Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 10109 - 10116
Received 05 March 2021; Accepted 01 April 2021.

Students Knowledge about E-cigarettes Smoking at Middle School in Baghdad City, Iraq

Asaad Salim Mohammed[1] & Mahdi Abed Neamah[2]

1 MSC student, University of Baghdad, College of Nursing, Community Health Nursing Department, Baghdad city, Iraq Email: Asaad.Salem1206a@conursing.uobaghdad.edu.iq
2Assistant Professor, University of Baghdad, College of Nursing, Pediatric Nursing Department, Baghdad city, Iraq, Email: drmahdi.1955@gmail.com

Abstract

Background: Many consider e-cigarettes to be less harmful than regular cigarettes, so their prevalence has increased dramatically among young people. However, recent studies confirm that the health hazards of vaping are more dangerous than traditional cigarettes. This study aims to assess knowledge of the middle school students about e-cigarette smoking; and determine the association between knowledge of the students with their socio-demographic characteristics.

Methodology: A descriptive study used assessment approach with questionnaire items is conducted to explore students knowledge related to e-cigarette smoking. By an intentional sample of (420) students is selected throughout the use of non-probability sampling approach. Data was collection through the use of a questionnaire and self-report. Through the application the descriptive and dedicative statistic, data were analyzed.

Results: Recent findings indicate that overall (70.5%) of students were good level of knowledge. Students gender and father occupation have been associated with their knowledge at p-value <0.05.

Conclusion: Students of secondary school showing good level of knowledge towards E-cigarette smoking. Students' knowledge correlated positively with their gender and correlated reversely with fathers' occupation. Health instructional materials such as pamphlet and booklets should be directed more towards smokers individual and Ministry of Education should devote more materials in the school curricula that shed the light on the detrimental effects of smoking of all types and their risks.

Keywords: Knowledge, Students, E-cigarettes Smoking.

Introduction

The prevalence of e-cigarette use has been increasing among middle and high school students in the United States. Findings from the National Youth Tobacco Survey showed that among all students grades 6-12, the number of those who had ever used e-cigarettes rose from 3.3% to 6.8%, and current use of e-cigarettes rose from 1.1% to 2.1% during 2011 and 2012 [1]. This increasing prevalence of e-cigarette use among adolescents raises concerns that it may serve as a gateway to traditional cigarette smoking among non-smokers or delay smoking cessation among current

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 10109 - 10116
Received 05 March 2021; Accepted 01 April 2021.

adolescent smokers [2]. E-cigarette use worldwide has dramatically increased, in Iraq especially Increase accessibility of e-cigarette due to increase free dealing trade in Iraq from exporting countries. E-cigarettes contain constituents that are not inert and are likely to have some negative health effects, No vaping research that concludes is safe. Anytime you inhale a foreign substance or use a drug like nicotine, there is some risk built into the activity. Measuring knowledge and attitudes can be helpful in understanding how to enhance the sequence of events leading to behavior change in population [3].

E-cigarette use has risen internationally among adults,1 comprising in UK where there are an estimated 3.6M person users compared with 700 000 in 2010. To date, growth has been mainly among current or ex-smokers, and underage use remains low, with 1.7% of 11-18 year olds recording weekly use, the caution and recognition this phenomenon very importance [4]. Concerning remain over e-cigarettes as a driver for re-normalization of tobacco [5]. With the renormalization hypothesis evident in policy, including the regulation of e-cigarettes via the EU Tobacco Products Directive 2016 (TPD) but the argument that e-cigarettes contradict the tobacco demoralization agenda is countered with suggestions that e-cigarettes could instead further deformalize smoking by acting as a social display of anti-smoking behavior [6]. Recent study suggests continuing decline in the acceptability of smoking among young people, providing limited evidence for smoking renormalization through this period of quick growth of e-cigarettes [7]. E-cigarette use through family may further act to normalize quitting tobacco use, potentially decreasing children's perception of smoking as a socially acceptable and normative behavior. Family are an important portion of the formation of knowledge and attitudes; but, as a relatively new issue, families may be uncertain how to discuss e-cigarette use with children, hindered by conflicting recording of risk [8].

As well as family, school are significant and are already recognized as a key effect of children's normative perceptions of tobacco. While some studies have considered school influence on e-cigarette perceptions [9]. It is important to comprehend knowledge and attitude among teenagers use e-cigarettes because teens and groups may become susceptible to lifelong nicotine addiction through e-cigarettes and traditional cigarettes. Although a few researches have explored e-cigarette alertness and use among teenagers, existing data are lacking for understanding factors influencing young e-cigarette use and correlating with e-cigarette use or non-use.

Methodology

A quantitative descriptive cross-sectional study used assessment approach with questionnaire items is conducted to knowledge among middle school students about electronic cigarettes and their health risks.

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 10109 - 10116
Received 05 March 2021; Accepted 01 April 2021.

Setting of the Study: The study is carried out at (28) middle school Education Directorate in Baghdad City. This school distributed throughout two distinct of Education Directorate (Rusafa and AL-Karkh) which include First, Second and Third Rusafa Education Directorate; and First, Second and Third AL-Karkh Education Directorate.

Study Sample: Intentional sample of (420) students is selected throughout the use of non-probability sampling approach. The study sample is distributed throughout two distinct of Education Directorate (Rusafa and AL-Karkh). A total of (28) school were selected for the purpose of this study.

A constructed questionnaire includes (socio-demographic data and knowledge questionnaire items); data was collection through the use of a questionnaire and self-report students. Through the application the descriptive and dedicative statistic, data were analyzed. "Frequencies and percentages, mean of score (M.s.); and person correlation"

Results

Table 1:Distribution of the Students According to their Socio-demographic Characteristics

Variables		F	%
Age (years) M±SD= 17±1.5	**15 – 16**	218	51.9
	17 – 18	120	28.6
	19 – 20	76	18.1
	21 ≤	6	1.4
Gender	**Male**	210	50
	Female	210	50
Father's occupation	**Dead**	26	6.2
	Employee	154	36.7
	Free works	194	46.2
	Retired	32	7.6
	Doesn't work	14	3.3
Mother's Occupation	**Dead**	8	1.9
	Employee	61	14.5
	Free works	2	.5
	Retired	4	1

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 10109 - 10116
Received 05 March 2021; Accepted 01 April 2021.

	Housewife	345	82.1
Residency	**Low class**	209	49.8
	High class	211	50.2

f: Frequency, %: Percentage, M: Mean, SD: Standard deviation

This table shows that average age of the students is 17±1.5 years in which more than half of them are with age group 15-16 years (51.6%). Regarding gender variable, the percentage is distributed equally for male and females (50%). The occupational status for students' parent refers that 46.2% of their father are working with free works and 36.7% are governmental employee while more of students' mothers are housewives (82.1%). Regarding residency, 50.2% of the students are showing resident in high class neighborhood and the remaining are resident in low class neighborhood (49.8%).

Table (2): Overall Assessment of Students' Knowledge about Electronic Cigarette Smoking

Knowledge	F	%	M	SD
Poor	8	1.9	2.69	.504
Fair	116	27.6		
Good	296	70.5		
Total	*420*	*100*		

, Poor= 22-36, Fair= 37-51, Good= 52-66

This table indicates that students have fair to good level of knowledge about E-cigarette in which 70.5% of the students are showing good level of knowledge and 27.6% are showing fair level.

Table (3): Correlation among Students' Knowledge with regard to their Socio-demographic Characteristics (N=420)

Knowledge / Characteristics	Pearson Correlation	P-value (2-tailed)	Significance
Age	-.030	.540	N.S
Gender	.125	.010	S
Fathers' occupation	-.102	.037	S
Mothers' occupation	.090	.066	N.S
Residency	-.025	.614	N.S

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 10109 - 10116
Received 05 March 2021; Accepted 01 April 2021.

This table depicts that there is positive significant relationship among students' knowledge with regard to their gender and fathers' occupation at p-value = .010 and .037.

Discussion

Discussion of the Socio-demographic Characteristics of the Students

The descriptive analysis of socio-demographic characteristics revealed that average age of the students is 17±1.5 years in which more than half of them are with age group 15-16 years. Such finding indicate the normal age at the school; the age of the students who reach the secondary schools are 15- 17 years except those whose fail at their scholastic stage which get older than their peer. This finding was slightly close to the study of Damas et al. (2009) who found in his study (Smoking habits in secondary school students) that students are with age 15-21 years and the mean age is 15.1 year [10].

The occupational status for students' parent refers that their father are working with free works and their mothers are housewives. From such findings, the researcher infers that parents of the students are associated with moderate socioeconomic status due to results that is showing the highest percentage of fathers are working with free private works and the mothers are housewives.

Regarding residency, more than half of the students are showing resident in high class neighborhood and the remaining are resident in low class neighborhood. The researcher sees that the residence area, namely the neighborhood is play important role in perception of the students about the smoking and drug use. No study has provided evidence about the residence place which is related to low class or high class neighborhood among the students. But a study found that more of the students are resident in an urban are [11].

Discussion of Students' Knowledge about E-cigarette

The analysis of knowledge scale indicated that students have fair to good level of knowledge about E-cigarette according to the cult off points for overall knowledge scale. The mean scores of scale items refer to fair and good level; the items of fair level are related to (Smoking electronic cigarettes leads to oral cancer, Smoking electronic cigarettes negatively affects reproduction, E-cigarette smoking is a cause of road accidents, E-cigarette smoking is a major cause of bladder cancer, There are laws against smoking electronic cigarettes, There are educational programs to curb the phenomenon of vaping, and E-cigarette smoking affects household income). The students' level of knowledge may explained by the experience of E-cigarette smoking among them, in which 44.3% of the students are smoking the E-cigarette that may gain them the acceptable knowledge about the E-cigarette and its risk factors. Despite their level of knowledge, they still lack to adequate knowledge about the risk of E-cigarette smoking. The finding of current study is closely to finding of

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 10109 - 10116
Received 05 March 2021; Accepted 01 April 2021.

(Franks et al., 2017) who found that students are showing moderately increasing scores of knowledge among their study entitles "Electronic cigarette use, knowledge, and perceptions among health professional students [12].

There are limited literatures that describe the knowledge about E-cigarettes smoking. A study describes the low level of knowledge among adults that found Sanders-Jackson et al. (24). Most of them have no knowledge about the risk of E-cigarette for health [13].

Zhou other colleagues found in their study that students at medical university that they have no knowledge about how to stop smoking. Those students reported significantly low education regarding the epidemiology, health effects, and secondhand smoke effects of alternative tobacco products compared to tobacco cigarettes [14].

The researcher summarized out of previous literature that students are still for need much and adequate knowledge about the smoking of E-cigarette in spite of their fair level of knowledge but they are at risk of smoking E-cigarette which has many effects on health and academic achievement in school.

Discussion the Relationships among Students' Knowledge with regard to their Variables

It has known out of correlation that there is positive significant relationship among students' knowledge with regard to their gender and fathers' occupation at p-value = .010 and .037. Regarding gender, the significant relationship could be interpreted that male students are more curious than female students and the males are much mingling with peers after the school from various culture which make them more prone to experience what others make such as smoking. This finding is supported with the study of Muacevic and Adler who found significant between knowledge and gender of the students [15].

The significant relationship between students' knowledge and their father's occupation may be explained by the nature of their works in which more of them is working free works. On the other hand, the fathers are always busy with their work and far of house which make more freedom to students to do what they want and then engaged in smoking cigarette and E-cigarette that increase their knowledge about E-cigarette also. No study has found refers to the significant relationship between students' knowledge about smoking E-cigarette and fathers' occupation.

Conclusions

Students of secondary school showing good level of knowledge towards E-cigarette smoking. Students' knowledge correlated positively with their gender and correlated reversely with fathers' occupation. Health instructional materials such as pamphlet and booklets should be directed more towards smokers individual and Ministry of Education should devote more materials in the school curricula that shed the light on the detrimental effects of smoking of all types and their risks.

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 10109 - 10116
Received 05 March 2021; Accepted 01 April 2021.

Recommendations

The health instructional materials such as pamphlet and booklets should be directed more towards smokers individual and raising the awareness of public about the unrecognized effect and risk of smoking, particularly E-cigarette through mass media and social media application, as well as the Ministry of Interior should raise the tightening legal procedures against those who use drugs and alcohols.

References

1. Arrazola, R. A., Singh, T., Corey, C. G., Husten, C. G., Neff, L. J., Apelberg, B. J., ... & Caraballo, R. S. (2015). Tobacco use among middle and high school students—United States, 2011–2014. MMWR. Morbidity and mortality weekly report, 64(14), 381.
2. Camenga, D. R., Delmerico, J., Kong, G., Cavallo, D., Hyland, A., Cummings, K. M., & Krishnan-Sarin, S. (2014). Trends in use of electronic nicotine delivery systems by adolescents. Addictive behaviors, 39(1), 338-340.
3. Canada, K. E., Watson, A. C., & O'kelley, S. (2021). Utilizing Crisis Intervention Teams in Prison to Improve Officer Knowledge, Stigmatizing Attitudes, and Perception of Response Options. Criminal Justice and Behavior, 48(1), 10-31.
4. McNeill, A., Brose, L. S., Calder, R., Bauld, L., & Robson, D. (2019). Vaping in England: an evidence update February 2019. A report commissioned by Public Health England. London: Public Health England.
5. Ramo, D. E., Young-Wolff, K. C., & Prochaska, J. J. (2015). Prevalence and correlates of electronic-cigarette use in young adults: findings from three studies over five years. Addictive behaviors, 41, 142-147.
6. Chaffee, B. W., Couch, E. T., & Gansky, S. A. (2017). Trends in characteristics and multi-product use among adolescents who use electronic cigarettes, United States 2011-2015. PLoS One, 12(5), e0177073.
7. Hallingberg, B., Maynard, O. M., Bauld, L., Brown, R., Gray, L., Lowthian, E., ... & Moore, G. (2020). Have e-cigarettes renormalised or displaced youth smoking? Results of a segmented regression analysis of repeated cross sectional survey data in England, Scotland and Wales. Tobacco control, 29(2), 207-216.
8. Fadus, M. C., Smith, T. T., & Squeglia, L. M. (2019). The rise of e-cigarettes, pod mod devices, and JUUL among youth: factors influencing use, health implications, and downstream effects. Drug and alcohol dependence, 201, 85-93.
9. Borzekowski, D. L., & Cohen, J. E. (2014). Young children's perceptions of health warning labels on cigarette packages: a study in six countries. Journal of Public Health, 22(2), 175-185.
10. Damas C, Saleiro S, Marinho A, Fernandes G, and Gomes I (2009), Smoking habits in secondary school students, Rev Port Pneumol; 15(1): 43-53.
11. Dawood A. (2018), Effectiveness of Health Education program on High Schools Students perception of Hookah-Related to Health Problems in Baghdad City, A thesis submitted to the College of Nursing, University of Baghdad.
12. Franks A, Hawes W, McCain K, and Nalin Payakachat (2017), Electronic cigarette use, knowledge, and perceptions among health professional students, Currents in Pharmacy Teaching and Learning: 1003-1009.

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 10109 - 10116
Received 05 March 2021; Accepted 01 April 2021.

13. Sanders-Jackson AN, Tan ASL, Bigman CA, Henriksen L (2015). Knowledge about e-cigarette constituents and regulation: results from a national survey of US young adults. Nicotine Tob Res.; 17(10):1247–1254.
14. Zhou S, Van Devanter N, Fenstermaker M, Cawkwell P, Sherman S, Weitzman M. (2015). A study of the use, knowledge, and beliefs about cigarettes and alternative tobacco products among students at one US medical school. Acad Med.; 90(12):1713–1719.
15. Muacevic A and Adler J (2017), Knowledge and Attitude of Teenagers towards Electronic Cigarettes in Karachi, Pakistan, Cureus; 9(7): e1468.