHTS is significantly associated with an increased risk of type 2 diabetes. The side stream smoke emitted from the burning tip of a cigarette is the primary source of SHTS exposure. Side stream smoke is hazardous due to elevated concentrations of ammonia, benzene, nicotine, carbon monoxide, and other carcinogens. Chronic exposure to SHTS is believed to pose health risks to non-smokers that are analogous to those experienced by light smokers.

Discussion

This study aimed to assess pulmonary carcinoma patients' awareness of the dangers of SHTS and the effectiveness of an educational campaign in enhancing that awareness. The study's findings indicated that pulmonary carcinoma patients' awareness of the detrimental effects of SHTS was either moderate or inadequate. No sample achieved a score sufficient to demonstrate acceptable awareness.

Pulmonary carcinoma patients with pre-existing medical conditions such as allergies, chronic lung disorders or angina experience, exacerbated early symptoms due to exposure to SHTS. In healthy people, immediate health effects include headaches, nausea, and irritation of the ocular and nasal mucous membranes [6]. Annually, 600,000 individuals succumb to passive smoking or SHTS. Approximately one-third of adults globally are consistently subjected to SHTS. In India, 52% of individuals were subjected to SHTS at home, with 58% in rural areas and 39% in urban areas. A study on the health effects of SHTS among Pulmonary carcinoma patients who have never smoked indicates that current knowledge levels must be improved, and initiatives should be intensified to target locations with insufficient awareness. According to a comprehensive review paper addressing various facets of tobacco control in the Indian context, it is imperative to foster public health awareness and educate all healthcare professionals on tobacco control and cessation by incorporating the subject into the curriculum to mitigate the adverse effects of active smoking and SHTS.

The findings of a cross-sectional Internet survey involving 1,128 men and 458 women aged 15 to 71 years indicate that enhancing smokers' awareness of the dangers associated with SHTS may elevate their motivation to cease smoking. The data may be utilized to advance tobacco control initiatives in the future [9]. Numerous research studies on the awareness of the detrimental effects of smoking have been completed globally; nevertheless, investigations highlighting the dangers of SHTS are infrequent, particularly among Indian adults. Therefore, it is necessary to evaluate the awareness of the impacts of SHTS and to enhance this awareness through an educational program.

A cross-sectional study done in February 2020 in Saudi Arabia assessed medical students' knowledge regarding the hazards of SHTS and determined that their awareness is inadequate [10]. A random sample of 400 undergraduate students was selected for a cross-sectional study to assess the prevalence of exposure to SHTS and awareness of its adverse consequences. The study's findings indicated that adolescents exhibited greater awareness than adults (86.5%) on the detrimental effects of SHTS [11].

The results of the present study indicated that the educational effort effectively enhanced public awareness regarding the detrimental effects of SHTS. A study was conducted in several colleges in Rajkot to assess the efficacy of a structured teaching program regarding the harms of smoking, focusing on knowledge among adolescent males. This study indicated that an education program effectively increased awareness of the detrimental effects of smoking [12]. An additional experimental investigation evaluating the efficacy of a program designed to educate adults about tobacco abuse demonstrated that the program effectively enhanced adults' comprehension of the topic [13].

The study identified a substantial correlation between age and educational status of participants regarding their level of awareness. A separate study on the detrimental effects of active smoking and SHTS in adolescent males indicates that specific demographic variables, including age, education, and prior awareness of SHTS risks, correlate significantly with their knowledge level [14].

Methodology

This study aimed to assess pulmonary carcinoma patients ' awareness of the dangers of SHTS and the effectiveness of an educational campaign in enhancing that awareness. A pre-experimental research methodology was utilized to conclude the study. The study included a sample of 60 pulmonary carcinoma patients who met the criteria of being aged between 18 and 45 years. The sample was selected via the non-probability purposive sampling method. The investigation was conducted in the subsequent sequence;

E1 - Level of awareness regarding effects of SHTS at PKT level
X - Education program on the consequences of SHTS
E2 - Level of awareness regarding effects of SHTS at SKT level

A systematically organized questionnaire was employed to assess pulmonary carcinoma patients' awareness of the hazards of SHTS and to gather data from the population. In this study, the word education program denotes a health instruction provided to the chosen sample concerning the consequences of SHTS. This instruction encompasses:

[1] Meaning of active smoke and SHTS
[2] Components of cigarette smoke
[3] Physiological systems impacted by tobacco use
[4] Negative impact of SHTS on multiple bodily systems
[5] Chronic illnesses resulting from SHTS
[6] Strategies to terminate the smoking habit
[7] Methods to avert SHTS

Preliminary Knowledge Test (PKT): To conduct the PKT, as a part of the education program, a systematic questionnaire was administered to the samples. Subsequently, health education was delivered to all participants utilizing charts, PowerPoint presentations, and pamphlets.

Second Knowledge Test (SKT): One week following the educational program, the post-intervention level of awareness was assessed using the same structured questionnaire to evaluate the program's success. Various statistical methods were employed to analyse and interpret the collected data.

Results

The majority of the sample (43.3%) belonged to the age group of 36-45 years. The sample has 50% male and 50% female participants. Of the 60 samples, 40 have only primary education, while merely 5 were graduates. Thirty-three percent of the study subjects resided in joint families. 36.67% of parents previously had smoking habit, while 42.3% of respondents indicated that they used to smoke.

The figure given below indicates that before the implementation of the educational program, 28.33% of the entire sample exhibited inadequate knowledge, 71.67% shown average knowledge and none possessed good knowledge in the preliminary knowledge test. However the SKT revealed a significant enhancement in the sample's knowledge, with 41.67% achieving intermediate knowledge and 58.33% attaining good knowledge.

EFFECTIVENESS OF THE ADMINISTERED TEACHING PROGRAM

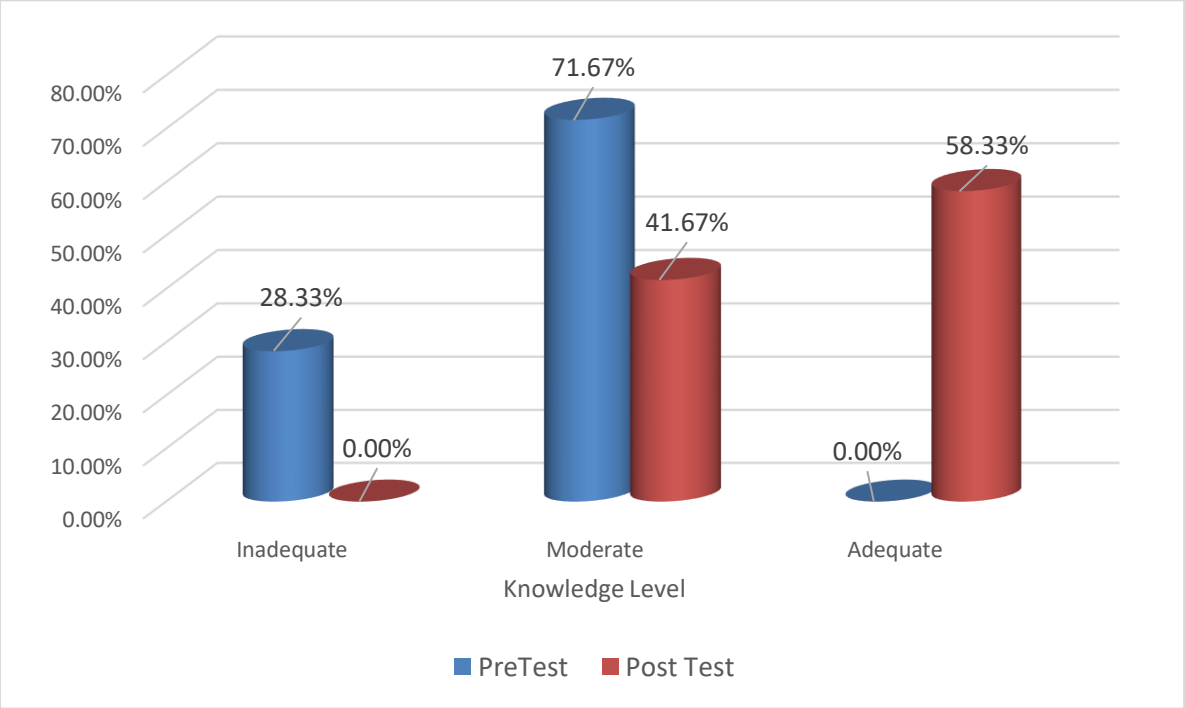

Figure 1
Cylinder Diagram depicting Percentage Distribution of the Samples According to PKT and SKT Scores

Parameter	Mean	S.D.	Mean Difference	t-value	Result
PK Test	12.33	2.87	9.17	14.80*	Sig. <0.05
SK Test	21.5	3.27			

Table 1

Mean, Standard Deviation and 'T' Value of PKT and SKT Scores Showing Effectiveness of Teaching Program.

DF = N-1 (60-1) =59

The data in the aforementioned table indicates that the mean PKT score was 12.33, whereas the mean SKT score was 21.5. The average difference was 9.17. The standard deviation of the PKT score was 2.87, while the standard deviation of the SKT score was 3.27. The computed 't' value is 14.80, the degrees of freedom (DF) is 59, and the p-value is 1.671. The computed 't' value (14.80) exceeded the tabulated

value (1.67) at the 0.05 significant level, indicating that the teaching program effectively enhanced adults' knowledge of the impacts of SHTS. The age and educational status of the sample exhibited a strong correlation with the level of awareness in the preliminary Knowledge Test.

Conclusion

Non-smokers exposed to SHTS at home or in the workplace face a 20-30% increased risk of developing pulmonary carcinoma, among various other health concerns [15]. The awareness of pulmonary carcinoma patients' concerning the hazards of SHTS was moderate or insufficient. The results of this study indicated that the educational program effectively increased awareness of the detrimental effects of SHTS. Additional research is required to ascertain the detrimental effects of SHTS on non-smokers cohabiting with smokers. The educational curriculum for health professionals should incorporate training on awareness initiatives regarding the effects of active smoking and SHTS.

The authors assert that there is no conflict of interest.

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