Clinical Schizophrenia & Related Psychoses

Research Article   **Hybrid Open Access**

A Comparative Study of Anxiety Level among Smoker and Non-Smoker Students in Institute of Medical Technology-Baghdad, Iraq

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Abstract

Background: Smoking and its health consequences are among the most important and serious public health problems all around the world, where smoking contributes to increased anxiety levels among cigarette smokers. In addition, there is a lack of studies about smoking among college students in Iraq.

Objective: This study was conducted to assess the smoking behavior among smoker students, level of anxiety among smoker and non-smoker students, and to find out the difference in level of anxiety among smoker students as compared with non – smoker students.

Methodology: A purposive (non-probability) sample of (140) male students who were tobacco cigarette smokers and (50) male students who were non – smokers and never smoked before from the Institute of Medical Technology – Baghdad.

Result: This study revealed that more than half of students smoked between (11-20) cigarettes per a day, and the highest percentage of them were smoked before (3-4) years ago. Majority of smoker students initiated smoking because of peer influence from friends. The study shows that (40%) of smoker students have moderate levels of anxiety while a half of non-smokers students don't have anxiety. The anxiety level increased among smoker students as compared with non-smoker students.

Conclusion: The result of the current study shows that there was a significant difference in level of anxiety between smoker and non-smoker students.

Recommendation: Emphasizing the role of educational counselors in the educational institutions in assisting youth students how to deal with their social and psychological problems and learning them new coping strategies instead of smoking.

Keywords: Anxiety •Smoking Behavior •Cigarette smokers

Introduction

Cigarette smoking and its health sequences is one of the most important and most serious public health problems, since it is the major cause of lung, throat, pharynx and esophagus diseases and is also a reason for the development of bladder, pancreas, liver, kidney, colon and rectal cancers [1].

Smoking cigarettes is one of the major problems among the student population, and it increases the risk of anxiety and depression symptoms [2].

The World Health Organization reported that more than 8 million deaths per year are caused by tobacco smoking worldwide, seven million of those deaths are result from direct use of tobacco while around 1.2 million are exposed to secondhand smoke (WHO, 2020). WHO expects the number of deaths to be increased to 10 million by the decade 2020-2030 with 70% of them occurring in developing countries, the reports also estimated that (23%) prevalence rate of smoking among young people in Iraq [3].

Psychosocial factors are the most factors that have been linked to smoking behavior, including parent smoking, imitation of friends, and positive attitudes towards smoking. The socio-economic situation of the family and the low level of self-esteem, in addition to exposure to the user-oriented attractive commercial advertisements lead to the purchase and use of cigarettes [4].

The psychoanalytic school interprets smoking behavior in terms of instincts and satiety, where the smoker conducts smoking to satisfy his inherent delicious desires, while the social learning theory states that smoking occurs through imitation and mimicry of famous and successful models in society, whereas the behavioral school sees the habit of smoking as a response learned by individual and is associated with specific feelings and situations so that he feels the desire to smoke when repeating these situations, such as ending a meal or thinking about solving a problem or when studying [5].

Previous studies showed that smoking has been associated with anxiety, as the level of anxiety increases in people who smoke compared to non-smokers. Some researchers also believe that smoking is a response to pressures and a way to reduce stress and frustration [6].

The current study aims to assess the smoking behavior among smoker students, level of anxiety among smoker and non-smoker students, and to find out the difference in level of anxiety among smoker students as compared with non – smoker students.

Methodology

A comparative descriptive study was conducted to assess the level of anxiety among a sample of smoker students as compared with a group of non-smoker students. The study was conducted during the period from 15th /November /2018 to 1st May/2019.

A purposive sample of (140) smoker students and (50) non-smoker student who never smoked before were participated in this study, the sample included only males students; smoking cigarette among female students aged between (18 to more than 24) years was rare in Iraq and absence in the Institute of Medical Technology/ Baghdad.

A self-administrative questionnaire was used for data collection. Informed

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consents were obtained from all participants; also the Institutional Review Board (IRB) at the Institute of Medical Technology has approved the study proposal.

The questionnaire was constructed by the researcher based on a review of scientific literature in order to achieve the goals of the study which included the following:

First axis: Involved three types of information:

a. Demographic information of the study samples including (age and social status) of smoker and non-smoker students.

b. Information related to smoking behavior including (age at the beginning of smoking, smoking period, number of smoked cigarettes per day, the time between one cigarette and another, the desire to quit smoking and the cause of smoking initiation).

c. Information related to motives for the desire of smoking among smoker students.

Second axis: Level of anxiety was assessed among smoker and non-smoker students using Taylor Measures of Manifest Anxiety Scale which translated to Arabic language by Dr. Mustafa Fahmy, Professor and Chair of Mental Health, Ain Shams University and Dr. Mohamed Ahmed Ghali, Professor of Psychology, Al-Azhar University. It involved (50) items, and responses were as follows: Yes=1 and No=zero. The level of anxiety was determined according to the range specified in the original scale and as shown in Table 1 below:

Table 1. Anxiety level scoring according to the range.

Level of anxiety	Range
Free of anxiety	0-16
Mild anxiety	17-20
Moderate anxiety	21-26
Severe anxiety	27-29
Very severe anxiety	30-50

Statistical analysis

Descriptive statistical analysis was used for data analysis using the (SPSS) program which included frequencies, percentages, Paired T-test as well as mean and standard deviation to describe differences between smoker and non-smoker students regarding the levels of anxiety.

Results

Table 2 shows that the age of smoker students ranged between 18 to more than 24 years with mean of age (21.12) years, and a standard deviation (1.625).

Table 3 shows the distribution of smoker students regarding smoking behavior where the highest frequency and percentage of smoker students 72(51.3%) started smoking between 15 to 17 years old, and the highest percentage of them 56(40%) were smoking since (3-4) years, and

75(53.6%) of them were smoked between 11 to 20 cigarettes per a day. Results also demonstrated that the highest frequency and percentage of the smoker students 67(47.9%) took less than one hour between consuming one cigarette and another, while 111(79.3) of them had the desire to quit smoking, and 126(90%) of them started smoking behavior as a result of friends effect.

The highest frequency and percentage 123(87.9%) of the smoker students were smoked because of the desire to relax and relieve stress as shown in Table 4.

Table 5 revealed that the highest frequency and percentage 56(40%) of smoker students had a moderate level of anxiety, while 34(24.3%) of them had a very severe level of anxiety. While the highest frequency and percentage of non-smoker students 25(50%) don't suffered from anxiety.

In Table 6 a significant difference was found in the level of anxiety between smoker and non-smoker students.

Table 2. Demographic characteristics of smoker and non-smoker students.

Demographic characteristics	Smoker		Non-smoker	
Present age	f	%	f	%
18-20 years	57	40.7%	19	38%
21-23 years	68	48.6%	26	52%
≤ 24 years	0	0	0	0
15	10.7%	5	10%	0
Total	140	100%	50	100%
Marital status				
Single	124	88.6%	43	86%
Married	14	10%	7	14%
Divorced	2	1.4%	-	-
Total	140	100%	50	100%

Table 3. Distribution of smoker students according to information related to smoking behaviour (N=140

Data related to smoking behaviour	f	%
Age at the beginning of smoking		
12-14 years	4	2.9%
15-17 years	72	51.3%
18-20 years	46	32.9%
21-22 years	18	12.9%
No. of smoking years		
1-2 years	51	36.4%
3-4 years	56	40%
5-6 years	24	17.2%
≥ years	9	6.4%
No. of cigarettes smoked per day		
≤ cigarettes	33	23.6%
11-20 cigarettes	75	53.6%
21-30 cigarettes	11	8%
31-40 cigarettes	18	12.9%
41- ≥ 50	3	2.1%
Time between one cigarette and another		
<1 hour	67	47.9%
1-2 hours	42	30%
3-4 hours	11	7.9%
Unspecified time	20	14.2%
Desire to quit smoking		
Yes	111	79.3%
No	29	20.7%
20.7%		
Effect of friends	126	90%
Smoking of one or both parents	14	10%
on	on	on

Table 4. Motives the desire of smoking among smoker students.

Motives the desire of smoking	Yes		No		Total	%
	f	%	f	%		
The desire to relax and to relieve stress	123	87.9	17	87.9	140	100%
To enhance the feeling of masculinity	9	6.4	131	6.4	140	100%
To enhance a sense of self-confidence	6	4.3	134	4.3	140	100%
The desire to boast in front of friends	13	9.3	127	9.3	140	100%

Table 5. Distribution of smoker and non-smoker students according to the level of anxiety.

Level of anxiety	Smoker		Non-smoker	
	f	%	f	%
Free of anxiety	21	15%	25	50%
Mild anxiety	15	10.7%	9	18%
Moderate anxiety	56	40%	10	20%
Severe anxiety	14	10%	3	6%
Very severe anxiety	34	24.3%	3	6%
Total	140	100%	50	100%

Table 6. Comparison between smoker and non-smoker students at the level of anxiety.

Anxiety level	The group				T-test	
	Smokers		Non-smokers		Correlation	Significance
	Mean	SD	Mean	SD		
Total anxiety level	3.18	1.326	0.71	1.207	-0.282	-0.001*
Note: *Correlation is significant at p-value ≤ 0.05 (2-tailed), df= 14.						

Discussion

Results revealed that more than half of smoker students was in the age group ranged between (18 to 20) years, and the majority of them were single, these findings was in agreement with the study of Akram, et al. who mentioned that smoking is most prevalent among the age range group (16 to 24) years.

The results in the current study revealed that the majority of smoker students started smoking at adolescent age, and the influence of friends was the major reason for smoking behavior initiation. These results coincided with the results obtained by (Celikel et al., who reported that the highest percentage of smoker students started smoking at the age of 16.0 ± 2.8 years and Akram et al., who mentioned that the effect of friends was the main reason for starting smoking behavior and continuing it [7].

The results demonstrate that the majority of smoker students smoked because of the desire to relax and relieve stress. This result was consistent with Slomp et al., suggested that adolescents may cope with stress by developing harmful habits such as tobacco cigarette smoking.

Most smoker students exhibit a moderate level of anxiety and 24.3% of them had a very severe level of anxiety while half of non-smoker students do not suffer from anxiety. These results were congruent with Saravanan and Heidhy who mentioned in their study that the smoker population experience more anxiety than non-smoker and be more anxious as a result of nicotine level decrease.

The present study indicated that there is a significant difference in the level of anxiety between smoker and non-smoker students, and an inverse relationship was found between both smoker and non-smoker groups and the level of anxiety, as anxiety increases in the smoker students and decreases in the non-smoker group. Carmen Miguez et al., Wilkinson et al, and Moylan et al, mentioned in their studies that many previous studies suggested that smoking may increase anxiety disorder during early adulthood in addition to cigarette smoking associated with some types of anxiety symptoms [8-11].

Conclusion

The current study revealed that more than half of smoker students started smoking between 15 to 17 years old and they were smoked between 11 to 20 cigarettes per a day and they took less than one hour between consuming one cigarette and another, in the same time most of them had the desire to quit smoking. The smoking behavior caused by the influence of friends during the adolescent period. The desire to relax and relief stress was the most motivation to consuming cigarettes among smoker students. Most of smoker students had a moderate level of anxiety, while more than half of non-smoker students not suffering from anxiety. It can be concluded from the present study that there was a significant difference in level of anxiety between smoker and non-smoker students, with an inverse relationship between both groups and level of anxiety as anxiety increases in the smoker students and decreases in the non-smokers.

Recommendations

1. Emphasis on the role of educational counselors in the educational institutions in helping students to recognize their psychosocial problems and how to deal with them and find solutions instead of resorting to smoking behavior to escape from these problems.

2. Implementing laws to prevent smoking in public places stated in Iraqi law on university campuses to reduce this phenomenon among students inside educational institutions.

3. Raising health awareness among all members of society, especially among young people and adolescents, about the dangers of smoking and its negative effects on the individual and society through different media.

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