Original Research

Evaluation of awareness level among population regarding E-cigarettes- A questionnaire survey

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ABSTRACT:

Background: Electronic cigarettes or e-cigarettes are battery-operated products designed to deliver nicotine, flavor and other chemicals. The present study was conducted to assess awareness about e- cigarettes. **Materials & Methods:** The present study was conducted 1250 subjects in the age range of 18- 68 years of age. They all were provided with questionnaire and asked to fill it. The response was recorded and was subjected to statistical analysis. **Results:** Maximum subjects were in age group 18-28 years (215 males, 240 females) followed by 28-38 years (185 males and 155 females). The difference was significant (P< 0.05). 22%, 15%, 5% and 58% usually use cigarette, bidi, hookah and vape respectively. 55% use it daily. 25% consume 1/week, 35% 2/ week and 40% >2/ weeks. 65% use low percentage of nicotine. The difference was significant (P< 0.05). Symptoms such as headache (55%), nausea (34%), sleep disturbance (40%), chest pain (62%), coughing (305) and phlegm production (25%) were seen. **Conclusion:** E- Cigarettes are moderately used among population. The awareness about it was good. More large scale studies are required to educate population about its use.

Key words: Bidi, E- Cigarettes, Headache.

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INTRODUCTION

Vaping is habit of using e- cigarettes. Electronic cigarettes or e-cigarettes are battery-operated products designed to deliver nicotine, flavor and other chemicals. The main advantage of e- e-cigarettes is that they are free of tobacco burn. They turn a flavored liquid into a vapor. Users inhale, or vape, the mist. The liquid usually contains nicotine which is commonly occurring substance in tobacco. They are safe as compared to tobacco cigarettes.[1]

They possess variability in the appearance, size and shape. The usage of e-cigarettes is increasing day by day. The appearance of e-cigarettes in the US may facilitate smoking termination for some cigarette smokers because it addresses the biochemical and behavioral aspects of smoking addiction. The tradition of E-cigarettes is famous among cigarette smokers who fail to quit. They prefer alternative to it in the form of e- cigarette which is comparatively less harmful.[2]   Recent research has confirmed the usefulness of e-cigarettes in alleviating cravings for cigarettes. They reveal the process of their usage and their role in prevention of tobacco consumption.[3] Sources of information regarding e-cigarettes are internet, you tube, televisions etc. Etter et al[4] in their study on 3587 e-cigarette users found that 84% showed that the cause for using e-cigarettes was the perception that it was less toxic than tobacco, 79% showed to deal with craving for tobacco, 67% showed withdrawal symptoms, 77% demonstrated to quit smoking, 57% thought that it was cheaper than smoking. Other information regarding these phenomena or restrictions related to e-cigarettes versus regular cigarettes in different environments is lacking. The present study was conducted to assess awareness about e- cigarettes.

MATERIALS & METHODS

The present study was conducted 1250 subjects of both genders (males- 610, females- 640) in the age range of 18- 68 years of age.

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The study protocol was approved from institutional ethical committee. All subjects were informed and written consent was obtained. They all were provided with questionnaire and asked to fill it. The response was recorded and was subjected to statistical analysis. The collected data were analyzed using SPSS version 22.0. P value less than 0.05 was considered significant.

RESULTS

Table I Sociodemographic characteristics of subjects

| Sociodemographic	Males	Females	P value
Age group			
18-28	215	240	
28-38	185	155	0.01
38-48	120	145	
48-58	60	75	
58-68	30	25	
Education			
Primary school	348	430	
High school	262	210	0.05

Table I shows that age group 18-28 years had 215 males, 240 females, 28-38 years had 185 males and 155 females, 38-48 years had 120 males and 145 females, 48-58 years had 60 males and 75 females and 58-68 years had 30 males and 25 females. The difference was significant (P< 0.05). 348 males and 430 females had primary school education and 262 males and 210 females had high school education. The difference was significant (P< 0.05).

Table 2 Questionnaire used in study

Questionnaire	Percentage	P value
Which type do you smoke?		
Cigarette	22%	
Bidi	15%	0.05
Hookah	5%	
Vape	58%	
Do you smoke vape?		
I use it daily	55%	
Never	30%	0.01
Occasionally	15%	
How many reservoirs do you consume per week?		
1/ week	25%	
2/ week	35%	0.1
>2/ week	40%	
What is percentage of nicotine in it?		
Zero	20%	
Low	65%	0.01
High	15%	

Table II shows that 22%, 15%, 5% and 58% usually use cigarette, bidi, hookah and vape respectively. 55% use it daily. 25% consume 1/week, 35% 2/ week and 40% >2/ weeks. 65% use low percentage of nicotine. The difference was significant (P< 0.05). Graph I shows symptoms such as headache (55%), nausea (34%), sleep disturbance (40%), chest pain (62%), coughing (305) and phlegm production (25%).

Graph I Symptoms in subjects with vape
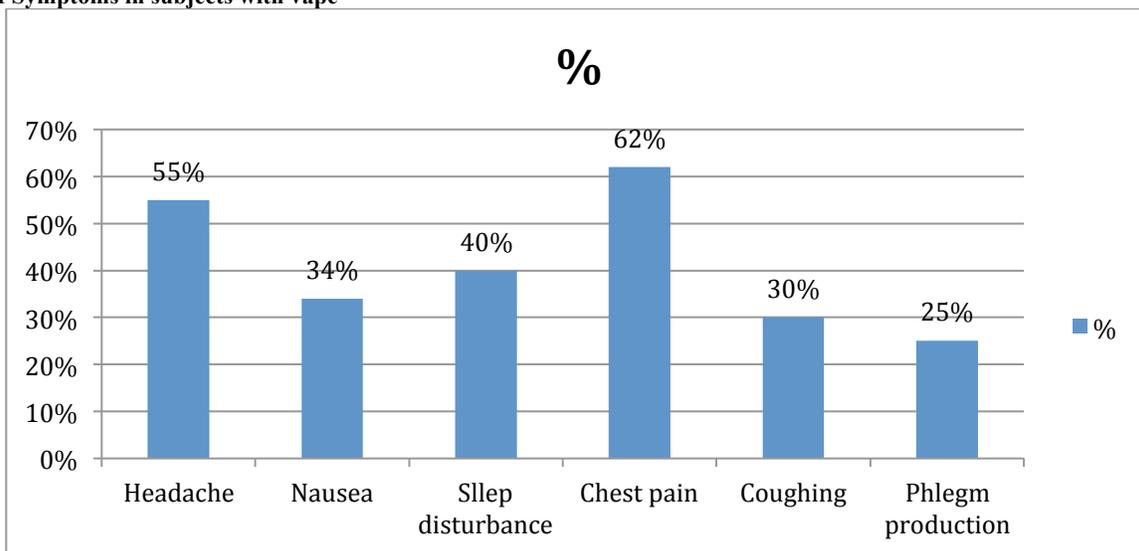
DISCUSSION

There is argument regarding e-cigarettes and how e-cigarettes should be regulated. Proponents of e-cigarettes indicate that e-cigarettes may result in harm reduction, whereas opponents dispute that too little is known about the health impact of e-cigarettes and efficiency of e-cigarettes in supporting termination, among other concerns. Studies have tried to find out the cancer-causing potential of e-cigarettes.[5] Use of e-cigarettes without a prior history of smoking is currently a rare occurrence in adults, but is increasingly common among youth. Due of the marketing and publicity, the consciousness about smoking the e-cigarettes vape

and their potential competitive advantages to the traditional cigarettes has increased as well.[6] The present study was conducted to assess awareness about e- cigarettes.

We found that age group 18-28 years had 215 males, 240 females, 28-38 years had 185 males and 155 females, 38-48 years had 120 males and 145 females, 48-58 years had 60 males and 75 females and 58-68 years had 30 males and 25 females. The difference was significant (P< 0.05). 348 males and 430 females had primary school education and 262 males and 210 females had high school education. This is in agreement with Yin et al.[7]

Lotrean et al[8] in their study followed 40 current regular smokers experimenting with e-cigarettes for 24 weeks (27 retained at follow-up). They reported a six-month point prevalence smoking cessation rate of 22.5%, with an additional 32.5% of smokers reducing their cigarette consumption by at least 50%. We observed that 22% use cigarette, 15% bidi, 5% hookah and 58% vape. 55% use it daily. 25% consume 1/week, 35% 2/ week and 40% >2/ weeks. 65% use low percentage of nicotine.

Berg et al[9] study examined vaping pattern. Of 72 individuals screened, 40 consented, 36 completed the baseline survey, and 83.3% and 72.2% were retained at weeks 4 and 8, respectively. Participants reduced cigarette consumption from baseline to week 4 and 8. 23.1% reported no cigarette use in the past month at week 8. There was no significant decrease in cotinine from baseline to week 4 or 8. At week 8, the majority reported improved health (65.4%), reduced smoker's cough (57.7%), and improved sense of smell (53.8%) and taste (50.0%). The majority believed that e-cigarettes versus regular cigarettes have fewer health risks (97.2%) and that e-cigarettes have been shown to help smokers quit (80.6%) and reduce cigarette consumption (97.2%). In addition, the majority intended to use e-cigarettes as a complete replacement for regular cigarettes (69.4%) and reported no restriction on e-cigarette use in the home (63.9%) or car (80.6%).

In present study we observed symptoms such as headache (55%), nausea (34%), sleep disturbance (40%), chest pain (62%), coughing (305) and phlegm production (25%). There is no restriction about e-cigarette use in personal spaces. Studies showed that vaping was allowed at work, while fewer reported that smoking was allowed. In contrast, many participants reported restrictions applying to cigarette smoking in home, in the car, and at work. The rates of smoking restrictions are promising; however, additional information is needed to understand the true impact of e-cigarette use among those exposed to secondhand vapor, as prior research indicates that using an e-cigarette indoor may involuntarily expose nonusers to nicotine but not to toxic tobacco-specific combustion products.[10]

CONCLUSION

E- Cigarettes are moderately used among population. The awareness about it was good. More large scale studies are required to educate population about its use.

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