

Effect of Nursing Intervention for Secondary School Students about Substance Abuse Prevention in Sammanoud City, Gharbia Governorate, Egypt

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Abstract:

Background: Alcohol and other forms of substance abuse continue to hinder the development, functioning, and well-being of millions of adolescents and adults.

Purpose of the study: The aim of this study is to evaluate the effect of nursing intervention for secondary school students about substance abuse prevention in Sammanoud City, Gharbia Governorate, Egypt.

Subjects and methods: Design: A quasi experimental research design was used.

Setting: The study was conducted at secondary governmental schools in Sammanoud City, Gharbia Governorate, Egypt.

Sampling: A multistage cluster random sample of student from first grade secondary school students

Tool: An interview questionnaire form, that cover four parts as 1) demographic characteristics. 2) Knowledge and awareness, and 3) Attitude toward substance abuse and abuser, and 4) prevalence and experience of students toward smoking and substance abuse

Results: Highly statistically significant improvement was found among secondary school students knowledge and attitude toward substance abuse and abuser after the nursing intervention implementation

Conclusion: The nursing intervention helped in improving students' knowledge, awareness, and their attitude about substance abuse prevention.

Recommendation: The study can be replicated with a larger number of students for generalizations of the results, more education with students at an earlier age than traditionally provided. Simultaneously, parents should also receive information on substances used by young people, the associated dangers with use, and the parents' role in prevention of problem substance use.

Keywords: Secondary school students, substance abuse, nursing intervention, Sammanoud City, Egypt.

I. Introduction:

Teenage is a stage when a human being develops physically and mentally with a great risk for beginning substance use. Reproductive and child health program reported that teenagers are between 10-19 years old with population of 1.2 billion adolescents in the world. Experiments with addictive substances begin on adolescents because they are still immature from a cognitive point of view and they can be easily exposed to social influences. Current reports approved a worldwide increase in the availability of drugs and consumption among youth who are between 15 and 25 years old with percent (12.5%-84%) 1.

The abuse of drugs has globally increased and it begins in a progressive age. The common reasons for drug abuse among teenagers are the encouragement from the group of friends, the desire for popularity, the poor control from the side of parents and the easy availability of drugs .There are other causes which include curiosity, enjoying specific feelings such as energy and confidence, risk taking and the excitement of rebellion especially when it becomes related to parents' disapproval and escapism 2.

Students go to school to overcome the evil of ignorance and the teachers shouldn't feel ashamed if they can't fix homelessness or violence or prevent AIDs or end taking drugs. Teachers will care when students use drugs or have sexual diseases but it isn't the concern of schools. Schools aren't concerned to repair such bad behaviors but they can influence that behavior through developing knowledge, skills and values in students 3.

Smoking tobacco is common worldwide. The World Health Organization has approved that tobacco and its products kill more than 3.5 million people every year and it's predicted that by the decade 2020-2030, tobacco will kill 10 million people every year 4.

Tobacco, alcohol and other legal or illegal kinds of drugs should be explained in educational programs for preventing them and should consider drug using levels among individuals and in society, risks and factors of protection, gender, culture, language, religion and sexual orientation. Teachers in schools should deal with students in a way that make them involved into knowledge of drug abuse prevention programs. Students react in

appositive way when their needs and the users and non-users needs are acknowledged and communication channels are kept open 5.

Nurses have an important role in screening, brief intervention and referral for treatment for substance use disorders, through developing educational intervention program, they Provide information regarding effects of addiction on mood and personality, be alert to changes in behavior, provide positive feedback for expressing awareness of dangers of substance abuse, encourage and support patient's taking responsibility for own recovery, assist patient to learn own responsibility for recovering, encourage family members to seek help whether or not the abuser seeks it, and review program rules, philosophy expectations 6.

Significance of the study:

The early beginning of using drugs is found to have impairment, crime, and difficulty in giving up and has a relation with poor prediction and pattern of deceit and irresponsibility, people who drink are victims of violent crimes and they are exposed to be assault sexually and unwanted pregnancy . They also can face strong problems in school or can be involved in traffic crashes and have later problems because of drinking alcohol Drugs abuse is common among the teenagers worldwide 7.

Aim of The Study

The current study aimed to evaluate the effect of nursing intervention for secondary school students about substance abuse prevention in Sammanoud City, Gharbia Governorate, Egypt. Through the following objectives

1. Studying the use of some substances among the study group; assessing knowledge about drugs; and evaluating attitude toward substance abuse and abusers.
2. Planning, implementing and evaluating a nursing intervention of addiction prevention to improve knowledge and attitude of the studied sample.

Hypothesis: After implementation of the nursing intervention improvement in students' knowledge and their attitude about substance abuse prevention can be achieved.

II. Subjects And Methods

Design:

A quasi experimental design was used to conduct this study.

Setting:

The study was conducted at governmental secondary schools in Sammanoud City, Gharbia Governorate, Egypt, where Sammanoud City contain 13 general secondary schools with 2257 students in first grade, one technical secondary school with 1280 students in first grade, one agricultural secondary school with 620 students in the first grade, and seven commercial secondary schools with 555 students in the first grade in a total of 22 schools and 4712 students.

Sampling: A multistage cluster random sampling was used to select a sample of 385 school students having the following inclusion criteria: registered in the first grade, and willing to participate in the study.

Sample Size Calculation:-

The sample size was calculated using the following equation: [36]8.

At 95% confidence power of the study.

$$N \times P (1-P)$$

Steven Thimpsons equation $n =$

$$\text{Where: } \{(N-1 \times (d^2 / Z^2) + P (1-P))\}$$

n =Sample size

N =Total society size

d =Error percentage = (0.05)

P =Percentage of availability of the character and objectivity= (0.5)

Z =The corresponding standard class of significance 95%= (0.5)

The calculated sample was 350 secondary school students at first grade. They were chosen randomly as a probability sample, out of total 4712 secondary school students. 35 students were included in the pilot study and they were excluded from the total sample of the study. So, the sample size included 350 secondary school students as a stratified random sample continuo to participate in the study.

Tools for data collection:

Data collection was carried out by using the following tool:

An interview questionnaire form that covers four parts:

Part 1: Demographic characteristics such as: age, father and mother education.

Part 2: Designed by the researcher, to assess students' knowledge as: definition of substance abuse, causes, etc.

Scoring system:

Each knowledge question answers were categorized into don't know (scored zero), incomplete answer (scored one), and complete answer (scored two), the total knowledge scores ranged from 0-12, Results were evaluated as follows:

- Poor knowledge (< 50%) (with scores ranged from 0-6)
- Fair knowledge (50-75%) (with scores ranged from 7-9)
- Good knowledge (>75%) (with scores ranged from 10-12)

Part 3a: Designed by **Al-Dossary (2004) 9**, it was used to assess student attitude regarding substance abuse using Likert scale

Scoring system:

- Pretest questions from 1-13 were scored from (0-2) (0 for don't agree, 1 for in-between, and 2 for agree).
- The total attitude scores ranged from (0-26).
Results were evaluated as follows:
- Negative attitude (<40%) (with scores ranged from 0-10)
- Neutral attitude (40-60%) (with scores ranged from 11-16)
- Positive attitude (>60%) (with scores ranged from 17-26)

Part 3b: Designed by **Al-Dossary (2004) 9**, it was used to assess student attitude regarding substance abuser using Likert scale

Scoring system:

- Pretest questions from 1-18 were scored from (0-2) (0 for don't agree, 1 for in-between, and 2 for agree).
- The total attitude scores ranged from (0-36).
Results were evaluated as follows:
- Negative attitude (<40%) (with scores ranged from 0-14)
- Neutral attitude (40-60%) (with scores ranged from 15-22)
- Positive attitude (>60%) (with scores ranged from 23-36)

Part 4: It was used to assess prevalence and experience of the studied secondary school about smoking and drug abuse.

Pilot study

A pilot study was carried out on 10% of the sample from different schools, to evaluate the clarity and applicability of the tool and necessary modifications were done based on their responses. The pilot study was also used to estimate the time needed to fill in the tool. Students who participated in the pilot study were later excluded from the main study sample.

Validity:

The study tool was tested for its content and face validity by a jury of five experts in the field of Community and Pediatric Health Nursing to evaluate items as well as the entire instrument as being relevant and appropriate in terms of the construct and if the items adequately measure all dimensions of the construct. The face validity of the questionnaire was calculated based on experts' opinion after calculating content validity index (%) of its items and it was 96%.

Reliability:

The study tool was subjected to assessment of internal consistency reliability using Spearman-Brown Prophecy Formula ($r^1=2(3)/1+r$), where r^1 estimated reliability of the entire test and r estimated correlation coefficient computed on the split halves. The study tool was tested by the pilot subjects at first session and retested after 2 weeks as test-retest reliability for calculating Cronbach's Alpha which was 0.877.

Statistical analysis:

The collected data were organized, tabulated and statistically analyzed using SPSS software Statistical Package for the Social Sciences, (SPSS) version 16, (Chicago, IL, USA). For quantitative data, the range, mean and standard deviation were calculated. For qualitative data, comparison between two groups and more was done using Chi-square test (χ^2). For comparison between means of two groups of parametric data of independent

samples, student t-test was used. For comparison between means of two related groups (pre and post program data) of parametric data, paired t-test was used. For comparison between more than two means of parametric data, F value of ANOVA test was calculated. Correlation between variables was evaluated using Pearson's correlation coefficient (r). Significance was adopted at $p < 0.05$ for interpretation of results of tests (Dawson & Trapp, 2001).

Field work:

An official letter issued from the Faculty of Nursing, Helwan University was sent to the Ministry of Education and after that the executive of the schools, including the point and timetable of the review to get consents to visit schools and direct the review. The health education intervention about addiction prevention was created in view of audit of related writing and apparatus appraisal (pre-test). Time plan was set up and the understudies were sorted out into 6 bunches (20-30 students).

The program was executed amid school day began from 8.00 a.m. to 2.00 p.m. and instructive program built included 4 stages:

- 1) Preparatory stage: The preliminary stage was done by utilizing the assessment tools after being revised and tested for general information about substance abuse prevention. Time expended for answering the study sheet ranged from 30-45 minutes. This phase lasted for 2 weeks.
- 2) Planning stage: Based on the outcome acquired from the assessment Phase. The educational sessions were created after reviewing of related literature. Detected needs, requirements and deficiencies were converted into aim and objectives of the educational sessions and an illustrated booklet was created by the researchers and offered to every member as reference.
- 3) Program implementation stage: The booklet was implemented in the form of sessions. The length of every session was distinctive according to students' response, time accessible, and the content of each session.
- 4) Evaluation phase: Evaluation of the educational sessions was done quickly after its Implementation by contrasting the change in students' level of knowledge, and attitudes through applying the similar apparatuses of pre-test as posttest.

Ethical considerations: Consent to participate in the study was obtained from the parents of school students of the study group. They were given an opportunity to refuse to participate and they were notified that they can withdraw at any stage of research without giving any reason. Also they were assured that, the information given will remain confidential and used for the research purpose only.

III. Result

Table (1): Demographic characteristics of the studied Secondary school students (n=350).

Studied Secondary School Students (n=350)		Variables
%	No	
		Age in (years):
16-17		Range
16.20±0.40		Mean±SD
		School type:
56.3	197	General secondary school
43.7	153	Technical school
		Fathers' education level:
2.0	7	Illiterate
13.1	46	Read & write
8.3	29	Basic education
37.7	132	Middle education
38.9	136	University education
		Mothers' education level:
0.6	2	Illiterate
9.1	32	Read & write
9.7	34	Basic education
46.9	164	Middle education
33.7	118	University education
		Residence:
39.4	138	Rural
60.6	212	Urban

Demographic characteristics of the secondary school students represented that, more than half (56.3%) were in general secondary school. Regarding level of father education, 38.9% of them had university education, while 46.9% of mothers had middle educational level. As regards residence, 60.6% of them were from urban.

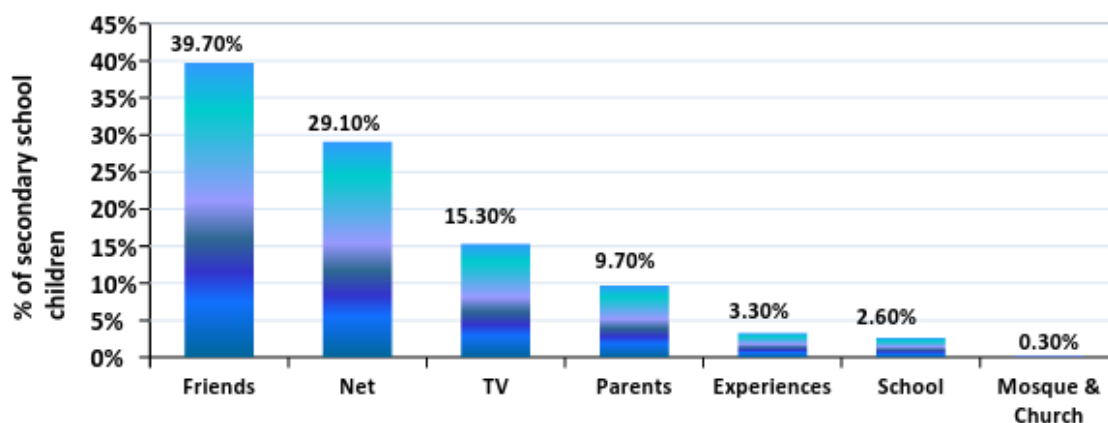


Figure (1): Sources of information of the studied secondary school students about substance abuse (n=350).

Figure (1) represents that 39.7%, 29.1% and 15.3% estimated that their sources of information were acquired from friends, net, and T.V respectively, while least sources were acquired from parents, schools, experiences, mosques and churches.

Table (2): Mean scores and levels of total knowledge of the studied secondary school students about substance abuse pre/post intervention (n=350).

χ^2 P	The Studied Secondary School Students (n=350)				Total Knowledge About Substance Abuse		
	Post- intervention		Pre-intervention				
	%	No	%	No			
					Levels of total knowledge:		
605.011	0.0	0.0	86.6	303	(0-6)	(<50%)	Poor
0.0001*	13.7	48	13.4	47	(7-9)	(50-<75%)	Fair
	86.3	302	0.0	0.0	(10-12)	(≥75%)	Good
					Total knowledge scores:		
	8-12 11.50±1.13		0-9 4.48±2.19		Range Mean±SD		
	80.056 0.0001*				Paired t-test P		

*Significant (P<0.05)

Highly statistically significant improvement was found among secondary school students knowledge after the nursing intervention implementation (P=0.0001).

Table (3): Knowledge items of the studied secondary school students about substance abuse pre and post-nursing intervention program (n=350).

P	χ^2	The studied secondary school students (n=350)				Knowledge items about substance abuse
		Post-intervention		Pre-intervention		
		%	n	%	n	
						Definition:
0.0001*	520.94	0	0	54.9	192	Don't know
		12.3	43	41.7	146	Incomplete answer
		87.7	307	3.4	12	Complete answer
						Reasons make the individual accustomed it:
0.0001*	471.02	0	0	21.7	76	Don't know
		14.0	49	73.4	257	Incomplete answer
		86.0	301	4.9	17	Complete answer
						Symptoms:
0.0001*	662.58	0	0	66.3	232	Don't know
		2.6	9	33.4	117	Incomplete answer
		97.4	341	0.3	1	Complete answer
						Resulting damage and risk:
0.0001*	638.80	0	0	56.3	197	Don't know
		4.9	17	43.7	153	Incomplete answer

		95.1	333	0	0	Complete answer
						List drinks that contain alcohol:
0.0001*	401.42	17.4	61	48.9	171	Don't know
		4.6	16	46.6	163	Incomplete answer
		78.0	273	4.6	16	Complete answer
						Preventive and protective measures against abuse:
0.0001*	551.27	0	0	52.9	185	Don't know
		13.7	48	47.1	165	Incomplete answer
		86.3	302	0	0	Complete answer

Highly statistically significant improvement was found among secondary school students knowledge after the nursing intervention implementation (P=0.0001).

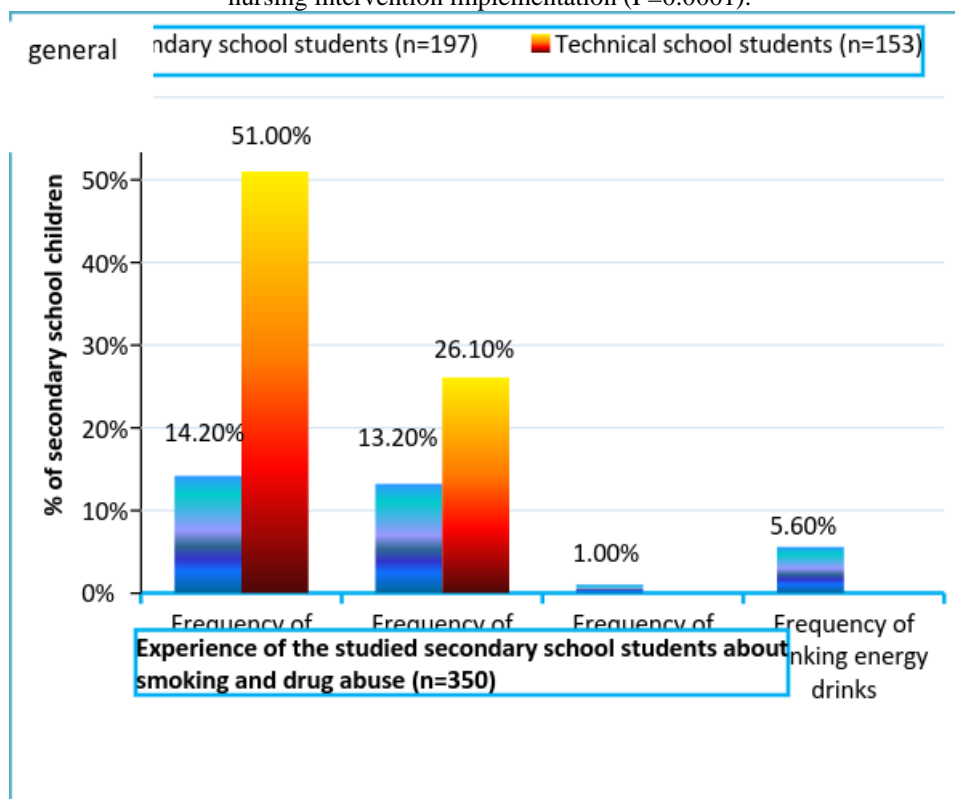


Figure (2): Frequency of the studied secondary school students (general secondary & technical secondary schools) about smoking and drug abuse (n=350).

Frequency of smoking and drug abuse among the studied secondary school students (general secondary and technical schools), represented 51.0% and 14.2% from technical secondary and general secondary school children who smoked cigarette respectively, And for drinking alcohol they accounted for 26.1% and 13.2% from technical and general secondary students respectively.

Table (4): Prevalence of abuse among the studied secondary school students (general secondary & technical secondary schools) (n=350).

P	χ^2	Frequency of abuse among the studied secondary school students (n=350)						Variables
		Total (n=350)		Technical secondary school (n=153)		General secondary school (n=197)		
		%	No	%	No	%	No	
								Substance abuse:
0.0001*	24.011	65.4	229	51.6	79	76.1	150	No
		34.6	121	48.4	74	23.9	47	Yes
								-If yes, multiplicity:
0.217	1.521	45.9	61	45.9	34	57.4	27	Single
		54.1	60	40	40	42.6	20	Multiple

Table (4) demonstrates the prevalence of abuser among the studied secondary school students, where 48.4% and 23.9% abuse some drugs in technical secondary and general secondary schools respectively with total prevalence 34.6%.

Table (5): Mean scores and levels of total attitude of the studied secondary school students towards substance abuse pre / post intervention (n=350).

χ^2 P	The Studied Secondary School Students (n=350)				Total attitude towards substance abuse and abuser		
	Post-intervention		Pre-intervention				
	%	No	%	No			
					□ Total attitude towards substance abuse:		
					-Levels of total attitude:		
692.045	0	0	56.3	197	(0-10)	(<40%)	Negative
0.0001*	0	0	43.1	151	(11-16)	(40-<60%)	Neutral
	100	350	0.6	2	(17-26)	(>60%)	Positive
					-Total attitude scores:		
	18-26 25.13±1.56		4-22 11.70±3.52		Range (0-26) Mean±SD		
	53.372 0.0001*				Paired t-test P- value		
					□ Total attitude towards substance abusers:		
					-Levels of total attitude:		
147.751	0	0	34.9	122	(0-14)	(<40%)	Negative
0.0001*	0	0	0	0	(15-22)	(40-60%)	Neutral
	100	350	65.1	228	(23-36)	(>60%)	Positive
					-Total attitude scores:		
	26-36 35.07±2.43		0-36 25.16±10.32		Range (0-36) Mean±SD		
	19.627 0.0001*				Paired t-test P		
					□ Total attitude towards substance abuse and abusers:		
					-Levels of total attitude:		
158.144	0	0	5.4	19	(0-24)	(<40%)	Negative
0.0001*	0	0	31.4	110	(25-37)	(40-<60%)	Neutral
	100	350	63.1	221	(38-62)	(>60%)	Positive
					-Total attitude scores:		
	44-62 60.20±3.72		14-52 36.86±7.90		Range(0-62) Mean±SD		
	62.850 0.0001*				Paired t-test P		

*Significant (P<0.05)

Highly statistically significant improvements were found among secondary school students attitude level towards substances abuse and abusers after the intervention (P=0.0001).

Table (6): Attitude items of the studied secondary school students towards substance abuse (n=350).

□ 2 P	Agreement of the studied secondary school students (n=350)						Attitude items towards substance abuse	
	Agree		Neutral		Disagree			
	%	n	%	n	%	n		
132.38	67.7	237	0	0	32.3	113	Pre	It is harmful to health
0.0001*	100	350	0	0	0	0	Post	
627.91	90.6	317	4.0	14	5.4	19	Pre	It activates the body
0.0001*	0	0	0	0	100	350	Post	
200.92	32.9	115	0	0	67.1	235	Pre	It is a manifestation of manhood
0.0001*	0	0	24.0	84	76.0	266	Post	
256.79	43.1	151	0	0	56.9	199	Pre	It is a boredom for human or away boring for human
0.0001*	0	0	28.6	100	71.4	250	Post	
184.348	38.6	135	3.1	11	58.3	204	Pre	Believe that it increases the ability to studying
0.0001*	0	0	0	0	100	350	Post	
684.18	1.1	4	32.3	113	66.6	233	Pre	Its use in times of testing is not harmful
0.0001*	100	350	0	0	0	0	Post	
81.49	1.1	4	37.7	132	61.1	214	Pre	Its use helps to high rate of achievement in studying
0.0001*	0	0	9.7	34	90.3	316	Post	
141.92	66.3	232	32.3	113	1.4	5	Pre	Its use leads to bad psychological effects
0.0001*	100	350	0	0	0	0	Post	

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457.91	1.1	4	79.1	277	19.7	69	Pre	The use of drugs, cigarettes does not lead to addiction
0.0001*	0	0	0.9	3	99.1	347	Post	
216.51	9.1	32	41.4	145	49.4	173	Pre	Its use is incompatible with the values and standards of the society
0.0001*	0	0	1.7	6	98.3	344	Post	
167.48	38.3	134	0	0	61.7	216	Pre	Substance abuse or stimulants serves to activate students mind
0.0001*	0	0	0.9	3	99.1	347	Post	
46.80	1.7	6	32.3	113	66.0	231	Pre	It is supposed to allow the use of narcotic pills
0.0001*	0	0	12.6	44	87.4	306	Post	
139.14	63.4	222	3.7	13	32.9	115	Pre	Strong punishment must be applied for drug abusers
0.0001*	91.7	321	8.3	29	0	0	Post	

Highly statistically significant improvements were found among secondary school students attitude level towards substances abuse after the intervention (P=0.0001).

Table (7): Attitude of the studied secondary school students towards substance or drug abuser (n=350).

χ^2 P	Agreement of the studied secondary school students (n=350)						Attitude items towards drug abuser		
	Agree		Neutral		Disagree				
	%	n	%	n	%	n			
329.41	63.4	222	0.6	2	36.0	126	Pre	He is a failed person	
0.0001*	0	0	0	0	100	350	Post		
171.89	60.6	212	33.4	117	6.0	21	Pre	I don't allow myself to mingle with members	
0.0001*	100	350	0	0	0	0	Post	of using narcotic pills	
187.19	58.6	205	1.1	4	40.3	141	Pre	Strongly refuse to marry a girl who has	
0.0001*	90.9	318	9.1	32	0	0	Post	addicted brother	
84.73	63.4	222	29.1	102	7.4	26	Pre	Strongly refuse to marry one of relative of a	
0.0001*	91.7	321	8.3	29	0	0	Post	person who uses drugs	
156.73	57.7	202	5.7	20	36.6	128	Pre	If the addict is a relative I will feel shame	
0.0001*	91.7	321	8.3	29	0	0	Post		
77.61	64.9	227	29.4	103	5.7	20	Pre	I cannot trust in a person who uses narcotic	
0.0001*	91.7	321	8.3	29	0	0	Post	pills	
22.23	94.0	329	0.3	1	5.7	20	Pre	People who abuse drugs must be treated	
0.0001*	98.9	346	1.1	4	0	0	Post	instead of punishment	
153.19	64.0	224	0.6	2	35.4	124	Pre	Person who uses narcotic drugs find it	
0.0001*	97.1	340	2.9	10	0	0	Post	difficult to live in a normal social life	
161.49	63.7	223	1.4	5	34.9	122	Pre	Person who uses narcotic drugs should be	
0.0001*	89.4	313	10.6	37	0	0	Post	ashamed of himself	
299.27	32.0	112	54.0	189	14.0	49	Pre	If I have a friend abuse drugs, the	
0.0001*	94.9	332	5.1	18	0	0	Post	relationship with him will continue	
62.70	65.4	229	28.9	101	5.7	20	Pre	I am ashamed to appear in public places ,	
0.0001*	89.4	313	10.6	37	0	0	Post	accompanied by someone who is known as drug abuser	
63.75	65.1	228	29.1	102	5.7	20	Pre	I will be strongly bothered if my brother uses	
0.0001*	89.4	313	10.6	37	0	0	Post	drugs	
66.23	64.3	225	30.0	105	5.7	20	Pre	Do not allow my family members to be	
0.0001*	89.4	313	10.6	37	0	0	Post	accompanied by addicted man	
482.26	15.1	53	50.6	177	34.3	120	Pre	Addicted person is apathetic	
0.0001*	97.4	341	2.6	9	0	0	Post		
153.55	60.5	212	4.9	17	34.6	121	Pre	Addicted person does not have ambition	
0.0001*	97.4	341	2.6	9	0	0	Post		
124.69	64.3	225	29.1	102	6.6	23	Pre	Addicted person cannot succeed in any	
0.0001*	97.4	341	2.6	9	0	0	Post	business	
631.52	5.1	18	82.3	288	12.6	44	Pre	A person who uses drugs can take off them	
0.0001*	100	350	0	0	0	0	Post	without need for treatment	
50.38	86.6	303	7.7	27	5.7	20	Pre	Normal person doesn't use narcotic drugs	
0.0001*	100	350	0	0	0	0	Post		

Highly statistically significant improvements were found among secondary school students attitude level towards abusers after the intervention (P=0.0001).

Table (8): Mean scores of total knowledge and attitude towards substance abuse of the studied secondary school students in relation to their demographic data pre-intervention (n=350).

The Studied Secondary School Students Pre-intervention (n=350)				Variables	
t-test or F value P- value	Total attitude scores Mean±SD	t-test or F value P- value	Total knowledge scores Mean±SD		
12.063	40.64±4.47	11.822	5.51±1.43	School type:	
				General	secondary

				school
0.0001*	32.01±8.67	0.0001*	3.15±2.29	Technical secondary school
				Fathers' education level:
23.103	32.71±7.18	22.953	2.00±2.00	Illiterate
0.0001*	30.28±1.92	0.0001*	2.17±1.93	Read & write
	30.00±0.00		4.27±2.31	Basic education
	39.35±6.82		4.89±1.63	Middle education
	38.36±8.86		5.02±2.17	University education
				Mothers' education level:
33.027	30.00±0.00	19.136	0.00	Illiterate
0.0001*	30.00±0.00	0.0001*	3.22±1.70	Read & write
	30.82±3.38		3.44±2.54	Basic education
	35.90±9.60		4.16±2.33	Middle education
	41.93±1.71		5.64±1.26	University education
				Residence:
1.744	37.77±6.20	1.437	4.69±1.77	Rural
0.082	36.27±8.79	0.152	4.34±2.42	Urban

Statistically, significant positive relationships were detected between score of total knowledge and attitude scores of secondary school students with some of demographic characteristics as school type, mothers and fathers educational level.

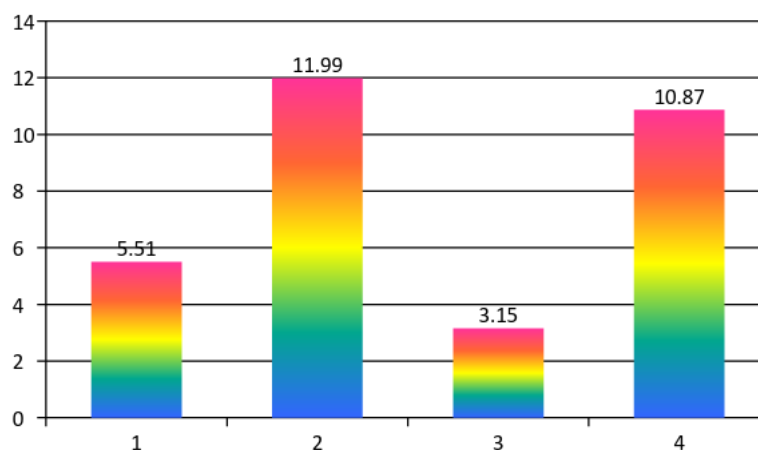


Figure (3): Change in scores of total knowledge about substance abuse of the studied secondary school students (general secondary & technical secondary schools) in relation to their type of school pre/ post Intervention (n=350).

Figure (3) shows significant change of total knowledge scores about substance abuse of the studied secondary school students (general secondary & technical schools) in relation to their type of school pre/post intervention.

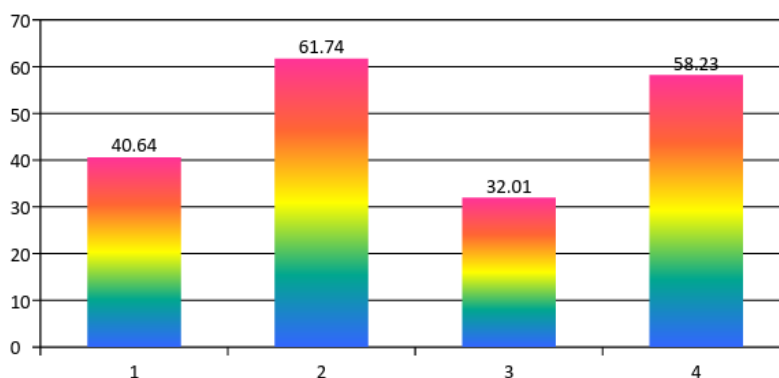


Figure (4): Change in scores of total attitude towards substance abuse and abusers of the studied secondary school students (general secondary & technical secondary schools) in relation to their type of school pre/ post intervention (n=350).

Figure (4) shows significant positive changes of total attitude scores about substance abuse and abusers of the studied secondary school students (general secondary & technical secondary schools) post intervention

Table (9): Correlation between levels of total knowledge and total attitude about substance abuse among the studied secondary school students pre / post- intervention implementation (n=350).

χ^2 P	Total Knowledge Levels of the Studied Secondary School Students (n=350)								Levels of Total Attitude Towards Substance Abuse and Abusers
	Post-program				Pre-program				
	Good (302)		Fair (n=48)		Fair (n=47)		Poor (n=303)		
			%	No			%	No	
18.929					0	0	6.3	19	Preprogram:
0.0001*					8.5	4	35.0	106	Negative
					91.5	43	58.7	178	Neutral
					0.676 0.0001*				Positive
									R P
									Post program:
-	100	302	100	48					Positive
	0.687 0.0001*								R P

*Significant (P<0.05)

r=Correlation Coefficient

Statistically significant positive correlations were detected between changes of attitude scores of secondary school students with changes in knowledge scores post intervention (P=0.001).

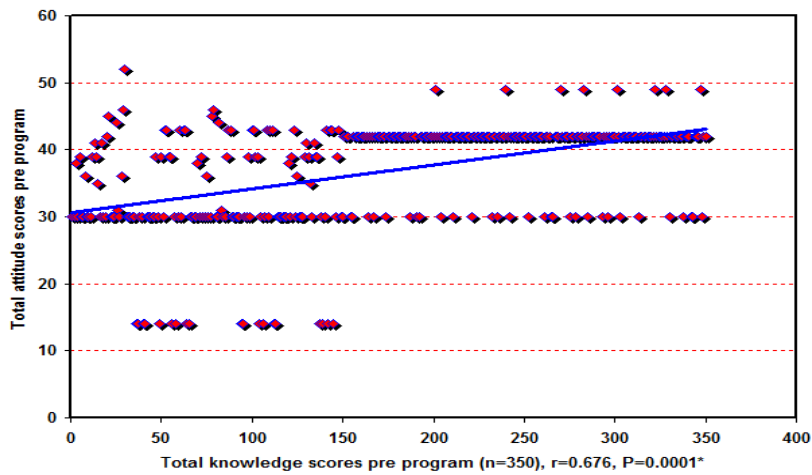


Figure (5): Correlations between total knowledge scores and total attitude scores about substance abuse among the studied secondary school students pre nursing intervention (n=350).

Figure (5) illustrate statistically, significant positive correlations were detected between attitude scores of secondary school students with knowledge scores (0.001) pre/intervention.

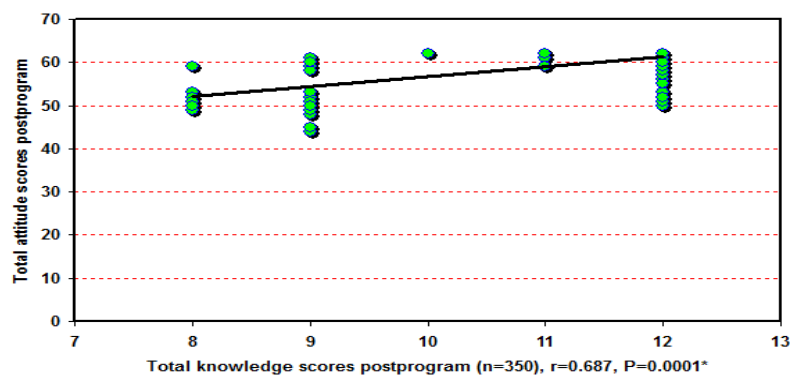


Figure (6): Correlations between total knowledge scores and total attitude scores about substance abuse among the studied secondary school students post/ intervention (n=350).

Figure (6) represent statistically, significant positive correlations were detected between changes of attitude scores of secondary school students with changes in knowledge scores post intervention ($P=0.001$).

IV. Discussion

Although most young people who experiment alcohol and other drugs don't encounter major issues, drug use can cause many and varied problems. Using legal or illegal drugs may influence the young people themselves, as well as friends, family and others around them. The short term risks of alcohol and other drug use incorporate risk of injury, loss of belonging, relationship issues, failed in school or work, and maybe even trouble with the law. The more extended term risks, on the other hand, include the risk of developmental problems, reliance, and chronic health problems (Gabrhelik et al., 2011)¹⁰.

Comparing knowledge levels of secondary school students (general secondary vs. technical secondary schools), regarding substance abuse, finding revealed that pre-intervention the mean knowledge score for technical school students was 3.15 ± 2.29 , while for general secondary school students, it was higher (5.51 ± 1.43). From the researcher point of view that is may be due to that general school students are characterized by that they are more committed, familiar with information and more anxious to acquire information.

Pre- intervention, majority of the total sample had poor level of total knowledge score, regarding substance abuse, while more than tenth had fair level and none of them had good knowledge. These study findings are in accordance with Haddad et al. (2010)¹¹ Jordan, who found some gaps in students' knowledge, attitudes and beliefs. As well, Nebhinani et al. (2013)¹² India, found that greater number of students had sufficient knowledge about harmful effects of addictive substances but had constrained data regarding treatment alternatives.

The current study results were less similar to those reported by Geramian et al. (2012)¹³ Isfahan Province Health Center, Iran, who asserted that knowledge level of high school students about addictive drugs and particularly their adverse impacts is in a medium level for both genders and in urban and provincial zone.

Considering the total attitude level of the studied school students, toward substance abuse, less than three fifth of them had negative attitude, while more than two fifth had neutral attitude, and a minority had a positive attitude. However students' attitude toward substance abuser results revealed that almost two third had positive attitude, while more than one third had negative attitude and none of them had neutral attitude. These finding are supported by Al-Dossary (2004)⁹ Wadi Al-Dawasser, Saudi Arabia, who reported that most the attitudes of the research individuals inclined to the negative attitude towards the stimulate drugs. In a similar study Prakash et al. (2009)¹⁴ India, expressed that their attitude towards addiction seemed to have many blemishes and most of the students appeared to have sufficient information about addictive substance however not in depth.

Regarding the change of total knowledge and total attitude about substance abuse among the studied secondary school students pre/post-intervention statistically significant positive correlations were detected between change of attitude scores of secondary school students with change in knowledge scores (0.001) . This finding is supported by Giannetti et al. (2008)¹⁵ Duquesne University who guaranteed that several studies in youth population have reported positive relationship between knowledge about substance abuse and their attitudes toward substances.

Concerning frequency of smoking and drug abuse among the studied school students (technical and general secondary), cigarette smoking showed the highest prevalence among both schools with higher rate among technical school students, followed by alcohol intake with higher rate among technical school students. However, the least was energy drinks and inhaling products among both schools, with total rate prevalence representing more than one third. From the researcher point of view that is may be related to the cheap price of cigarettes from the other type of the substance abuse next to it is the most widespread and commonly used between the Egyptian population that may reflect the influence of cultural and economic factors. These study findings are to some extent in accordance with those of a study carried out by Ranjan et al. (2010)¹⁶, in Mumbai who found that smokeless tobacco accounted for 43.7% followed by smoking tobacco (21%), then Alcohol (12.2%). As well the Department for National Drug Control (2013)¹⁷, Bermuda, and Kotina et al. (2016)¹⁸ Malla Reddy hospital India reported that alcohol intake was high showing prevalence of 48.54%, followed by cigarette smoking (23.36%), then tobacco (8.76%), pan (3.65%), toddy (6.93%), guthka (6.93%), and khaini (2.2%).

However Johnston et al. (2011)¹⁹, University of Michigan reported that overall, 76% (2,418) of all survey respondents have reported use of at least one drug in their lifetime. Students recorded the highest lifetime prevalence-of-use for energy drinks (65.5%), alcohol (54.9%), marijuana (21.2%), inhalants (12.1%), and cigarettes (10.7%).

Concerning students' sources of information about substance abuse, the highest percentage of students in the present study, these were friends followed by Net, TV, parents, and minorities as experiences, schools,

mosques and churches. Similar results were mentioned by several studies as; Tsering et al. (2010)²⁰ India, and Salim and Siddiqui (2015)²¹ Jizan city, Kingdom of Saudi Arabia.

Regarding the effect of nursing intervention about substance abuse on student findings revealed that highly statistically significant improvements on school students knowledge and attitude after the intervention implementation (P=0.0001). This improvement may be due to knowledge refreshment through the intervention sessions and relevance of items of the intervention content. As reported by Newton et al. (2009a,b)^{22,23} Australia evaluation of the findings state that in comparison with usual drug education programs, students in the intervention group showed significantly greater enhancements in alcohol and cannabis knowledge at the end of the course, additionally at six and twelve months taking after the intervention. As well, Spoth et al. (2009)²⁴ Iowa State University and Faggiano et al. (2010)²⁵ in Seven European countries provided support for the efficacy of school-based programs, at least in the short term (defined as at least 6 months after the intervention was implemented).

Kerry et al. (2013)²⁶, UK reported substantial evidence relating to the positive effects of school-based alcohol education and life-skills programs on school children's alcohol related-knowledge and attitude.

V. Conclusion

The nursing intervention helped in improving students' knowledge, awareness, and their attitude toward substance abuse, and abuser.

VI. Recommendations

There is a need for continued and repeated more education for students at an earlier age than traditionally provided. Parents should also receive information on substances used by young people, the associated dangers with use, and the parents' role in prevention of problem substance use. Further study to be conducted in other settings and more schools to know the prevalence of drug abuse, measures used to prevent its occurrence and generalization.

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