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Research Article

**A CROSS-SECTIONAL RESEARCH ON THE HEALTH
EFFECTS OF PASSIVE SMOKING SUCH AS HEADACHE IN
THE MEDICAL COLLEGES OF LAHORE****Dr. Nabila Akhtar¹, Dr. Saba Mahrukh², Dr. Zeeshan Alam³**¹WMO BHU Karyal Kalan, Gujranwala.²WMO RHC Kot Ladha, Gujranwala.³CMO DHQ Bhimber, Azad Jammu Kashmir.**Abstract:**

Objective: Primarily our research was aimed at the determination of the headache frequency in the medical colleges because of the passive smoking and it also observed the non-smokers response.

Methods: Research was cross-sectional and it was held in the 3 medical colleges of Lahore. Research was completed on three hundred participants in August, 14. It included the students in the age of 18 – 25 years. All the participants were non-smokers and they were being exposed to the effects of passive smoking daily once or twice. Demographic data about the gender, age, duration, frequency and location was gathered for the absence or presence of passive smoking. Behavior and non-smokers response about the counselling was also observed.

Result: In the total of 290 participant's headache was complained by 186 participants (64.1%) as the total participants exposed to the passive smoking were 172 (59%). More than twice a total of 127 students (43%) were exposed to passive smoking regularly. Prohibition of public place smoking was advocated by 255/290 students (88%). 90 students (31%) practically took a step to talk to the smokers about the quitting of smoking at public place. Smokers response was observed as positive in seventy-three percent of the students.

Conclusion: High frequency of headache was observed in the passive smoker students of medical colleges. Special training is mandatory about the counselling of smokers to avoid smoking in public and practical exercise of the law is also required about the public smoking specifically in public.

Keywords: Passive and Secondhand Smoking, Medical Students, Headache and Medical Colleges.

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INTRODUCTION:

Secondhand or passive smoking is that smoke of tobacco released in the atmosphere by the smokers and inhaled by the other who are non-smokers. In the situations like an indoor activity of smoking cigars, cigarettes, and pipes causes accumulation of smoke in a closed environment such as homes and classrooms and this smoke is un-intentionally inhaled by the other present in the vicinity, which is a great public health issue and affects the health of others. Common practice is observed in the homes, educational organizations and at offices. There is a clear interrelation of lung cancer and passive smoking including heart disease, respiratory complications and Asthma [1, 2, 3].

There is an estimate of four thousand chemical release because of the burning of the cigarette and exhaled smoke by the smokers and almost forty are active agents of the cancer. Even than this practice is common and almost ninety-three percent of the world inhabitants are exposed to the passive smoking as observed by the organizations related to the smoke-free environment [4]. Back in 2004 almost forty percent children including male and female with respective proportions of 33 and 35 percent were non-smokers and exposed to the effects of the passive and second-hand smoking. Globally, the death rate over one year is estimated as six lacks only because of the effects of inhaling the tobacco smoke released by the smokers. Commonly observed health issue is headache as observed in the medical colleges of Lahore which adversely affects the one's mood and routine activities [5].

Many causes are associated to the headache because of second-hand smoking, empirically in the young available data is scarce and limited [5, 6]. Educational institutes have been reported as the victim of this menace of passive smoking as there is weak or no implementations of administration and law. A Spanish research on the same topic related the respiratory and headache issues to the act of passive smoking [7]. In the research held at USA by Rozen and colleagues conclude a higher incidence of children headache because of passive smoking [8]. It includes many dimensions such as awareness about the passive smokers in the non-smokers being affected by the passive smoking. In the same way Pakistani institutes are no exception specially in the educational institutes of Pakistan. An outstanding question remains common that practical effort is needed for the counselling of smokers to quit this mall-practice of smoking in covered and public area. Therefore, primarily our research was aimed at the determination of the headache frequency in the

medical colleges because of the passive smoking and it also observed the non-smokers response.

SUBJECTS AND METHOD

Our research was cross sectional and observational in nature and it was carried out on three hundred students selected from the total population of 2000 of three medical colleges. Every college contributed one hundred student's population with the inclusion criteria of age in the range of 18 – 25 years, exposed daily, non-smokers and exposed at any of the open or close place whether in home or at college. All the cases of chronic headache, cluster headache, migraine, head trauma and deficits of neurology were not included in the research. Confidentiality was made in-tact about the participant identification and informed consent was also secured before the act of research study. Patient's information about the gender, age, exposure, location, counselling and attempt of quitting were recorded through a questionnaire for the observation of the participants' response.

Student's opinion about the smoking prohibition in open was also included in the research questionnaire. An analysis of the data was carried out through SPSS-21 and presentation of variables such as age was carried out by mean \pm S.D; other data related to students including gender, headache frequency, location, exposure frequency and duration were shown in percentages and frequency.

RESULTS:

In the total sample of 290 participants' male and female students respectively 102 males (35.2%) and 188 females (64.8%) were given a Performa for filling and mean age was calculated as (22.6 ± 1.29) years. In the total research sample, the exposure to passive smoking was observed as 172 in the colleges (59%), 67 at public place (23%) and 51 at home (18%). Above one-hour exposure was observed in the 208 students, 144 students (49.7%) once or twice on daily basis, 127 students (43.8%) two or three times in a day, 19 students (6.5%) even <1 time in a day. Headache frequency in the exposure was observed as 186 students (64.1%) shown in Table-I.

In terms of the response of the participants it was revealed that in the total sample of 290 just 90 students (31%) had any attempt of counselling and positive response was observed by the smokers in the process of prohibition advise. Attempt on counselling in the ninety patients was as 66 students (73%) with a believe that smokers agree to remove the practice of smoking in public, while 20 students (22%) relied negative response about the advice, no response was observed in the 4 students (5%) made no response,

out of the total, 255 students (88%) favored prohibition, against cases were 3% and no response was observed in the 9% students as shown in Table-II.

DISCUSSION:

Numerous complications and symptoms are associated to the act of cigarette smoking which affects adversely smokers and persons in the vicinity. It is a strong believe that Nicotine is among the vasoconstrictor causing headache because of the act of smoking, headache is also associated to the increased incidence of the Carbon monoxide and decreased oxygen [6, 9]. It also causes cancer of the lungs and many other non-malignant diseases [10]. A common symbol of respiration is cough, rhinorrhea, sneezing, dysphonia, pharyngitis, headache and dry throat [11]. Considerable evidence is available about the headache caused because of the smoking and its exhaled smoke in the air by the smokers affecting the non-smokers specifically targeting the young population such as students [12]. Therefore, our research targeted three medical colleges for the sample collection to study the subject matter; moreover, scarce literature is available on the subject in the Pakistani colleges and educational institutes.

We included an average age factor of twenty-two years and observed that 64% participants were facing the exposure of passive smoking and also reported the incidence of headache. According to the research of Gedikondele and Hammadet respectively observed 54 and 68 percent incidence of the passive smoking

and according to the research of Stosic and his colleagues this incidence was observed as 56%. It was also noted in the research that other places were less involved than the colleges and educational institutes because of the impaired implementation of the regulations against the smoking by the administrations. This exposure affected adversely the general performance, concentration and general ability of the students. Interesting data was noted in terms of the student's response as 88% participants were agreeing about the eradication of this practice, 31% students counseled smokers about the side effects on the smokers and others. Same outcomes were noticed in a Saudi research held at the city of Riyadh; in the higher incidence of awareness lack of active participation about the counselling was documented and same was observed in the research conducted in UK about the same topic [10].

Duty realization and appropriate training is needed for the realization of community role in the eradication of adverse effects of smoking and its exhaled smoke. Preventive measures are recommended for the general awareness in the larger interest of the general students. Interestingly, positive attitude was noticed in the smokers about the counselling, implementation of regulations and better environmental effects. According to Chuang and his colleagues there was a positive trend about the eradication of smoking in public [12], same has been reported by numerous other research attempts.

Table 1. Characteristics of subjects selected (n=290)

Data	Detail	Number	Percentage
Mean Age = 22.6±1.294	Female	102	35.2
	Male	188	64.8
	Headache Frequency	186	64.1
Exposure Place	Home	51	18
	College	172	59
	Any Public Place or Campus	67	23
Per Day Exposure Duration	More than 60 minutes	208	72
	Less than 60 minutes	72	28
Exposure Frequency	1 - 2 times per day	144	49.7
	2 - 3 times per day	127	43.8
	Less than one time per day	19	6.5

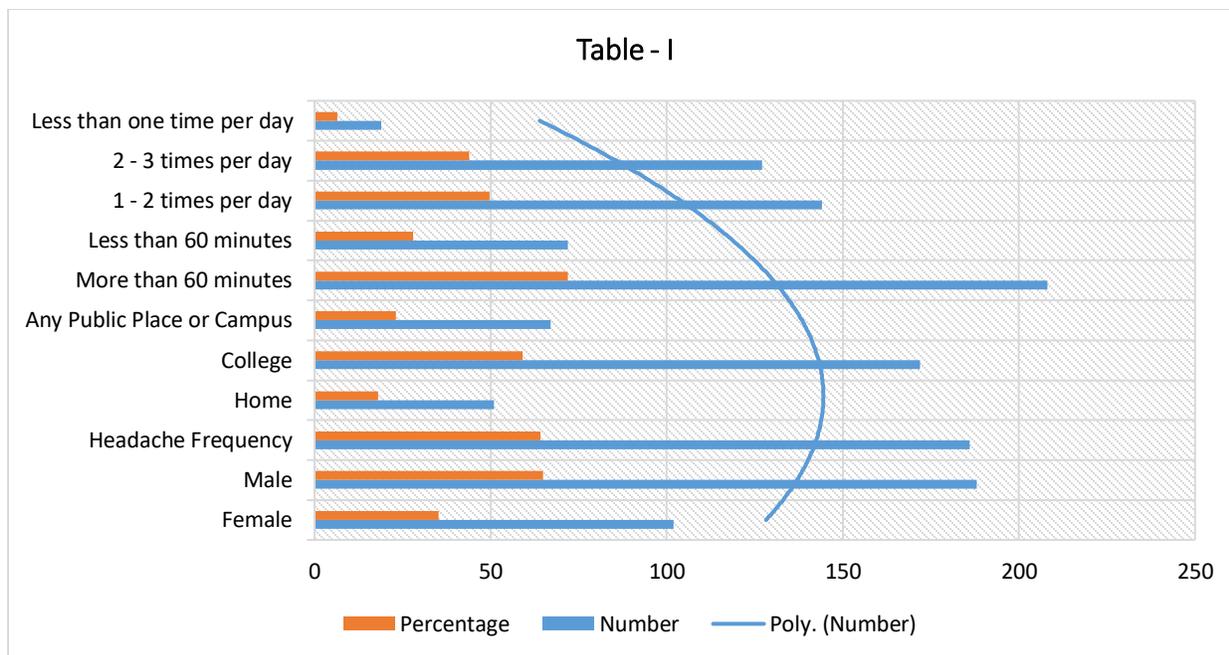
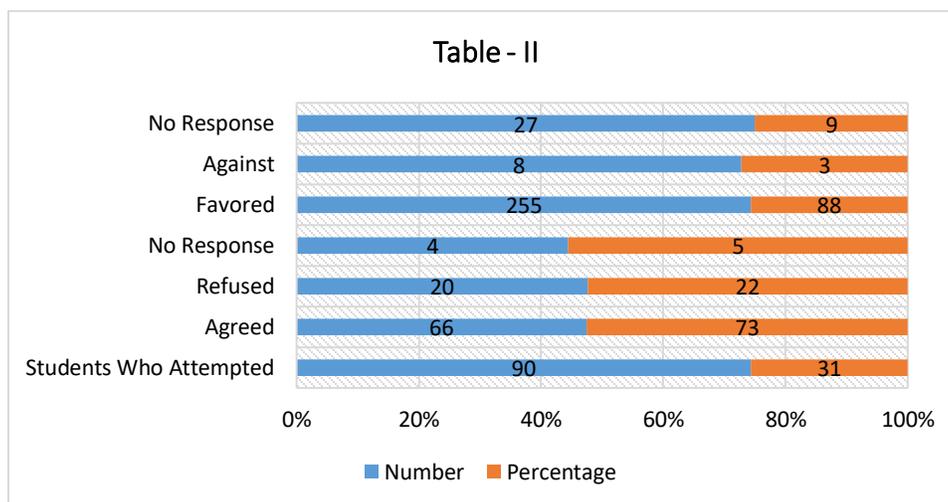


Table 2. Evaluation of response of subjects

Question	Detail	Number	Percentage
Counselling	Students Who Attempted	90	31
	Agreed	66	73
Response of the Smokers Number = 90	Refused	20	22
	No Response	4	5
	Favored	255	88
Students Opinion about Prohibition at Public Place Number = 290	Against	8	3
	No Response	27	9



Limitations of the research include limited sample size and scarcity of resources for the evaluation of the complications related to the effects of the passive smoking. It is suggested that future research work can further help in the better understanding of the various features and varied setting outcomes specially in the setting of low-income areas and in terms of implementation of the law.

CONCLUSION:

High frequency of headache was observed in the passive smoker students of medical colleges. Special training is mandatory about the counselling of smokers to avoid smoking in public and practical exercise of the law is also required about the public smoking specifically in public.

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