Knowledge, Attitudes and Practice Regarding Smoking among Secondary School Students in Al-Matama Locality –River Nile State – Sudan – (2023-2025)

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Abstract

Smoking is a major risk factor for cardiovascular disease, respiratory disease, and stroke and is a major cause of death associated with these diseases**.** A descriptive cross - Sectional study was conducted Among Secondary School Students, to assess the knowledge, attitudes and practice of secondary school students regarding smoking, in AL-Matama locality (2023-2025). The sample size of 359 students was determined using a statistical equation And equal stratified sample was used to take the sample ,the sample size of 359 was distributed among the administrative units included in AL-Matama locality (wad hammed ,AL-Matama and Tayba), Information was collected through records and a questionnaire that was prepared, tested, and then directed to the students. The data was analyzed using the statistical package for social sciences (SPSS22). The study showed the following results: All students, 100%, know about smoking, most students 97.8% know that smoking has harmful effects. A group of students 15.9 smoke, Most of the smokers 81.7% use cigarettes for smoking and a group of smokers15.5%, use cigarettes and shisha together. More than half of the student smokers 53.5% mentioned sharing with friends as a reason for their smoking, A group of student smokers16.9% mentioned imitation as a reason for their smoking. A group of student smokers 47.8% smoke less than 5 cigarettes per day; a small group of student smokers 13% smoke more than 10 cigarettes per day. More than half of the students smokers 53.5% smoke openly A group of smokers 42.3% spend half of their money on smoking. Study showed that there is a correlation between students' smoking and their families' monthly income in Sudanese pounds (P value =.008) (x^2 =9.623). The study concluded with the following recommendations: Establishing health education program for promoting students' knowledge of the harms of smoking.

Keywords: *Knowledge, Attitudes, Smoking, Students*

Introduction

Smoking is a practice in which a substance is burned and the resulting smoke is typically breathed in to be tasted and absorbed into the bloodstream .most commonly, the substance used is the dried leaves of the tobacco plant, which have been rolled into a small round cylinder called a cigarette (1).

Tobacco kills more than 8 million people each year more than 7million of those deaths are the result of direct tobacco use while around 1.2 million are the result of non smokers being exposed second hand smoke(2) .

Cigarette smoking is a learned behavior which passes through various stages namely: "preparation, initiation, experimentation, regular smoking, and finally addiction" (3).
Majority of the cigarette smokers (88%) start smoking in their teenage, and thus adolescents and young adults remain the focus of preventive efforts (4).
Tobacco use, primarily cigarette smoking, is a major preventable public health risk in most of the developing countries of the world. (5).
It has been projected that if current trends of smoking prevalence continue, annual tobacco related deaths will be over 8 million by the
year 2030, and more than two third of these will occur in low and middle income countries (6). which represents a school-based survey focusing on adolescents students aged 13 to 15 years designed to determine the level of tobacco use, estimate the age of initiation of cigarette use, estimate the level of susceptibility to become a cigarette smoker, estimate the exposure to tobacco advertising, identify key intervening variable, such as attitude and beliefs on behavioral norms (7).
In 2016, 15.6% of Sudanese adults were tobacco users. Tobacco use in Sudan is significantly higher for men (27.9%) than women (0.8%). Youth tobacco use (ages 13-15 years old) is 11.7% overall. This also reflects a gender divide, with 14.5% of boys versus 7.3% of girls using tobacco, Product use is fairly evenly divided between smoked (9.6%) and smokeless (7.9%) tobacco in adults. Youth tobacco use leans more heavily towards smoked (8.3%) than smokeless (4.9%) products (8, 9, 10).
The aim of this study is to assess the knowledge, attitudes and practice, regarding smoking among secondary school students in Al-Matama Locality, and to find correlation between smoking and demographic factors.

Materials and methods

Type of the study: This cross-sectional descriptive study was conducted among secondary school students in Al-Matama locality, river Nile state, Sudan (2023-2025).
Study area: Al-Matama is one of the localities of river Nile state it is located north Khartoum. The total population is 195.775 (11). There are 24 secondary schools, the total students about 3506 (12).
Study population: The study population included the Secondary Schools Students in AL-Matama locality.

Sample size & sample technique: The sample determined using the equation:

$$\mathbf{n = N /1+N(e)^2}$$

n = Sample Size N= Total Number of Students = 3506 e =margin of error (0.05)

$n= 3506/1+3506(0.05)^2 = 359$

An equal stratified sample was used to take the sample, the sample size of 359 was distributed among administrative units included in AL-Matama locality (wad hammed, AL- Matama , Tayba).

Data collection & data analysis: Data were collected using a questionnaire was prepared. Data were also collected from Secondary school records. Used statistical package for social science program (SPSS no. 22) for analysis, and the finding presented in tables and figures.

Ethical consideration: Consent of the Al -Matama locality, school principals, and the students, for data collection.

Results

Table (1) distribution of students according to their socio-demographic factors- Secondary School- Al-Matama Locality- 2023. (n=359)

Gender	Frequency	Percent
Male	180	50.1
Female	179	49.9
Total	359	100.0
Ages	Frequency	Percent
15-17	246	68.5
>17	113	31.5
Total	359	100.0
The daily expenses	Frequency	Percent
<500	124	34.5
500-1000	168	46.8
>1000	67	18.7
Total	359	100.0
live with parents	Frequency	Percent
Yes	334	93.0
No	25	7.0
Total	359	100.0

Table (2) distribution of students according to the types of school- Secondary School- Al-Matama Locality- 2023. (n=359)

Type of school	Frequency	Percent
Government	359	100.0
Special schools	0.0	0.0
Total	359	100.0
The level in school	Frequency	Percent
Second	179	49.9
Third	180	50.1
Total	359	100.0
Living	Frequency	Percent
Internal	17	4.7
External	342	95.3
Total	359	100.0

Table (3) student's knowledge and attitude of smoking - Secondary School- Al-Matama Locality-2023. (n=359)

knowledge of the harms	Frequency	Percent
Yes	351	97.8
No	8	2.2
Total	359	100.0
Types of harms	Frequency	Percent
Health	95	27.1
	3	.9

Social		
Economic	2	.6
all mentioned	251	71.5
Total	351	100.0
Health harms	Frequency	Percent
high blood pressure	8	2.3
heart disease	10	2.9
lung cancer	93	26.9
gum disease	8	2.3
All mentioned	227	65.6
Total	346	100.0
Knowledge of harm of passive smoking	Frequency	Percent
Yes	285	79.4
No	15	4.2
don't know	59	16.4
Total	359	100.0
Attitudes Regarding Smoking	Frequency	Percent
Positive	79	22.0
Negative	280	78.0
Total	359	100.0
Factors that lead others to smoke	Frequency	Percent

Social	41	11.4
Economic	9	2.5
Psychological	172	47.9
all of the above	137	38.2
Total	359	100.0

Table (4) student's practices of smoking - Secondary School- Al-Matama Locality- 2023. (n=359)

Type of smoking used	Frequency	Percent
Cigarettes	58	81.7
Shisha	2	2.8
(1+2)	11	15.5
Reasons for smoking	Frequency	Percent
Sharing with friends	38	53.5
Imitation	5	7.0
Vacuum	12	16.9
Reconnaissance and experiment ion	5	7.0
Anxiety	7	9.9
all mentioned	4	5.6
Total	71	100.0
Cigarettes smoked per day	Frequency	Percent
<5	33	47.8
5-10	27	39.1

>10	9	13.0
Total	69	100.0
Reasons for smoking	Frequency	Percent
Exams	17	24.6
Free time	31	44.9
Personal or family problem	13	18.8
enjoy with friends	8	11.6
The expense	Frequency	Percent
<from half of the expense	22	31.0
half of expense	30	42.3
>half of expense	19	26.8
Total	71	100.0

Table (5) distribution of students according to smoking practice -Secondary School-Al-Matama Locality-2023. (n=359)

Use smoking	Frequency	Percent
Yes	57	15.9
No	302	84.1
Total	359	100.0

Table (6) the correlation between students smoking and gender - Secondary School-Al-Matama Locality-2023. (n=359)

Smoking practice	Gender		Total
	Male	Female	
Yes	56	1	57
No	124	178	302

Total	180	179	359

P=.000 x^2 =62.724

Table (7) the correlation between students smoking and family monthly income in Sudanese pounds - Secondary School- Al-Matama Locality-2023. (n=359)

Smoking practice	the monthly income			Total
	<50000	50000-100000	>100000	
Yes	0	6	51	57
No	1	91	210	302
Total	1	97	261	359

P=.008 x^2 =9.623

Discussion

Most students (97.8%) know that smoking has harmful effects, and this may help students to quit smoking. This is more than what was reported by [13] that (80.9%) of students know that smoking has harmful effects.

A small group of students (2.2%) do not know that smoking has harmful effects, less than what was reported by[14]. (9%) of the students did not consider that smoking has harmful effects.

A group of students (26.9%) of the students mentioned that the health effects of smoking are lung cancer. This is matches with what was reported by [15] that (26%) of the students that lung cancer is a common disease among the health effects.

Most of the students (84.1%) are not smokers, and this indicates that the students care about their health and know the harms of smoking, This is more than what was reported by [4] that (73.1%) are not smokers .

A group of students smoke (15.9%). This is similar to what was reported by [17] that (14.6%) of the students smoke, and similar to what was reported by [18] that (16.8%) of the students are smokers.

A group of student smokers (47.8%) smoke (1-5) cigarettes per day. This is similar to what was reported by [14] that (35.7%) of the student smokers smoke regularly (1-5) cigarettes per.

A group of students smokers (39.1%) smoke (5-10) per day, and this is not a good indicator, which indicates the spread of the phenomenon of smoking and its increase in the future and the possibility of an increase in diseases related to smoking, This is similar to what was reported by [19] that (47%) of the students are smokers. They smoke (5-10) cigarettes per day.

The study showed correlation between students smoking and gender (p value<0.05), (x^2 =62.724) with higher percentage of male students being smokers compared to females. This is similar to what was reported by [20] that correlation between students smoking and gender (p value<0.05), with higher percentage of male students being smokers compared to females.

Conclusion

All students 100% know about smoking, most students 97.8% know that smoking has harmful effects.

Less than half of the students 47.9% mentioned that psychological factors are among the factors that lead others to smoke, A group of students 31.2% believe that if someone starts smoking it is easy to stop.

A group of students 15.9 smoke, Most of the students smokers 81.7% use cigarettes for smoking, and a group of students smokers 15.5%use cigarettes and shisha together.

A group of student smokers 47.8% smoke less than 5 cigarettes per day, a small group of student smokers 13%, smoke more than 10 cigarettes per day.

Recommendations

Based on the results, the study recommends the following:

Authorities of health and education, have to establishing health education programs for secondary school students to changing students' practice smoking.

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