

Knowledge Levels of Vocational High School Students About Substance Addiction and Sexually Transmitted Diseases

Meslek Lisesi Öğrencilerinin Madde Bağımlılığı ve Cinsel Yolla Bulaşan Hastalıklar hakkındaki Bilgi Düzeyleri

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Abstract

Introduction: This study was carried out to determine the knowledge levels of vocational high school students about substance addiction and sexually transmitted diseases (STDs).

Materials and Methods: 20691 students from 22 vocational high schools were included in this study, and it was conducted with a total of 1929 students selected with stratified sampling. The data obtained in this study was collected using a questionnaire form.

Results: The mean age of the students was 16.58±1.17, of which 54.1% were male, and 57.4% were high school 9-10th grade. It was determined that most of the students (95.9%) lived with their families and 25.2% of them came with migration. 95.5% of the students stated that they had information about the health hazards of cigarettes, alcohol and other substances. While 60.9% of students stated knowing HIV/AIDS, 55.7% hepatitis B and 45.2% hepatitis C from STDs, 70.1% stated not knowing genital wart, 76.3% gonorrhea, 76.7% syphilis, 86.7% chlamydia, and 87.6% trichomonas. More than half of students stated knowing that STDs have symptoms like vaginal discharge odor (56%), inguinal pain (52.8%), itch (52.1%), and wart and blister (54.3%) in sexual organs. It was determined that more than half of the students do not know complications of STDs, and 41.5% of students stated that condom usage in every intercourse was necessary. 68.8% of the students did not receive any education about STD.

Conclusions: It was determined that the vocational high school students did not have enough information about STD and substance abuse and peer-based education were planned for the students.

Öz

Giriş: Bu çalışma meslek lisesi öğrencilerinin madde bağımlılığı ve cinsel yolla bulaşan hastalıklar (CYBH) hakkındaki bilgi düzeylerini belirlemek amacıyla yapılmıştır.

Gereç ve Yöntem: Çalışmaya 22 meslek lisesinden 20691 öğrenci dahil edilmiş ve tabakalı örnekleme seçilen toplam 1929 öğrenci ile çalışma yürütülmüştür. Çalışmada elde edilen veriler anket formu kullanılarak toplanmıştır.

Bulgular: Öğrencilerin yaş ortalaması $16,58 \pm 1,17$ olup, bunların %54,1'i erkek, %57,4'ü lise 9-10. sınıfta okumaktadır. Öğrencilerin çoğunun (%95,9) aileleri ile yaşadığı ve %25,2'sinin göç ile geldiği belirlenmiştir. Öğrencilerin %95,5'i sigara, alkol ve diğer maddelerin sağlığa zararları hakkında bilgi sahibi olduğunu belirtmiştir. Öğrencilerin %60,9'u CYBH'dan HIV/AIDS'i, %55,7'si hepatit B ve %45,2'si hepatit C'yi bildiğini belirtirken, %70,1'i genital siğil, %76,3'ü gonore, %76,7'si sifiliz, %86,7'si klamidya ve %87,6'sı trikomonazı bilmediğini belirtmiştir. Öğrencilerin yarısından fazlası kötü kokulu akıntı (%56), kasıklarda ağrı (%52,8), kaşıntı (%52,1) ve cinsel organlarda siğil ve uçuk (%54,3) gibi CYBH'nin belirtileri olduğunu ifade etmiştir. Öğrencilerin yarısından fazlasının CYBH'nin komplikasyonlarını bilmediği saptanmış ve CYBH'dan korunmada %41,5'i her ilişki kombine kondom kullanılması gerektiğini belirtmiştir. Öğrencilerin %68,8'i CYBH hakkında herhangi bir eğitim almamıştır.

Sonuç: Meslek lisesi öğrencilerinin cinsel yolla bulaşan hastalıklar ve madde bağımlılığı konusunda yeterli bilgiye sahip olmadıkları saptanmış ve öğrenciler için akran temelli eğitimler planlanmıştır.

Introduction

The adolescent period is an important period in transition from childhood to adulthood when growth and development are quite fast, and besides, when cognitive and psychosocial development continues (1). Physiological and psychological changes in adolescents developing depending on their periodical characteristics may cause some important behavior changes in children of this age group that may cause problems on the psychosocial level. Children of particularly this age group seek new environments for themselves by emotionally moving away from family to be independent, and to gain a new status. This situation may bring many problems with adolescents' effort to prove themselves in new environments and with new experiences. Depending on this seeking, risky behaviors observed in the adolescent period may be ordered as drug usage, sexually transmitted diseases (STDs), accidents, suicides, violence and adolescent pregnancies (2,3).

Substance addiction is a social problem with biological, emotional and social dimensions that can affect everyone, notably the young in our country as well, just like in the world (2,3). According to the World Drug Report (2019), it is estimated that 271 million people, 5.5 % of the global population between the ages of 15-64, had used drugs in the 2016 year. It is stated that most drug-related deaths (585.000 deaths) result from hepatitis C and opioid use disorder (2). According to the Turkish Drug Report 2019, the rate of those using drugs at least once in their lives between ages 15-24 is the highest (35,4%) (3). Spreading drug use with immigrations, rapid urbanization, economic

imbalances, socio-cultural changes and entertainment culture create serious problems in our country. Besides, because of Turkey's geographical location, its being in a strategic points in the world in the substances addiction trafficking increases the danger more. It is reported that drug usage is higher in port or close-to-port cities geographically. Being a port city and allowing high immigration causes Mersin city to be one of the important centers in drug trafficking (4). Starting drug usage at a young age causes the longer use of this substance, and long-term drug usage causes serious health problems in the future lives of individuals.

Sexually transmitted diseases are the most common and dangerous among infectious diseases. The most frequent STDs are gonorrhea, syphilis, chlamydia, genital herpes, hepatitis B, human papilloma virus (HPV), and human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS). According to the World Health Organization (WHO) for 2016, more than one million people are infected by STDs daily. Each year, 376 million new infections occur with one of the four STDs (chlamydia, gonorrhea, syphilis, and trichomoniasis); and besides, 417 million people have herpes simplex virus (HSV), and more than 290 million women have human papillomavirus (HPV) infection (5).

According to WHO HIV/AIDS Report, 37.9 million people were predicted to have HIV/AIDS at the end of 2018, and of those, 36.2 million are adults, and 1.7 million are children aged under 15. People newly infected with HIV are 1.7 million in 2018, and it is stated that 770.000 people died from AIDS-related

diseases (6). While newly infected HIV/AIDS cases decrease throughout the world, the number continues to increase in our country (6,7). In our country, the young population constitutes an important part of society. According to the data of the Ministry of Health, HIV positivity has been increasing in adolescents and it is seen that the newly infected ones are young (7). Unfortunately, that the young do not have sufficient information about STD at that period, that they cannot get information from the correct sources, and their being misinformed cause difficulties in fight against these diseases. It was identified in studies conducted in our country that students have insufficient information about STDs, and that they would like to get information about STDs (8,9,10).

Mersin is a cosmopolitan tourism city where migrations are high and exposed to socio-cultural changes. In our country, vocational high school students settle in schools with the lowest points, and their education includes mostly vocational knowledge. These students, who have more free time, are at risk for substance use and sexually transmitted diseases. In our city, representing a great portion of school-age youngsters in high school, vocational high school students make up an important group that may be exposed to threats like drug usage and STDs. According to our research, there is no comprehensive study that determines the knowledge level of vocational high school students about substance addiction and STDs in our country. The aim of this study is to determine the knowledge levels of vocational high school students about substance addiction and STDs, and to determine their educational needs.

Materials and Methods

This descriptive study was conducted to determine the knowledge levels of vocational high school students about substance addiction and sexually transmitted diseases. A total of 20.691 vocational high school students from 22 vocational high schools having education in 9th-12th grade in Mersin Province were included in this study and it was conducted with a total of 1929 students selected with stratified sampling.

In data collection, questionnaire form related to socio-demographic characteristics, substance addiction and sexually transmitted diseases information form prepared by researchers in accordance with literature were used (4,8-28). Socio-

demographic information form includes questions about the students' age, gender, school, department, and class. In the sexually transmitted diseases information form, there are questions about sexually transmitted diseases, the modes of transmission of the diseases, symptoms and consequences, treatment and prevention. Substance addiction questionnaire consists of questions containing students' information about substances harmful to health. There are 51 questions in the survey together with their subgroups. After getting necessary permissions (governorship approval, ministry of education permission slip, and ethic committee approval), questionnaire was applied to 1929 students to determine information levels of students. Students were orally informed about the study, their consent was taken, and only the voluntary ones were included in the study. After the knowledge levels of students about sexually transmitted diseases and substance addiction were determined, peer-based education to students about sexually transmitted diseases and substance addiction was planned and educational materials (power point presentation, brochure) have been prepared to increase of knowledge level of students about these items.

Statistical Analysis

The obtained data were analyzed using STATISTICA 13.0 program. The data were expressed as number (n) and frequency (%), and the relationships between categorical variables were determined using the chi-square test (χ^2). Pairwise grade comparisons were done using two proportions z test. $p < 0.05$ was evaluated as the level of statistical significance.

Ethical issues

This study was conducted in accordance with the Helsinki Declaration Principles, it was approved by the clinical investigations ethics committee from Mersin University (Mersin University Clinical Research Ethics Committee, No: 2015/300) and informed consent was obtained from all the study participants.

Results

The mean age of students was 16.58 ± 1.17 , and 54.1% of them were male. It was identified that 57.4% of students were high school 9th-10th grade,

that 95.9% of them were living with their families, that 25.2% came by immigration, and that the mean monthly income of their families was low (Table 1).

Table 1. Sociodemographic characteristics of students (n=1929)

Characteristics		n	%
Gender	Male	1043	54.1
	Female	886	45.9
Grade of school	9 th grade	573	29.7
	10 th grade	535	27.7
	11 th grade	436	22.6
	12 th grade	385	20.0
Longest place resided	City	1277	66.2
	District	444	23.0
	Village	195	10.1
	Abroad	13	0.7
Immigration status	Yes	487	25.2
	No	1442	74.8
Living place	With my family	1849	95.9
	With my relatives	34	1.8
	In a state dormitory	24	1.2
	With my friends	5	0.2
	In an orphanage	4	0.2
	Alone	3	0.2
	In the street	8	0.4
Mother's education status	Other	2	0.1
	Illiterate	311	16.1
	Literate	104	5.4
	Primary School Graduate	760	39.4
	Secondary School Graduate	407	21.1
Father's education status	High School Graduate	288	14.9
	University Graduate	59	3.1
	Illiterate	78	4.0
	Literate	102	5.3
	Primary School Graduate	682	35.4
Mother's occupation	Secondary School Graduate	546	28.3
	High School Graduate	381	19.8
	University Graduate	140	7.2
	Housewife	1598	82.8
	Worker	155	8.0
Father's occupation	Self-Employed	99	5.2
	Officer	48	2.5
	Retired	18	0.9
	Farmer	11	0.6
	Self-Employed	738	38.3
Father's occupation	Worker	721	37.4
	Retired	177	9.2
	Officer	166	8.6
	Farmer	96	5.0
	Tradesman	31	1.5

When the knowledge level of students about STDs was examined, it was identified that 60.9% of them knew HIV/AIDS, 55.7% hepatitis B, 45.2% hepatitis C as sexually transmitted diseases, but that 76.7% of them did not know syphilis, 76.3% gonorrhoea, 71.4% genital herpes, 87.6% trichomonas and 86.7% chlamydia. It was defined that while 82.9% of students knew sexual intercourse, 66.1% certain commonly used tools (injector, razor, manicure set, etc.), 51.7% blood and organ transfusion as sources of infection, the awareness rate of students about other ways of infection were low. It was identified that the rates of the students knowing other symptoms and results of STDs were relatively lower (Table 2).

Knowledge level of students about treatment and vaccination of STDs was given in Table 3. Most of the students stated not having information about vaccination and treatment of STDs.

The difference between the knowledge level of the students about substance addiction and gender characteristics was examined, and it was found statistically significance. When compared to male students, female students knew more that substances such as marijuana, opium, ecstasy and captagon makes addiction ($p=0.001$, $p=0.001$) (Table 4).

The difference between the knowledge level of students about STDs and gender characteristic was examined, and a statistically significance relationship between them was identified. The number of male students stating of knowing STDs was identified more than the number of female students such as HIV/AIDS, syphilis, chlamydial infection and gonorrhoea ($p=0.0001$, $p=0.005$, $p=0.006$, $p=0.007$) (Table 5). The relationship between the knowledge level of students about STDs and grade difference was statistically significance. It was determined that the 12th grade students have more information than 9th grade students about STDs, and that their information increases as the grade level increases ($p=0.001$, $p=0.0001$) (Table 6).

When the sources of information of students about STDs and substance addiction were examined, it was determined that more than half of students did not have any education. The other students get the most information about substance addiction and STDs from school, family, media and internet. The rate of getting information of the students from healthcare personnel was quite low. However, it was determined that students obtained more information about substance

addiction from these information sources and could not benefit from these sources on STDs. Moreover, students stated that they would like to have education about STDs from healthcare personnel.

Discussion

The adolescence period is a period when risky health behavior is frequently observed, and so which is under risk in terms of reproductive health. That the topics related to reproductive health are taboo in

our country prevents the young people from reaching the correct information, from creating awareness, and from prevention from possible risks. As a result of this, lack of information increases risky behaviors concomitantly, and cause situations like drug usage, sexual intercourse at early age, unintended pregnancies, and catching STDs (11,12).

In this study, it was determined that a great majority of students have knowledge about health hazards of addictive substances. In other studies conducted in our

Table 2. Knowledge level of students about transmission way, symptoms and prevention of STDs

	Yes		No		Does not know	
	n	%	n	%	n	%
Answers to STDs' transmission ways						
With sexual intercourse	1600	82.9	60	3.2	269	13.9
With commonly used tools (injector, razor, manicure set, etc.)	1276	66.1	202	10.5	451	23.4
With HIV/AIDS, hepatitis B/C, blood and organ transplant of the patient	998	51.8	161	8.3	770	39.9
During pregnancy and breastfeeding from mother to baby	836	43.4	365	18.9	728	37.7
With respiration	768	39.8	534	27.7	627	32.5
With HIV/AIDS, hepatitis B/C, tattoo/piercing	702	36.4	255	13.2	972	50.4
With using the same toilet/bathroom	698	36.2	588	30.5	643	33.3
With mosquito/bug bite	547	28.4	641	33.2	741	38.4
With kissing from cheek to cheek	442	22.9	947	49.1	540	28.0
Answers to STDs' symptoms and results						
Vaginal discharge odor in sexual organs may occur	1081	56.0	61	3.2	787	40.8
Wound, wart, herpes may occur in sexual organs	1048	54.3	120	6.2	761	39.5
Pain may occur in groins	1018	52.8	115	6.0	796	41.2
Itch may occur on sexual organs	1005	52.1	113	5.9	811	42.0
Pain/Bleeding may occur during sexual intercourse	999	51.8	121	6.3	809	41.9
May cause death	953	49.4	128	6.6	848	44.0
May cause illness in newborn babies	931	48.3	121	6.2	877	45.5
Cancer may occur on sexual organ	939	48.7	125	6.5	865	44.8
Painful and frequent urination may occur	926	48.0	129	6.7	874	45.3
Swelling and alveolus in groins may occur	865	44.8	135	7.0	929	48.2
May cause premature birth/aborts	799	41.4	139	7.2	991	51.4
May cause infertility	765	39.7	161	8.3	1003	52.0
May cause impotence	580	30.1	194	10.0	1155	59.9
Answers to prevention from STDs						
Avoiding drug usage	1315	68.2	166	8.6	448	23.2
Avoiding common usage of tools like razor, injector, nail clipper	1253	65.0	150	7.8	526	27.2
Avoiding intercourse with risky people (prostitutes, homosexuals)	1206	62.5	124	6.4	599	31.1
Maintaining monogamy in sexual intercourse	1049	54.4	245	12.7	635	32.9
Using condom in every intercourse	801	41.5	192	10.0	936	48.5

Table 3. Knowledge level of students about treatment and vaccination of STDs

Answers related to treatment of STDs	n	%
Treatment of HIV/AIDS		
Existent	527	27.3
Non-existent	367	19.0
Does not know	1035	53.7
Treatment of Hepatitis B		
Existent	699	36.2
Non-existent	140	7.3
Does not know	1090	56.5
Treatment of Hepatitis C		
Existent	614	31.8
Non-existent	113	5.9
Does not know	1202	62.3
Treatment of Syphilis		
Existent	299	15.5
Non-existent	121	6.3
Does not know	1509	78.2
Treatment of Gonorrhoea		
Existent	438	22.7
Non-existent	91	4.7
Does not know	1400	72.6
Treatment of Genital wart (HPV)		
Existent	453	23.5
Non-existent	108	5.6
Does not know	1368	70.9
Treatment of Genital herpes		
Existent	491	25.5
Non-existent	79	4.1
Does not know	1359	70.4
Treatment of Trichomonas		
Existent	233	12.1
Non-existent	79	4.1
Does not know	1617	83.8
Treatment of Fungus		
Existent	916	47.5
Non-existent	72	3.7
Does not know	941	48.8
Treatment of Chlamydia		
Existent	214	11.1
Non-existent	116	6.0
Does not know	1599	82.9

Table 3. Continued

Answers related to treatment of STDs	n	%
Answers related to vaccination of STDs		
Vaccination of HIV/AIDS		
Existent	347	18.0
Non-existent	248	12.8
Does not know	1334	69.2
Vaccination of Hepatitis B		
Existent	696	36.1
Non-existent	68	3.5
Does not know	1165	60.4
Vaccination of Hepatitis C		
Existent	569	29.5
Non-existent	83	4.3
Does not know	1277	66.2
Vaccination of Syphilis		
Existent	179	9.3
Non-existent	107	5.5
Does not know	1643	85.2
Vaccination of Gonorrhoea		
Existent	211	10.9
Non-existent	136	7.1
Does not know	1582	82.0
Vaccination of Genital wart (HPV)		
Existent	194	10.1
Non-existent	127	6.5
Does not know	1608	83.4
Vaccination of Genital herpes		
Existent	189	9.8
Non-existent	148	7.7
Does not know	1592	82.5
Vaccination of Trichomonas		
Existent	122	6.3
Non-existent	90	4.7
Does not know	1717	89.0
Vaccination of Fungus		
Existent	322	16.7
Non-existent	210	10.9
Does not know	1397	72.4
Vaccination of Chlamydia		
Existent	132	6.8
Non-existent	88	4.6
Does not know	1709	88.6

country, the majority of the students stated that they had knowledge on substance addiction, were informed and gained information on addictive substances from school (13,14). In studies performed in other countries, a study by Siddiqui and Salim on substance addiction in young Saudi Students, it was determined that 84.2%

of students have sufficient information level on the topic (15). In the study of Gotsang et al. with students at adolescence period in Botswana, it was determined that they are informed about addictive substances and their abuse, and that had information from television, newspaper and from friends (16). In a study conducted

Table 4. The difference between the knowledge level of students about substance addiction and gender characteristics

	Knowledge level								χ^2	p
	Yes		No		Does not know		Total			
	n	%	n	%	n	%	n	%		
Cigarette makes addiction										
Male	846	43.9	33	1.7	7	0.4	886	45.9	13.081	0.001
Female	960	49.8	78	4.0	5	0.3	1043	54.1		
Total	1806	93.6	111	5.8	12	0.6	1929	100		
Alcohol makes addiction										
Male	816	42.3	59	3.1	11	0.6	886	45.9	56.260	0.001
Female	844	43.8	189	9.8	10	0.5	1043	54.1		
Total	1660	86.1	248	12.9	21	1.1	1929	100		
Cannabis makes addiction										
Male	838	43.4	34	1.8	14	0.7	886	45.9	27.145	0.001
Female	923	47.8	104	5.4	16	0.8	1043	54.1		
Total	1761	91.3	168	7.2	30	1.6	1929	100		
Marihuana makes addiction										
Male	489	25.3	96	5.0	301	15.6	886	45.9	65.926	0.001
Female	701	36.3	155	8.0	187	9.7	1043	54.1		
Total	1190	61.7	251	13.0	488	25.3	1929	100		
Cocaine makes addiction										
Male	791	41.0	42	2.2	53	2.7	886	45.9	9.87	0.001
Female	944	48.9	65	3.4	34	1.8	1043	54.1		
Total	1735	89.9	107	5.5	87	4.5	1929	100		
Opium makes addiction										
Male	528	27.4	105	5.4	253	13.1	886	45.9	44.896	0.001
Female	709	36.8	166	8.6	168	8.7	1043	54.1		
Total	1237	64.1	271	14.0	421	21.8	1929	100		
Heroin makes addiction										
Male	812	42.1	20	1.0	54	2.8	886	45.9	18.188	0.001
Female	938	48.6	61	3.2	44	2.3	1043	54.1		
Total	1750	90.7	81	4.2	98	5.1	1929	100		
Ecstasy makes addiction										
Male	512	26.5	93	4.8	281	14.6	886	45.9	74.161	0.001
Female	727	37.7	156	8.1	160	8.3	1043	54.1		
Total	1239	64.2	249	12.9	441	22.9	1929	100		

in Malaysia, information levels of students on substance addiction were found as 82% (17). In another study conducted in India about the same topic, it was reported that of high school students, 90.6% have medium-level, and 7.5% have a good level of information (18). In the study of Nwosu and Ezejindu in Nigeria, the

information levels of students on substance addiction were determined as insufficient (19). Although studies done in other countries differ from each other, studies conducted in our country show that the young people are well-informed about substance addiction. The reason for their high level of knowledge of students on

Table 5. The difference between the knowledge level of students about STDs and gender characteristics

	Knowledge level				Total	χ^2	p
	Knows		Does'nt know				
	n	%	n	%			
HIV/AIDS							
Male	591	30.6	295	15.3	886	45.9	23.492 0.0001
Female	583	30.2	460	23.8	1043	54.1	
Total	1174	60.9	755	39.1	1929	100	
Hepatitis B							
Male	563	29.2	323	16.7	886	45.9	41.101 0.0001
Female	511	26.5	532	27.6	1043	54.1	
Total	1074	55.7	855	44.3	1929	100	
Hepatitis C							
Male	431	22.3	455	23.6	886	45.9	7.832 0.005
Female	441	22.9	602	31.2	1043	54.1	
Total	872	45.2	1057	54.8	1929	100	
Syphilis							
Male	232	12.0	654	33.3	886	45.9	7.764 0.005
Female	217	11.2	826	42.8	1043	54.1	
Total	449	23.3	1480	76.7	1929	100	
Gonorrhoea							
Male	235	12.2	651	33.7	886	45.9	7.273 0.007
Female	222	11.5	821	42.6	1043	54.1	
Total	457	23.7	1472	76.3	1929	100	
Genital herpes							
Male	310	16.1	576	29.9	886	45.9	20.580 0.0001
Female	266	13.8	777	40.3	1043	54.1	
Total	576	29.9	1353	70.1	1929	100	
Chlamidial infection							
Male	97	5.0	789	40.9	886	45.9	7.683 0.006
Female	159	8.2	884	45.8	1043	54.1	
Total	256	13.3	1673	86.7	1929	100	
Fungal infection							
Male	542	28.1	344	17.8	886	45.9	33.302 0.0001
Female	501	26.0	542	28.1	1043	54.1	
Total	1043	54.1	886	45.9	1929	100	

Table 6. The difference the knowledge level of students about STDs and grade difference

	Knowledge level						χ^2	p	Different grades
	Knows		Does'nt know		Total				
	n	%	n	%	n	%			
HIV/AIDS									
Grade									
9 th	241	42.1	332	57.9	573	29.7	123.501	0.0001	
10 th	356	66.5	179	33.5	535	27.7			
11 th	312	71.6	124	28.4	436	22.6			
12 th	265	68.8	120	31.2	385	20.0			
Total	1174	60.9	755	39.1	1929	100			
Hepatitis B									
Grade									
9 th	260	45.4	313	54.6	573	29.7	42.776	0.0001	9 th -10 th 9 th -11 th 9 th -12 th 10 th -11 th 10 th -12 th
10 th	346	64.7	189	35.3	535	27.7			
11 th	249	57.1	187	42.9	436	22.6			
12 th	219	56.9	166	43.1	385	20.0			
Total	1074	55.7	855	44.3	1929	100			
Hepatitis C									
Grade									
9 th	196	34.2	377	65.8	573	29.7	42.271	0.0001	9 th -10 th 9 th -11 th 9 th -12 th
10 th	273	51.0	262	49.0	535	27.7			
11 th	224	51.4	212	48.6	436	22.6			
12 th	179	46.5	206	53.5	385	20.0			
Total	872	42.2	1057	54.8	1929	100			
Syphilis									
Grade									
9 th	72	12.6	501	87.4	573	29.7	69.529	0.0001	9 th -10 th 9 th -11 th 9 th -12 th 10 th -12 th 11 th -12 th
10 th	166	31.0	369	69.0	535	27.7			
11 th	133	30.5	303	70.5	436	22.6			
12 th	78	20.3	307	79.7	385	20.0			
Total	449	23.3	1480	76.7	1929	100			
Gonorrhea									
Grade									
9 th	94	16.4	479	83.6	573	29.7	38.324	0.0001	9 th -10 th 9 th -11 th 10 th -11 th 10 th -12 th 11 th -12 th
10 th	123	23.0	412	77.0	535	27.7			
11 th	144	33.0	292	67.0	436	22.6			
12 th	96	17.1	289	82.9	385	20.0			
Total	457	23.7	1472	76.3	1929	100			

Table 6. Continued

	Knowledge level						χ^2	p	Different grades
	Knows		Does'nt know		Total				
	n	%	n	%	n	%			
Trichomonas									
Grade									
9 th	49	8.6	524	91.5	573	29.7			
10 th	71	13.3	464	86.7	535	27.7			9 th -10 th
11 th	74	17.0	362	83.0	436	22.6	16.600	0.001	9 th -11 th
12 th	46	12.0	339	88.1	385	20.0			11 th -12 th
Total	240	12.4	1689	87.6	1929	100			

this topic in our country shows that educations (such as media and public education) to the fight against substance abuse are important. However, drug usage status of students in this study is unknown.

In our study, when information levels of students about STDs were examined, it was seen that the most well-known sexually transmitted disease was HIV/AIDS. Similar to our study, in the study of Demir and Şahin, the best-known disease was HIV/AIDS, but this ratio was lower than our study (9). In another study of Elkin, the most known STDs among university students were, respectively, AIDS, syphilis, hepatitis B, hepatitis C, and fungus (20). In the study of Amu and Adegun, it was determined that best-known disease was AIDS and gonorrhea, respectively (21). In a study conducted with female students by Nwatu et al., it was found that the most known diseases were gonorrhea, AIDS and syphilis, respectively, and the least known disease was genital herpes (22). In our study, it was determined that, from STDs, hepatitis B and hepatitis C are less known by students, whereas students do not know other STDs such as syphilis, gonorrhea, genital herpes, trichomonas, and chlamydia. In other studies, although HIV/AIDS is the most known disease, it can be seen that other STDs are less known (21-25). As AIDS disease is frequently shown in media, and a current and important problem, its status of being known is higher compared to other diseases. However, these studies showed that this rate is still not in the desired level (20,24,25).

Although most of the students stated that sexually transmitted diseases were transmitted through sexual intercourse, it was determined that almost half of the students had wrong information (commonly used toilet, respiration, etc.) in our study. In Genz et al.'s study,

almost all the students knew that STDs is transmitted with sexual intercourse (23). In Yazganoğlu et al.'s study, students stated that STDs can be transmitted through sexual intercourse, through blood, and through anal intercourse (25). In the same study, students stated that HIV can be transmitted through handshake or mosquito bite. In another study, students stated that STDs can be infected through unprotected sexual intercourse, through injector sharing, through blood and blood products, and from mother to baby. In the same study, students stated that STDs can also be transmitted with cough/sneeze, and with common toilet usage (21). In another study, more than half of the students stated that AIDS can be infected with common usage of plate, glass, bathroom and toilet, and with contact like handshake, hug (20). When studies are examined, it can be seen that the young people have wrong information about ways of infection, and that they are insufficient about protecting themselves.

In our study, more than half of the students stated that vaginal discharge odor, wound, wart, herpes, itch may be the symptom or result of STD. In some studies, more than half of the students stated that wound in exterior genital organs, itch, inguinal pain, menstrual irregularity, difficulty and burning in urination, discharge in vagina and penis as symptoms of STDs (9,26,27). In another study, more than half of the students stated of knowing genital discharge, genital ulcer, urinary burning as symptoms (28). In Amu and Adegun's study, students stated that weight loss and rash on body may occur (21). It was seen that students needed more information about the symptoms or consequences of STD.

According to our study results, more than half of the students stated that STDs may cause premature

births and abortions, cancer in sexual organs and death, and disease in newborn babies. In Çalışkan et al.'s study, if STDs are untreated, students stated that they may cause infertility, and that visual disability in newborn baby (29). In Bakır and Kızılkaya Beji's study, university students stated that visual disability in newborn baby may occur as a result of STDs (30). In other studies, done as parallel to our study results, it can be seen that many students do not have sufficient information about the results of STDs.

In our study, to the questions related to protection from STDs, students answered as avoiding drug usage, as maintaining monogamy in sexual intercourse, as using condom in every intercourse. In Nwatu et al.'s study, students stated that they can be protected from STDs by avoiding unprotected sexual intercourse, by having intercourse with one partner, by avoiding injector sharing, by avoiding careless use of blood and blood products (22). Besides these answers, it was also determined that there are wrong beliefs about ways of protection, like not sharing the same chair with infected people, not shaking hands, not sharing the same toilet, not using kitchen tools. In Yazganoğlu et al.'s study with university students, the best known three protection methods are stated as avoiding contact with prostitutes (sex workers) (82.6%), using condom during sexual intercourse (77.6%), and limiting sexual partner number (monogamy) (66.9%) (25). In Çalışkan et al.'s study, students stated that condom usage can be effective in STDs (29). In Demir and Şahin's study, students answered as not having intercourse with risky people, using contraceptive pill, not having sexual intercourse with anyone to protect from these diseases. The study results showed that although students have correct information to protect from STDs, they also have wrong information (9).

In our study, it was determined that gender, grade and family education levels of students affected their knowledge levels. We found that female students know STDs more than male students. Similar to the results of our study, in Biri et al.'s study, the rate of female students knowing STDs was found more compared to male students (24). In Bakır and Kızılkaya Beji with Çalışkan et al.'s studies, male students answered more questions correctly compared to female students (29,30). These differences may be resulted from the variety of cultural characteristics and social pressures in our country. In our study, it was detected that the

information levels of students about STDs increase as their grade levels increase. In Çaltık Yılmaz and Başkan's study on information levels about AIDS with primary and high school students, in terms of answering questions correctly, significance difference was determined between primary and high school students (26). Furthermore, in our study, it was found that as parents' education levels increase, students' information levels about STDs also increase. Having the same results in the studies of Çalışkan et al. (29) and Malki (31) showed the importance of education taken from the family. Similar to the results of our study, the studies showed that some sociodemographic characteristics such as gender, education level of parents and grade level of school, etc. have increased of the knowledge level of students (24,26,29). In our study, it was determined that more than half of students did not have any education on substance addiction and STDs. Students get the most information about substance addiction and STDs from school, family, media and internet. The rate of getting information of the students from healthcare personnel was quite low. Similar to our study, it was determined in the other studies that students have get the information on these matter from family, school, media and internet (21,23,24). In the some studies conducted, the rate of getting information from a health institution was detected as quite low (9,23,24). The results of the studies showed that young people turned to information sources such as internet and media except the family and school. Whereas, in our study, many of students stated that they would like to have education about STDs and substance addiction from healthcare personnel. As resources such as internet give limited information, applying to a healthcare institution to reach correct information about correct and quick diagnosis, treatment and protection are of great importance.

Conclusion

In our study, it was determined that students do not have sufficient information related to substance addiction and STDs, and that they have education needs on this topic. In our country, studies related to the level of knowledge on this subject differ, as well as similar results in other countries. In a study conducted by Tavoosi et al. with high school students regarding AIDS in Iran, only a few students answered all the knowledge questions

correctly, and there were many misconceptions about the routes of transmission (32). In the another study, Andrew et al. evaluated knowledge level about HIV/AIDS among African-American undergraduate students and 96.5% of students had good knowledge about HIV/AIDS, however, some participants had misconceptions about the transmission modes of HIV infection (33). In general, the studies showed that levels of awareness and knowledge of young population about STDs and substance addictive in various country are low or moderate levels (19,23,28,32,34,35,36). In our country, information studies about substance addiction and STDs are done at school sometimes as conference, panel, but as these educations do not have continuation, they do not reach to satisfactory levels. Although there are centers in our country treating drug addicts, as they are few in number, information studies towards protection cannot be done at a sufficient level by these centers. There is not a single center that can give consultation about STDs, and although health institutions take on this task, it is difficult to reach all individuals in society and all the young people at schools. Setting up units in family health centers to give consultation on substance addiction and STDs, making peer-based education at schools in company with school counsellors or experts can be useful. In accordance with the results we obtained from this study, making peer-based education was planned for all the students at schools within the scope of this study to create awareness about and inform on drug usage and STDs. New methodological approaches may be needed to attract young people.

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Ethics

Ethics Committee Approval: This study was conducted in accordance with the Helsinki Declaration Principles, it was approved by the clinical investigations ethics committee from Mersin University (Mersin University Clinical Research Ethics Committee, no: 2015/300).

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