



Assessment of Adolescent Nursing Students Knowledge and Attitude regarding Substance Abuse

Zainab Taha Abd El Aziz⁽¹⁾, *Afaf Salah Abdel El Mohsen*⁽²⁾, and *Amany Mohamed Saad*⁽³⁾

(1) Assistant lecturer of community Health Nursing- Faculty of Nursing- Beni-Suef University, Egypt

(2) Professor of Community Health Nursing, Faculty of Nursing, Helwan University, Cairo, Egypt

(3) Assistant professor of Community Health Nursing, Faculty of Nursing, Helwan University, Cairo, Egypt

Abstract

Background: Substance abuse among adolescents is fast becoming a global public health concern. **Aim:** The study aimed to assess adolescent nursing students' knowledge and attitude regarding substance abuse. **Study Design:** A descriptive design was utilized. **Setting:** This study conducted in two institutions (Health Technical Institute which affiliated to Ministry of Health and Population and Nursing Technical Institute which affiliated to Faculty of Nursing of Beni-Suef University), Health Technical Institute included 2 years of academic study and consisted of two building, Nursing Technical Institute included 2 years of academic study and consisted of 2 floors. **Sample:** Purposive sample of three hundred twenty adolescent nursing students. **Tool:** A structured interviewing questionnaire, included three parts: Socio-demographic characteristics that included 18 questions such as: Age of adolescent nursing students, residence, number of house room, number of family members, adolescent nursing students' knowledge regarding substance abuse and its prevention that included 13 questions as: Meaning, reasons, signs and symptoms, types, complications, characteristics of substance abuser, age at which substance abuse occur, and adolescent nursing students' attitude toward substance abuse, included three parts: Students' attitude toward substance abuse and leading causes, students' attitudes toward substance abuser, students' attitude toward importance of preventing substance abuse. **Results:** About one quarter of adolescent nursing students had satisfactory total knowledge and more than one-third of them had positive attitude toward prevention of substance abuse. **Conclusion:** Less than one quarter of adolescent nursing students had satisfactory knowledge and more than one third of them had negative attitudes regarding substance abuse. Also, there was highly statistically significant positive correlation between student total knowledge level and their total attitude regarding substance abuse. **Recommendation:** Implement an educational program to improve knowledge and attitude about substance abuse and its adverse health effects.

Key words: *Adolescents nursing students, Attitude, Knowledge and Substance abuse*



Introduction

Harmful use of both legal and illicit substances is referred to as substance abuse. It is a serious global public health issue that affects all social classes and regions of the world. It slows down socioeconomic development and is a key factor in many countries' increased rates of crime, traffic accidents, and acquired immunodeficiency syndrome (AIDS). Adolescent students in educational institutions who take drugs have grave consequences that have an adverse impact on their future professional behavior and productivity. These consequences extend to the community at large as well as to the individuals abusing drugs (*Kurui et al., 2020*).

Worldwide, opioids (morphine and heroin), hallucinogens, central nervous system depressants (alcohol, barbiturates), central nervous system stimulants (amphetamines, cocaine), cannabis (marijuana), and nicotine (cigarettes, tobacco) are the most often abused substances. Substance abuse affects a person's ability to think clearly, communicate effectively, and recognize reality. It also carries serious health risks, such as central nervous system poisoning, traffic accidents, poor attendance in class and poor performance that resulted in dismissal from the university. Additionally, it fuels criminal activity, destructive behavior, and violence (*Namada and Karimi, 2021*).

Signs of substance misuse include having many different companions, spending a lot of time alone, losing interest in past hobbies, and not taking care of oneself, not taking a shower, changing clothes, or brushing one's teeth. They usually feel exhausted and depressed, eating more or less than usual, acting destructively, speaking rapidly, or conveying things that don't make sense. They also frequently have a sour mood and can go from an awful to a pleasant mood very quickly. They also frequently have problems at school, pay attention difficulties, speak unclearly, and have problems with their relationships with their relatives and friends (*Bilal et al., 2022*).

Adolescence is a time of rapid biological, psychological, and social growth that marks the shift from childhood to adulthood. The riskiest time of life to start high-risk habits is during adolescence. They face a variety of challenges related to lifestyle patterns, such as the inevitable process of growing up and becoming independent, as well as the formation of a personal identity. Adolescence may become a risky period for substance misuse as a result of these changes. A few factors that contribute to substance misuse are peer pressure, lack of self-assurance, positive family attitudes about drug use, dysfunction within the family, and inadequate regulations to stop substance usage in schools (*Ghobadi et al., 2020*).

Community health nurses (CHNs) can help prevent substance use in adolescents. CHN can help public health practitioners, clinicians, and communities implement evidence-based prevention policies, programs, and practices that reduce risk factors and support prevention factors related to drug addiction. CHN teaches teens how to avoid the dangers of illegal drugs, violence and peer pressure. CHN provides knowledge, skills and opportunities to promote positive attitudes, helping them make informed decisions to lead safe and healthy lives. Collaboration with law enforcement, government agencies, guidance and counseling services has been effective in curbing substance abuse regardless of whether they experience actual harm or not (*Odhiambo, 2020*) and (*Jones et al., 2020*).

Significance of the Study

Substance abuse is a global problem, with 269 million people suffering from a substance use disorder. Deaths related to tobacco 8.1 million and alcohol 2.8 million. More than 70,000 drug overdose deaths occur each year in the United States. In the United States, 47% of teenagers use illegal drugs. 47.1 million people over 18 use marijuana, 86.4% of teens drink alcohol, and 9.5 million people over 18 have both a substance use disorder and mental illness (*National Center for Drug Abuse Statistics, 2023*).

Drug addiction is a serious problem in Egypt. Sporadic studies have been conducted and indicate a high rate of drug addiction among adolescents, study in Menoufia State that tobacco consumption rate of 15.3%, cannabis 2% and benzodiazepines 0.7%. Another study conducted among young university students in Fayoum province showed that cannabis was the most common drug addiction with 40%, tramadol 37%, benzodiazepines 23% and parkinol 9%, 62% of students were people who use multiple substances (*Rabie et al., 2020*).

A national survey of 106,480 Egyptians from different regions found that 13.3% of them had used the substance at least once in their lives. Furthermore, a large cohort study in Egypt of 10,648 high school students concluded that cigarette smoking was the highest rate, including 9% stimulant users, 5.1% benzodiazepine users, 3.3% alcohol, 3.1% organic solvents and 2.6% cannabis (*Khafagy et al., 2021*). Substance abuse in Egypt is becoming a serious threat that is increasing daily and there is not enough research on this issue among adolescent nursing students in Beni Suef Governorate. Therefore,



we need to implement a health education program to increase awareness of adolescent nursing students about drug abuse prevention.

Aim of the study

The aim of this study is to assess adolescent nursing students' knowledge and attitude regarding substance abuse.

Research Questions:

Q 1 –What is the level of adolescent nursing students' knowledge regarding substance abuse?

Q 2 –What is adolescent nursing students' attitude toward substance abuse?

Q 3 – Is there a relation between adolescent nursing students' total knowledge and attitude regarding substance abuse?

Subjects and Method

Research design: A descriptive research design was applied to achieve the aim of the current study.

Research setting: The study was conducted in two institutions (Health Technical Institute which affiliated to Ministry of Health and Population and Nursing Technical Institute which affiliated to Faculty of Nursing of Beni-Suef University).

Subjects:

The subjects of the existing study were 320 adolescent nursing students, 200 from Health Technical Institute and 120 from Nursing Technical Institute.

Sampling technique:

Purposive sample of 320 adolescent nursing students from 1st year of the academic year 2022-2023, Beni suef University was selected.

The inclusion criteria include:

- Male students
- Students who enrolled to first year in the above-mentioned settings
- Agree to participate in the study.

Tools for data collection

The following tool was used:

A structured interviewing questionnaire that consists of 3 parts as the following:

Part I: Socio-demographic characteristics of adolescent nursing students, which include age, residence, number of house room, number of family members, crowding index, living with, relationship with the father, relationship with the mother, father's job, mother's job, family monthly income, father's and mother's level of education, family social status, the way parents treat adolescent nursing students, have friends, what do in spare time and the source of information.

Part II: Adolescent nursing students' knowledge about substance abuse, which includes: Meaning, reasons, signs and symptoms, types, complications, characteristics of substance abuser, age at which substance abuse occur, kind of youth does the problem spread, ways to prevent risk of substance abuse, authorities concerned with substance abuse control, importance of health education programs, important ways in combating the spread of substance abuse and role of educational institutions to prevent substance abuse.

Scoring system for knowledge items:

The knowledge consisted of 13 items with a total 26 grades. Two grades were given for each complete correct answer, one grade was given for incomplete correct answer and zero grade was given for incorrect or don't know. The grades for each item were summed up and then converted into a percent score.

- Satisfactory when total score was $\geq 60\%$ (≥ 16 grades).
- Unsatisfactory when total score $< 60\%$ (< 16 grades).



Part III: Adolescent nursing students' attitude toward substance abuse which includes:

Attitude toward substance abuse and leading causes, which include 14 items such as: Substance abuse are harmful to health, substance abuse activate the body, substance abuse increase ability to study etc.

Attitude toward substance abuser which include 10 items such as: Many substance abusers are unaware of their devastating effect; many adolescents start substance abuse with their friends ...etc.

Attitude toward importance of preventing substance abuse which include 9 items such as: Normal person does not abuse substances, adolescents' participation in substance abuse prevention programs is essential ...etc.

Scoring system for attitudes items:

The attitude consisted of 33 items with a total 66 grades. Statement of student attitude were assigned a score as 2 for agree, 1 for neutral and zero for disagree. The grades for each item were summed up and then converted into a percent score

- Positive when total score was $\geq 60\%$ (≥ 40 grades).
- Negative when total score was $<60\%$ (< 40 grades).

Validity:

The validity of the instruments was tested by five Faculty nursing experts in the field of Community Health Nursing, Faculty of Nursing, Helwan University and disciplines, who reviewed the clarity, suitability, completeness, applicability and reliability of these tools.

Reliability

To assess reliability, the study instruments were tested by pilot subjects in the first session and again after 2 weeks as test-retest reliability to calculate test coefficients. Cronbach's Alpha, which shows that the instrument is made up of relatively homogeneous factors, indicates high reliability of the instrument. The internal consistency of knowledge was 0.801 and attitude was 0.833.

Ethical considerations:

An official permission to conduct the proposed study was obtained from the Scientific Research Ethics Committee, Faculty of Nursing, Helwan University. Participation in the study was voluntary and subject was given complete full information about the study and their role before signing the informed consent. The ethical considerations were the participants. Informed consent was taken from students to conduct the study. Objectives, tools and study technique were illustrated to gain their cooperation. Ethics, values, culture and beliefs were respected.

Pilot study:

A pilot study was conducted on 10% (32) of the sample to test the clarity of the questions and the time required to complete the research instruments, which took approximately 15 to 20 minutes. Based on the results of the pilot study, no changes were made. Therefore, the pilot study subjects were included in the main study sample.

Field work

- Official permission was obtained from the dean of Faculty of Nursing, Helwan University to conduct this study, researcher met the nursing students.
- Data were collected within two semesters of (2022-2023) academic year and the researcher was attended two days (Sunday and Tuesday) each week from 10am-2pm in the study setting till completion of the questionnaire
- The researcher introduced himself and explained the purpose of the study to the adolescent nursing students, after receiving their consent, the researcher conducted the study by distributing the tool for them as a pre-test.

Statistical analysis:

All data was arranged, recorded, and examined through the use of suitable statistical tests. The Statistical Package for Social Science (SPSS) version 25 and the Microsoft Excel Program were the computer programs used to analyze the data. For categorical data, frequencies and percentages were used in descriptive statistics; for quantitative data, the arithmetic mean (X) and standard deviation (SD) were used. The chi square test was used to compare qualitative variables (X²). Furthermore, the correlation between the research variables for (p value) was determined using the r-test. Results are deemed very statistically significant at $p > 0.001$, statistically significant at $p > 0.05$, and not significant at $p > 0.05$, depending on the degree of significance

Results:

Table 1: Shows that, 72.8% of adolescent nursing students age was 19 years old, with a mean age of 19.32 ± 0.85 . Regarding to place of residence 55.0% were from rural. Concerning relation with parents 70.3% and 91.3% of them had a good relationship with the father and easily deal with the mother. Concerning parent's job 91.3% of adolescent nursing students whose fathers were working. While, 73.1% of adolescent nursing students whose mothers didn't work.

Figure 1: Illustrates that, the source of information regarding substance abuse, 47.2% of adolescent nursing students their source of information about substance abuse were from friends. Also, 25.0% of them had information from television.

Table 2: Clarifies that, 23.4% of adolescent nursing students had complete correct knowledge regarding meaning of substance abuse. Also, 16.3%, of adolescent nursing students had complete correct knowledge regarding characteristics of substance abuser. 19.4 of them had complete correct knowledge regarding types of abused substance most prevalent among adolescents. 18.8 of them had complete correct knowledge regarding important ways in combating the spread of substance abuse.

Figure 2: Shows that, 22.5% of adolescent nursing students had satisfactory level of total knowledge regarding substance abuse. Also, 77.5% of them had unsatisfactory knowledge regarding substance abuse.

Table 3: Presents that, 19.7% of adolescent nursing student agreed about attitude toward substance abuse had a bad psychological effect. Also, 25.6% of them agreed that failure to satisfy the psychological and social needs of adolescents makes them abuse substance.

Table 4: Reveals that, 40.0% of adolescent nursing student agreed about attitude toward substance abuser start using substance abuse with friends. Also, 40.9% of them agreed about attempt to experiment with substance abuse drives them to addiction.

Table 5: Present that, 31.2% of adolescent nursing student agreed about proper educational upbringing is necessary to prevent substance abuse. Also, 34.4% of them agreed about the need to implement severe punishment for substance users.

Figure 3: Illustrates that, 39.4% of adolescent nursing students had positive attitude toward prevention of substance abuse. While 66.6% of them had negative attitude toward prevention of substance abuse.

Table 6: Illustrates that, there was a highly statistically significant positive correlation between total knowledge and attitudes regarding substance abuse among adolescent nursing students $P = 0.000$

Table (1): Frequency Distribution of Socio-Demographic Characteristics among Adolescent Nursing Student (n=320)

Socio-demographic characteristics	No.	%
Age (years)		
18	45	14.1
19	233	72.8
20	42	13.1
Mean ± SD	19.32 ± 0.85	
Residence		
Rural	176	55.0
Urban	102	31.9
Slum areas	42	13.1
Number of rooms		
1-2	218	68.1
3-5	102	31.9
Number of family members		
2-3	40	12.5
4-5	216	67.5
≥ 6	64	20.0
Crowding index		
<1	46	14.4
1-2	170	53.1
>2	104	32.5
Living with		
Father and mother	304	95.0
Father	8	2.5
Mother	5	1.6
Grandfather or grandmother	3	0.9
Relationship with the father		
Good understanding	225	70.3
To some extent understanding	52	16.3
Not understanding each other	43	13.4
Relationship with the mother		
Easy dealing	292	91.3
Firm dealing	18	5.6
Easy dealing with the lack of understanding of each other	10	3.1
Father's job		
Working	292	91.3
Not working	28	8.7
Mother's job		
Working	86	26.9
Not working	234	73.1

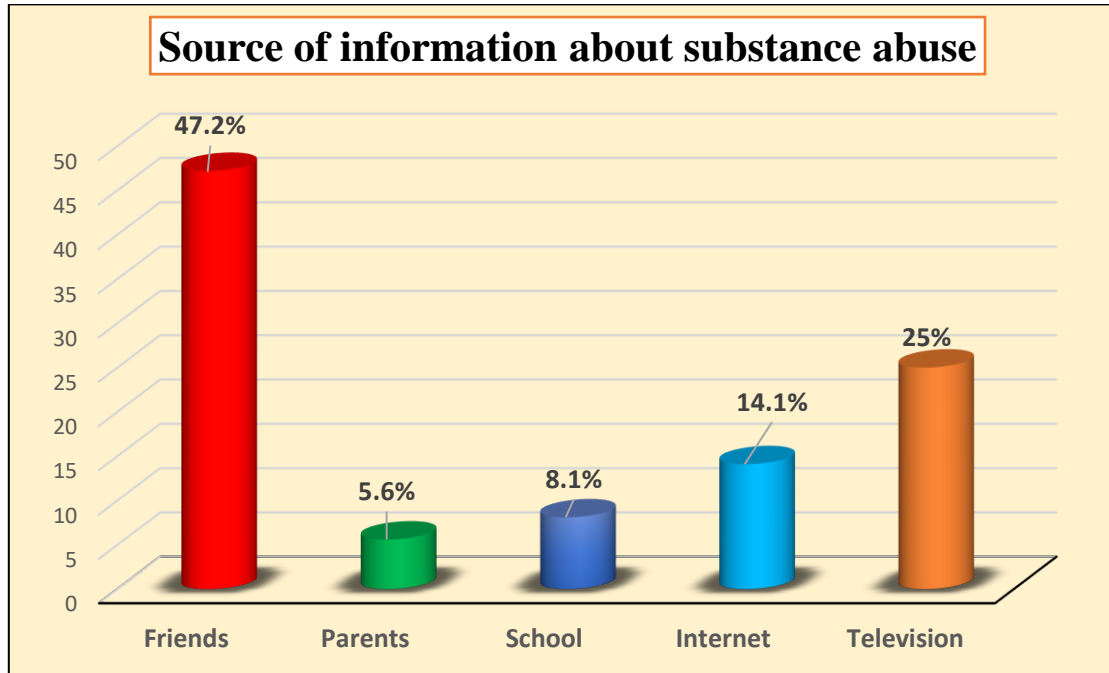


Figure (1): percentage distribution of adolescent nursing students according to their source of information about substance abuse (n=320).

Table (2): Frequency Distribution of Knowledge regarding substance abuse among Adolescent Nursing Students (n=320).

Knowledge items	Complete correct		Incomplete correct		Don't know	
	No.	%	No.	%	No.	%
Meaning of substance abuse	75	23.4	184	57.5	61	19.1
The reasons that drive adolescents to substance abuse	42	13.1	177	55.3	101	31.6
Signs and symptoms of substance abuse that appear on substance abuser	46	14.4	158	49.4	116	36.2
Types of abused substance most prevalent among adolescents	62	19.4	170	53.1	88	27.5
Complications and consequences of substance abuse	57	17.8	171	53.4	92	28.8
Characteristics of substance abuser	52	16.3	171	53.4	97	30.3
At what age does substance abuse occur?	49	15.3	0	0.0	271	84.7
In what kind of youth is the problem of substance abuse spread?	62	19.4	0	0.0	258	80.6
Ways to prevent the risk of substance abuse	59	18.4	110	34.4	151	47.2
Authorities concerned with substance abuse control	54	16.9	120	37.5	146	45.6
The importance of health education programs toward substance abuse	56	17.5	114	35.6	150	46.9
Important ways in combating the spread of substance abuse	60	18.8	131	40.9	129	40.3
The role of educational institutions to prevent substance abuse	58	18.1	119	37.2	143	44.7

(**) Highly statistically significant at $p < 0.001$.

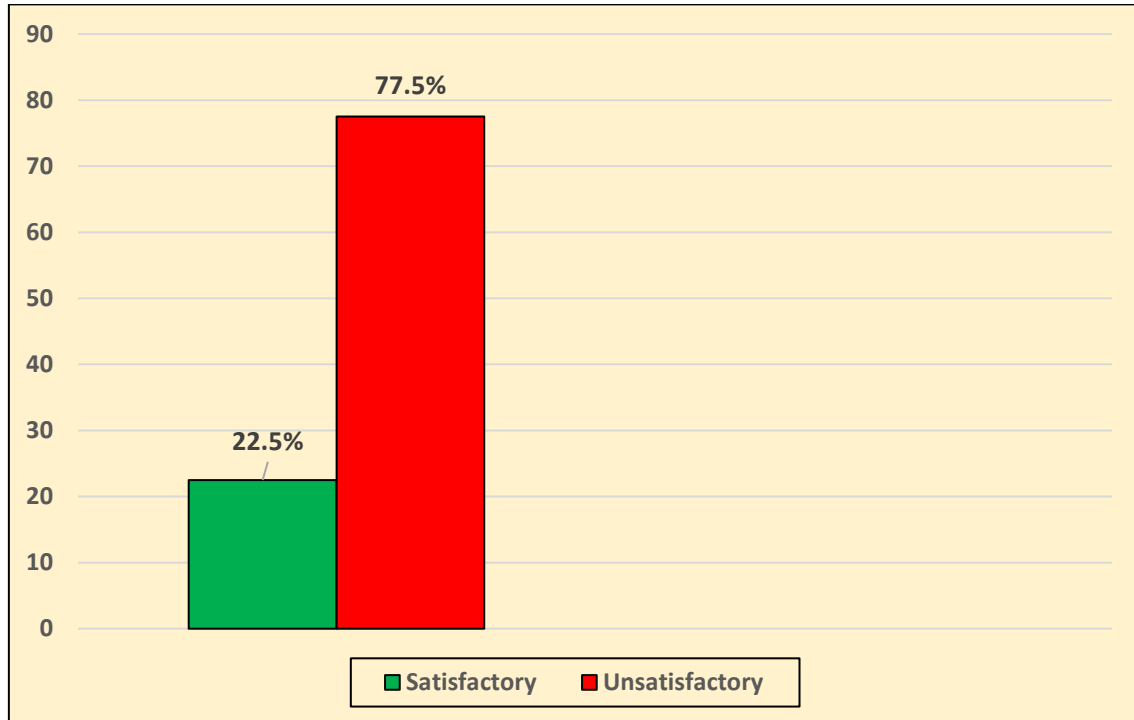


Figure (2): percentage distribution of total adolescent nursing students' knowledge about prevention of substance abuse (n=320).

Table (3): Frequency Distribution of Attitudes toward Substance Abuse among Adolescent Nursing Students (n=320).

Attitude items	Agree		Neutral		Disagree	
	No.	%	No.	%	No.	%
Substance abuse are harmful to health	75	23.4	45	14.1	200	62.5
Substance abuse activate the body	201	62.8	84	26.3	35	10.9
Substance abuse increase the ability to study	187	58.4	62	19.4	71	22.2
Substance abuse have a bad psychological effect	63	19.7	50	15.6	207	64.7
Substance abuse and cigarettes do not lead to addiction	241	75.3	60	18.8	19	5.9
I think that poor religious upbringing leads to substance abuse	90	28.1	128	40.0	102	31.9
Failure to satisfy the psychological and social needs of adolescents makes them to abuse substance	82	25.6	115	36.0	123	38.4
Poor awareness of the negative effects of substances abuse makes adolescents vulnerable to abuse	100	31.3	120	37.5	100	31.3
The feeling of emptiness pushes adolescents to substances abuse	89	27.8	113	35.3	118	36.9
I think that substance abuse causes violence and terrorism	117	36.6	184	57.5	19	59.4
Family breakdown and family problems push adolescents to substances abuse	114	35.6	180	56.3	26	8.1
Poor family supervision pushes adolescents to substances abuse	105	32.8	147	45.9	68	21.3
Too much money and excessive pampering push adolescents to substances abuse	122	38.1	150	46.9	48	15.0
Strict family control leads adolescents to substances abuse	100	31.2	110	34.4	110	34.4

(**) Highly statistically significant at $p < 0.001$.

Table (4): Frequency Distribution of Attitudes toward Substance Abuser among Adolescent Nursing Students (n=320).

Attitude items	Agree		Neutral		Disagree	
	No.	%	No.	%	No.	%
Many substance users are unaware of its devastating effect	67	20.9	151	47.2	102	31.9
Many adolescents start substance abuse with friends	128	40.0	95	29.7	97	30.3
Substance abuse affects academic achievement	158	49.4	112	35.0	50	15.6
Substance abuser cannot succeed in his work	160	50.0	115	35.9	45	14.1
Substance abuse causes problems with family and university	175	54.7	125	39.1	20	6.2
Substance abuse destroys friendships	168	52.5	115	35.9	37	11.6
Substance abuser has an effect on his friends	168	52.5	115	35.9	37	11.6
Poverty and financial difficulties push adolescents to substance abuse	157	49.1	113	35.3	50	15.6
Adolescents attempt to experiment with substance abuse leads them to addiction	131	40.9	140	43.8	49	15.3
Substance abuser can quit without the need for treatment	150	46.9	92	28.7	78	24.4

(**) Highly statistically significant at p<0.001.

Table (5): Frequency Distribution of Attitudes toward Importance of Preventing Substance abuse among Adolescent Nursing Students (n=320).

Attitude items	Agree		Neutral		Disagree	
	No.	%	No.	%	No.	%
A normal person does not abuse substances	298	93.1	22	6.9	0	0.0
Adolescents' participation in substance abuse prevention programs is essential	151	47.2	89	27.8	80	25.0
Can protect yourself from substance abuse	180	56.3	100	31.3	40	12.5
Exercising helps adolescents avoid drugs	169	52.8	111	34.7	40	12.5
Artistic activities and listening to music reduce free time and thus prevent substance abuse	143	44.7	98	30.6	79	24.7
Provide supervision over adolescents within institutions prevent them from substance abuse	150	46.9	98	30.6	72	22.5
Proper educational upbringing is necessary to prevent substance abuse	100	31.2	110	34.4	110	34.4
Staying away from places that make adolescents vulnerable to substance abuse is essential	144	45.0	99	30.9	77	24.1
The need to implement severe punishment for substance abusers	110	34.4	125	39.1	85	26.5

(**) Highly statistically significant at p<0.001.

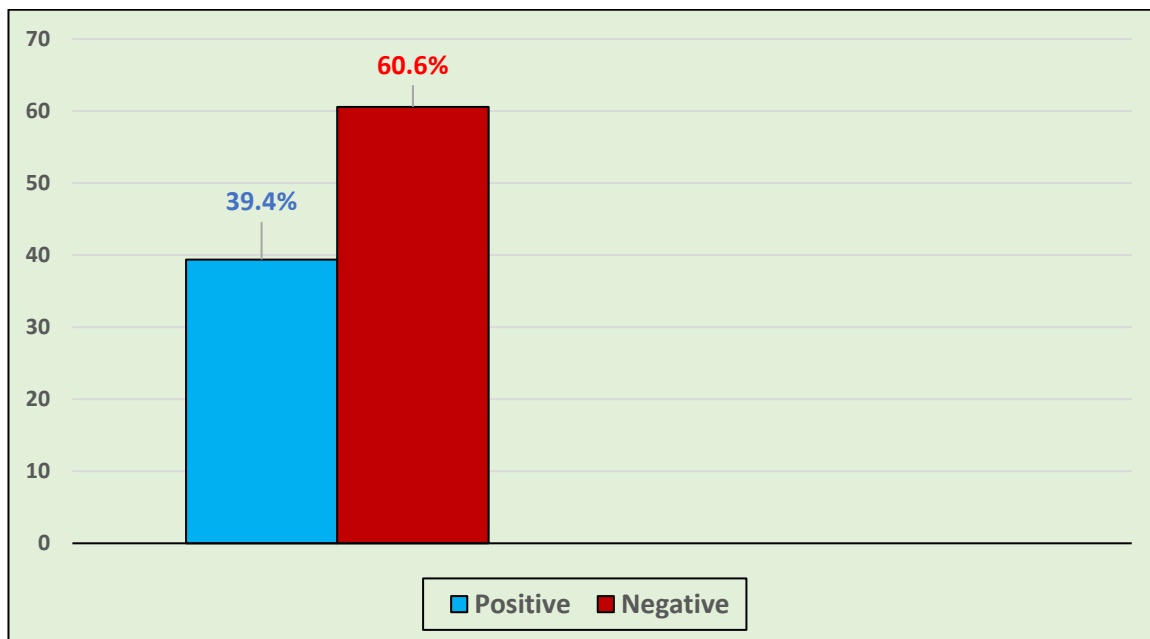


Figure (3): Percentage distribution of total adolescent nursing students' attitude toward prevention of substance abuse (n=320).

Table (6): Correlation between Total Knowledge and Attitude regarding Substance Abuse among Adolescent Nursing Students (n=320)

Variables	Total students' attitude	
	r	p-value
Total students' knowledge	0.546	0.000**

R= correlation coefficient test. **Highly significant at $p < 0.001$.

Discussion

Substance abuse is a widespread issue that significantly affects individuals, families, and society as a whole. A person's social life, relationships, career, educational possibilities, social standing, and overall health are all impacted by the influence, which has led to issues like behavioral, mental, physical, and behavioral health issues. The term "substance abuse" describes the improper use of chemically active drugs that are hazardous to the body, such as heroin, cocaine, alcohol, opiates, and other addictive compounds, as well as the illegal use of psychoactive chemicals (George, 2020).

According to socio-demographic characteristic of the adolescent nursing students, the present study revealed that, the mean age was 19.32 ± 0.85 . This finding was in disagreement with Afify, (2021) who studied "Effect of health educational program about substance abuse on knowledge and attitude of adolescent nursing students" in Egypt ($n = 82$) and found that the mean age of adolescent nursing students was 18.9 ± 0.7 . This due to variation of sample selection of students enrolled in the academic year.

Related to residence, the current study showed that more than half of them lived in rural areas. This result was in agreement with Marks et al. (2019) who conducted study entitled "Geographic differences in substance use screening for justice-involved youth" in Nigeria ($n = 2,735$) and showed that respondents representing that 64% of rural adolescents reported higher rate of substance abuse. From the researcher point of view, this result may be due to rural students are at great risk for substance abuse due to curiosity and experimentation of new substance to compete with their urban colleges that indicate the imperative need of these students for health education to prevent substance abuse.

Concerning relation with parents, the present study showed that, vast majority of adolescent nursing students had good understanding with the father and easily deal with mother. Also, vast majority of adolescent nursing students reported that their parents love them a lot. This study result was supported by Yadav and Parajuli, (2021) who conduct a study entitled "Knowledge regarding drug abuse among school students" in Nepal ($n = 106$) and found that 85.8% of students report very good relation with their parents. From the researcher point of view, this may be due to good treating methods and creating dialogue with their adolescents is very important for having self-confidence and preventing them from substance abuse.

Concerning parents' job, the present study revealed that vast majority of them their fathers were worked and nearly three quarters of their mothers didn't work. This result was in agreement with Buja et al. (2019) who conducted "Pathways connecting socioeconomic variables, substance abuse and gambling behavior: A cross-sectional study on a sample of Italian high-school students" in Italy ($n = 15602$) and stated that majority of mothers are not working. From the researcher point of view, this may be due to lack of job opportunities and not working mothers help in parental monitoring and incorporate youth supervision, seems to be especially influential in its association with adolescent involvement in risky behavior.

In relation to source of knowledge, the current study revealed that, less than half of adolescent nursing students their source of information about substance abuse were from friends and one quarter of them from television. This result was in disagreement with [1] who studied "Factors associated with substance abuse by students in medical training colleges" in Kenya ($n = 303$) and found that 42.6% of students their sources of information contributing to substance abuse were from internet.

Also, this result was in disagreement with Idowu et al. (2018) who conducted a study in South-West Nigeria ($n = 249$) on "Substance abuse among students in selected secondary schools of an urban community of Oyo-state, South West Nigeria: Implication for policy action" in South-West Nigeria and found that 48.0% of the students heard about substance abuse from school teachers. According to the researcher point of view, this may be due to student weren't receive any information about substance abuse from academic institution.

According to frequency distribution of knowledge regarding substance abuse among adolescent nursing students, the current study clarified that, less than one quarter of adolescent nursing students had completed correct answer about the meaning of substance abuse and the characteristics of substance abuser. This result was in disagreement with Gilani et al. (2019) who studied "Effectiveness of structured teaching program regarding knowledge of drug abuse among students" in

Pakistan (n = 100) and said that 68.8% of students' knowledge about substance abuse were significant. From the researcher point of view, this may be due to student weren't receive any information about substance abuse from academic institution.

Regarding total adolescent nursing students' knowledge about prevention of substance abuse, the current study showed that about one quarter of adolescent nursing students had satisfactory level of total knowledge. While more than three quarters of them had unsatisfactory level of total knowledge. This result was in agreement with **Kulthe et al. (2021)** who carried out study entitled "A study to assess the effectiveness of structured teaching program on knowledge of high school students regarding drug addiction in selected high schools at selected rural areas" in India (n = 60) and explained that 51.67% had unsatisfactory knowledge regarding drug addiction. From the researcher point of view, this may be due to adolescent students have their information about substance abuse and its effect from friend and television.

Regarding adolescent nursing students' attitude toward substance abuse and its causes. the present study clarified that, only one quarter of the adolescent nursing students agreed that substance abuse had a bad psychological effect and failure to satisfy the psychological and social needs of adolescents makes them abuse substance. This result was supported by **Saladino et al. (2021)** who studied "The vicious cycle: Problematic family relations, substance abuse, narrative review" in Italy (n =150) and showed that 95% of the respondents agree that substance abuse had a bad psychological effect lead to involve in an organized crime, multifactorial interaction among the family system affect substance abuse and satisfy of psychological needs had a strong impact on substance abuse. From the researcher point of view, this result may be due to the immaturity of the adolescent students in this age and lake of decision-making skills, which make them liable to had negative attitude easily from the surrounding environment.

Regarding adolescent nursing students' attitude toward substance abuser, the present study revealed that, less than half of adolescent nursing students agreed that, many adolescent nursing' students start using substance abuse with friends and attempt to experiment with substance abuse drives them to addiction. This result was supported by **Fred, (2019)** who studied "The effect of drug abuse on the behavior of students in selected secondary schools" in Uganda (n = 125) and stated that 87% of students report wide spread of substance abuse start from other students. Conversely, this result was in disagreement with **Namada and Karimi, (2021)** who conducted study entitled "Drug and substance abuse among university students" in United States International University Africa, Kenya (n = 723) and presented that 51.3% of students had negative attitude toward substance abuser. From the researcher point of view, this result may be due to the immaturity and un awareness of the adolescent students in this age about hazards of substance abuse.

Regarding adolescent nursing students' attitude toward importance of preventing substance abuse, the present study showed that, one third of adolescent nursing students agreed that, proper educational upbringing is necessary to prevent substance abuse and the need to implement severe punishment for substance users. This result was in agreement with **Mohammed et al. (2022)** who studied "Knowledge and attitude of substance abuse among the youths" in Tikrit, Iraq (n = 450) and mentioned that 78.5% of students agree that educational programs can aid in the prevention of substance abuse and having better education is a protective factor against substance abuse.

Regarding total adolescent nursing students' attitude toward prevention of substance abuse, the current study showed that, more than one-third of adolescent nursing students had positive attitude toward prevention of substance abuse. While, two thirds of them had a negative attitude toward prevention of substance abuse. This result was in disagreement with **Nurmala et al. (2021)** who conducted a study entitled "The intention of Indonesian high school students to participate in drug abuse prevention through peer education activities" in Indonesia (n = 854) and stated that 88.2% of students had positive attitude toward prevention of substance abuse.

Also, this result was in disagreement with **Hozifa et al. (2018)** who conducted a study entitled "Effect of educational program on the knowledge, attitude and practices of preparatory school students regarding drug addiction" and presented that 100% of students had positive attitude. From the researcher point of view, these results may be due to mistaken beliefs about substance abuse and adolescent nursing students have lake of decision-making skills, which make them liable to had negative attitude easily from the surrounding environment.

Regarding correlation between total students' knowledge and their attitude toward prevention of substance abuse, the present study revealed that, there was highly statistically significant positive correlation between students' knowledge and their attitude toward prevention of substance abuse. This result was in agreement with **Elsayed et al. (2019)** who conducted a study entitled "Psychosocial intervention program for school students for protection against substance abuse" and showed that there was highly statistically significant correlation between student total knowledge level and their total attitude. Also, this result was in agreement with **Mohammed et al. (2021)** who studied "Assessment of knowledge and attitudes of secondary school students regarding drug abuse at Minia City" and mentioned that there was highly significant positive correlation between students' total knowledge and their attitude. From the researcher point of view, these results reflect that lack of knowledge affect on attitude of adolescent nursing students toward substance abuse as correct knowledge about substance abuse help adolescent students have positive attitude.

Conclusion

The present study answered the research questions that related to first, knowledge of adolescent nursing students regarding substance abuse, less than one quarter of the studied nursing students had a satisfactory knowledge regarding substance abuse. While, more than three quarters of them had unsatisfactory knowledge regarding substance abuse. And second research questions that related to attitudes toward substance abuse, more than one-third of adolescent nursing students had positive attitude toward prevention of substance abuse. While two thirds of them had negative attitude. There was a highly statistically significant positive correlation between total knowledge and total attitude regarding substance abuse among studied nursing students ($p < 0.001$).

Recommendations

- 1-Health educational campaign should be hold for improving positive attitude of adolescent nursing students toward substance abuse.
- 2-Guidelines for adolescent nursing students to avoid risk factor of substance abuse as peer pressure, availability and ease of access of these drugs and dissemination of health educational booklet and pamphlets about defensive ways against substance abuse.

For further research:

- 1-Further researches in large sample of adolescent nursing students should be available about substance abuse and in different settings.
- 2-Ongoing researches were required for enhancing students' knowledge and attitude about substance abuse.

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