

Effectiveness of an Educational Program on Knowledge of High School Students about Substance Abuse in Kirkuk City

فاعلية البرنامج التعليمي في معارف طلاب المدارس الإعدادية حول تعاطي المواد المخدرة في مدينة كركوك

Fatima Fadil Salih, MScN*

Aysen Kamal M Noori, PhD**

*Assistant Instructor, Technical Institute of Kirkuk, Northern Technical University, Kirkuk City, Iraq e-mail: fatimateacher696@gmail.com

** Instructor, Department of Community Health Nursing, College of Nursing, University of Baghdad, Iraq e-mail: dr.aysin@conursing.uobaghdad.edu.iq

المستخلص:

الهدف: تهدف الدراسة إلى تقييم فاعلية البرنامج التعليمي في معارف الطلاب المدارس الإعدادية حول تعاطي المواد المخدرة وعواقبها الصحية ولمعرفة العلاقة بين معارف الطلاب حول تعاطي المخدرات وعواقبها الصحية وبياناتهم الديموغرافية المتعلقة بالعمر والحالة الاجتماعية والإقتصادية والمستوى التعليمي للوالدين.

المنهجية: أجريت دراسة شبه تجريبية للفترة من ٢٨ تشرين الأول ٢٠١٩ إلى ٣٠ مارس ٢٠٢٠. عينة الدراسة كانت عينة غرضية غير عشوائية تضمنت (١٢٤) طالباً (٦٢) طالباً للمجموعة الضابطة و (٦٢) طالباً لمجموعة الدراسة ممن تتراوح أعمارهم من (١٤-١٩) سنة والذين تم إختيارهم من إعدادية الحكمة للبنين في مدينة كركوك. جُمعت البيانات بإستعمال أداة البحث ذاتية الإملاء وهي إستبائية تتكون من ثلاث أجزاء، الجزء الأول شملت البيانات الديموغرافية، الجزء الثاني معارف الطلاب حول المواد المخدرة والجزء الثالث معارف الطلاب بالآثار الصحية لتعاطي المخدرات.

النتائج: أظهرت نتائج الدراسة وجود فروقات معنوية هامة في معارف الطلاب المتعلقة تعاطي المواد المخدرة وعواقبها الصحية بين الإختبار القبلي والبعدي وعدم وجود علاقة ذات دلالة إحصائية بين معارف الطلاب ومعلوماتهم العامة كالعمر، مستوى تعليم الوالدين، والحالة الاجتماعية الإقتصادية.

التوصيات: توصي الدراسة بتوفير برنامج تعليمي حول تعاطي المخدرات وعواقبها الصحية كجزء من المناهج الدراسية في المدارس الإعدادية. تشجيع تعاون وزارة الصحة مع وزارة التربية والتعليم لمنع ظاهرة تعاطي المخدرات بين الطلبة.

الكلمات المفتاحية: البرنامج التعليمي، المعارف، المواد المخدرة

Abstract

Objective(s): This study aims at determining the effectiveness of an educational program on knowledge of high school students' knowledge about substance abuse and its health consequences, and to find out the association between students' knowledge about substance abuse and its health consequences and their demographic data of age, socioeconomic status, and educational level of parents.

Methodology: A quasi-experimental study is conducted for the period of October 28th, 2019 to March 30th, 2020. The study sample included a nonprobability "purposive" sample of (124) male students (62) students for the control group and (62) students for the study group, aged (14-19) years who are selected from Al-Hikma High School for Boys in Kirkuk City, Iraq. A self-report questionnaire is used for data collection which has included three parts; the first part deals with the students' demographic information, the second part includes students' knowledge about substances and the third part is about students' knowledge of the health effects of substance abuse.

Results: The study results reveal that there is a significant difference in students' knowledge about substance abuse and its health consequences between the post-test knowledge score of the study group. There is no significant relationship between students' knowledge and their demographic variables of age, parents' education, and socio-economic status.

Recommendations: The study recommends that providing of an educational program about substance abuse and their consequences as part of the curriculum in high schools is essential and encouraging collaboration between the Ministry of Health and Environment and the Ministry of Education to prevent substance abuse among students.

Keywords: Educational Program, Knowledge, Substance Abuse

Introduction

Adolescence is a vital period in being because of established most of the behaviors that will affects health through adulthood⁽¹⁾.

Also, some unhealthy behavior frequently start through teens and represent principal public health challenge⁽²⁾. Substance abuse is defined by the World Health Organization (WHO) as a hazardous/harmful custom of addictive-drugs, involving alcohols and illegal drug⁽³⁾.

Substance abuse among adolescence is an important problem globally. It is connected with an increased risk for number of well-established consequence, including mental illness, impaired peer relationship, high- risk for suicide, human immunodeficiency virus (HIV), increased risky sexual behavior, truancy, interrupted learning, increased rate of poverty and school dropout⁽⁴⁾.

Studies in Iraq have demonstrated that substance abuse by young people is on the increase. According to the report of the Iraqi community epidemiology workgroup, there has been an increase in the uses of prescription drugs, alcohol, and illicit drugs, particularly among young people⁽⁵⁾.

According to a study which is conducted to estimate the rate of some health risk behavior among male pupils of the secondary school of Erbil City, Iraq to find out the factors related to these risk behaviors, the study results revealed that smoking was the common risk behavior among the pupils (41.7%), followed physical fighting (33.3%), sexual relationships (15.5%), and alcohol drinking (6.6%). While, the lowest risk behavior is substance abuse⁽⁶⁾.

Illegal substances use among adolescents imposes huge burdens on individuals, families, and communities.

Further substance abuse has associations with violence, including adolescent homicides and involvement in victimization⁽⁷⁾. School-based interventions administered to all teenagers that intend to address engagement in various risky behaviors and can prevent alcohol, tobacco, illicit drug use, and antisocial behavior (hostility toward others), as well as in promoting physical activity among adolescents⁽⁸⁾.

Methodology

Design of the study

The study design is a quasi-experimental; two groups; pre-test and post-test.

Setting

The present study was conducted at "Preparatory AL-Hikma for Boys" at Kirkuk Directorate of Education in Kirkuk City.

Sample of the study

The study has applied a non-probability (purposeive) sampling method that is used to recruit study subjects. The sample size is (124) students. (62) student for the study group and (62) students for the control group.

Ethical Considerations

Scientific Research Ethical Committee at the University of Baghdad, College of Nursing has approved the study to be conducted. All mothers who have participated in the study have signed consent form for the human subjects' rights.

Steps of the study

1. Assessing the education needs related to knowledge about substance abuse and Its health consequences. Before implementing the educational program, a preliminary need assessment for students' knowledge about substance abuse and its health consequences.

2. Program construction: An educational program was constructed for the purpose of the study. It focuses on various aspects of substance abuse, especially prevention and health consequences.

Study Instrument

A self-report questionnaire is constructed for the purpose of the study. It includes three parts. These parts are displayed as follows:

Part I: Demographic Characteristics

This part consists of the demographical characteristics for students age, grade, education level of parents, and socioeconomic status of the family.

Part II: students' knowledge about substance abuse

This part is comprised of (10) items that measure students' knowledge about substance abuse.

Part III: Students' knowledge about health effects of substance abuse.

This part is comprised of (20) items that measure students' knowledge about health effects of substance abuse.

Scoring of the Study Instrument

The questionnaire format contains multiple choices questions. The semantic scale is used for the purpose of rating knowledge items. The level of knowledge is estimated by calculating the mean of the score and the cut-off-point for the overall score of knowledge and scored as follows: The mean of the score (1-1.33) was considered a low level of knowledge, (1.34-1.67) a moderate level of knowledge, and (1.68-2) a high level of knowledge.

Data Collection

Data are collected for the period from December 15th, 2019 to January 27th, 2020. The questionnaire is used to collect the data in 2-time points pre-test, post-test after the month of presenting the educational program.to the students.

Data Analysis

The data are analyzed using the Statistical Package for Social Sciences (SPSS), version22.

Results

Table (1): Distribution the Students' Knowledge about Substance Abuse and its Health Consequences Overtime

Period	Level of Assessment	Control group		Study group	
		Frequency	Percent	Frequency	Percent
Pre-test	Low (1-1.33)	55	88.7	50	80.6
	Moderate (1.34-1.67)	7	11.3	12	19.4
	High (1.68-2)	0	0	0	0
	Total	62	100	62	100
	$\bar{x} \pm S.D$	1.25 \pm 0.088		1.246 \pm 0.107	
Post test	Low (1-1.33)	53	85.5	3	4.8
	Moderate (1.34-1.67)	9	14.5	43	69.4
	High (1.68-2)	0	0	16	25.8
	Total	62	100	62	100
	$\bar{x} \pm S.D$	1.258 \pm 0.075		1.58 \pm 0.145	

$\bar{x} \pm S.D.$ = Arithmetic Mean (\bar{x}) and Std. Dev. (S.D.)

According to the mean of the score level of assessment, there is low level of assessment of 55 (88.7%) of the control group at level (1.00-1.33). The mean of score and standard deviation are (1.25 \pm 0.088) at the pre-test, there is low level of assessment of 50 (80.6%) of the study group at level (1.00-1.33) the mean of score and standard deviation are (1.246 \pm 0.107) at the pre-test. There is low level of assessment of 53 (85.5%) of the control group at level (1.00-1.33) the mean of score and standard deviation are (1.258 \pm 0.075) at the post- test, there is moderate level of assessment of 43 (69.4 %) of the study group at level (1.34-1.67) the mean of score and standard deviation are (1.58 \pm 0.145) at the post-test.

Table (2): Significant Comparison for Students' Knowledge about Substance Abuse and its Health Consequences

Sample groups	Periods		Matched Paired t-test	P- value	C.S.
Study group	Pre test	Post test	-15	0.000	HS
Control group	Pre test	Post test	-1.526	0.132	NS

C.S. : Comparison Significant, NS : Not Significant at $P \geq 0.05$, HS : Highly Significant at $P < 0.01$

This table shows that there is a highly significant difference at $P < 0.01$ between the initial period of pre and posttest of the study group for Students Knowledge about Substance Abuse, then followed by a no significant difference at $P \geq 0.05$ between the initial period of pre and posttest of the control group for Students Knowledge about Substance Abuse.

Table (3): Association between Students' knowledge about Substance Abuse and its Health Consequences at pre-test of Control Group and Their Demographic Characteristics

Variables		Level of knowledge		Total	Chi-square
		Low	Moderate		
Age (years)	14	1	0	1	$X^2=4.882$ d.f= 5 P=0.43
	15	10	0	10	
	16	13	1	14	
	17	13	2	15	
	18	13	4	17	
	19	5	0	5	
Father education	Unable to read & write	3	0	3	$X^2= 3.52$ d.f=6 P=0.74
	read & write	3	0	3	
	Primary school certificate	12	0	12	
	Middle school certificate	6	1	7	
	High school certificate	10	2	12	
	Institute certificate	13	2	15	
	Bachelor and more	8	2	10	
Mother education	Unable to read & write	5	1	6	$X^2= 1.29$ d.f= 6 P=0.972
	read & write	12	1	13	
	Primary school certificate	18	2	20	
	Middle school certificate	10	2	12	
	High school certificate	1	0	1	
	Institute certificate	6	1	7	
	Bachelor and more	3	0	3	
SES	Lower	1	0	1	$X^2= 1.42$ d.f= 4 P=0.84
	Lower middle	23	2	25	
	Upper	1	0	1	
	Upper lower	17	2	19	
	Upper middle	13	3	16	

X^2 = chi-square, d.f=degree of freedom, P=p-value

This table indicates that there is no significant relationship between the pre-test knowledge score of the control group and chosen demographic variables such as age, educational level of parents, and socio-economic status at p-value ≤ 0.05 .

Table (4): Association between Students' Knowledge about Substance Abuse and Its Health Consequences at Pretest of Study group and Their Demographic Characteristics

Variables		Level of knowledge		Total	Chi-square
		Low	Moderate		
Age	15	3	0	3	$X^2=3.16$ d.f= 4 P=0.53
	16	11	2	13	
	17	13	6	19	
	18	14	2	16	
	19	9	2	11	
Father education	Unable to read & write	1	0	1	$X^2= 8.1$ d.f=6 P=0.23
	read & write	3	0	3	
	Primary school certificate	5	4	9	
	Middle school certificate	9	1	10	
	High school certificate	11	4	15	
	Institute certificate	10	0	10	
	Bachelor and more	11	3	14	
Mother education	Unable to read & write	2	3	5	$X^2= 11.66$ d.f= 6 P=0.07
	read & write	5	0	5	
	Primary school certificate	25	4	29	
	Middle school certificate	3	3	6	
	High school certificate	7	1	8	
	Institute certificate	3	0	3	
	Bachelor and more	5	1	6	
SES	lower middle	24	3	27	$X^2=3.2$ d.f= 3 P=0.362
	Upper	1	1	2	
	Upper lower	13	5	18	
	Upper middle	12	3	15	

X^2 = chi-square, d.f=degree of freedom, P=p-value

This table shows that there is no significant relationship between the pre-test knowledge score of the study group and chosen demographic variables such as age, educational level of parents, and socio-economic status at p-value ≤ 0.05 .

Discussion

Regarding effectiveness of educational program, the finding of the present study shows that there is a significant difference between the post-test knowledge score and the pre-test knowledge score students' knowledge about substance abuse and its health consequences for the study group for. The educational program on substance abuse and its health consequences was found to be effective. This study is supported by a study conducted to evaluate and compare the degree of knowledge about drug use and its consequences among students before and after administration of health awareness program revealed a significant change between the degree of awareness after the test and the degree of awareness before the test. Since the value of the account is less than the scheduled value, the health awareness program on drug use and its effects was found to be successful ⁽⁹⁾. Similarly, a study examines the effect of educational intervention on the knowledge of high school students with regard to drug use and finds that after implementing a health education program, students' knowledge of drug use improved significantly and this proves the effectiveness of the health education program in increasing students' knowledge about drug use ⁽¹⁰⁾.

Regarding the associations of students' knowledge with their demographic characteristics at the pretest, the finding of the present study reveals that there is no significant relationship between students' knowledge with their age, parents' education and socioeconomic status. This finding indicates that student knowledge is independent of all of these characteristics. A study supports this finding that shows there is no statistically significant relationship among the

knowledge scores of substance abuse and its consequences and the chosen variables of father's education, mother's education, age, and monthly income ⁽¹¹⁾.

Recommendations

1. Providing an educational program about substance abuse and consequences as part of the curriculum in high schools.
2. Encouraging collaboration Ministry of Health and Environment with the Ministry of Education to prevent substance abuse among students.
3. Encouraging youth centers and forums to prepare social, recreational and sports activities for youth.

References

1. Fernández-Prieto, I., Canet, O., & Giné-Garriga, M. (2019). Physical activity perceptions in adolescents: a qualitative study involving photo elicitation and discussion groups. *Journal of Adolescent Research*, 34(3), 302-322.
2. Das, J. K., Salam, R. A., Arshad, A., Finkelstein, Y., & Bhutta, Z. A. (2016). Interventions for adolescent substance abuse: An overview of systematic reviews. *Journal of Adolescent Health*, 59(4), S61-S75.
3. World Health Organization [WHO]. (2017). *Defining Substance Abuse and Substance Use Disorder*. Retrieved from <https://www.ruralhealthinfo.org/toolkits/substance-abuse/definition>
4. Pullen, S. J., Petruzzi, L., Lange, B. C., Parnarouskis, L., Dominguez, S., Harris, B., ... & Borba, C. P. (2016). A qualitative analysis of substance use among Liberian youth: Understanding behaviors, consequences, and

- protective factors involving school youth and the school milieu. *International journal of mental health & psychiatry*, 2(1).
5. Al-Hemiary, N. J., Al-Diwan, J. K., Hasson, A. L., & Rawson, R. A. (2014). Drug and alcohol use in Iraq: findings of the inaugural Iraqi Community Epidemiological Workgroup. *Substance use & misuse*, 49(13), 1759-1763
 6. Shreen Al-Doski, N. A., & Baker, J. M. A. (2016). Health risk behaviors among male students in secondary schools in Erbil city. *Zanco Journal of Medical Sciences*, 20(1), 1199-1205.
 7. Hohl, B. C., Wiley, S., Wiebe, D. J., Culyba, A. J., Drake, R., & Branas, C. C. (2017). Association of drug and alcohol use with adolescent firearm homicide at individual, family, and neighborhood levels. *JAMA internal medicine*, 177(3), 317-324.
 8. MacArthur, G., Caldwell, D. M., Redmore, J., Watkins, S. H., Kipping, R., White, J., ... & Campbell, R. (2018). Individual-, family-, and school-level interventions targeting multiple risk behaviours in young people. *Cochrane database of systematic reviews*, (10).
 9. Hansadah, T., & Sonalika, S. (2018). Health Awareness Programme on Knowledge Regarding Substance Abuse and its Consequences among Adolescents
 10. Mahmood, N., Othman, S., Al-Tawil, N., & Al-Hadithi, T. (2018). Impact of an education intervention on knowledge of high school students concerning substance use in Kurdistan Region-Iraq: A quasi-experimental study. *PloS one*, 13(10), e0206063.
 11. Nayak, A. K., & Jose, T. T. (2015). A study to determine the effectiveness of an awareness programme on knowledge on substance abuse and its consequences among the students of a selected pre university college of Udupi district, Karnataka. *Nitte University Journal of Health Science*, 5(1).