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HIV/AIDS knowledge among a group of youngsters under social protection in Turkey

Aim: A number of radical changes in social conditions have created new hazards, such as STDs and HIV/AIDS, for young people. The purpose of this research was to determine the level of HIV/AIDS knowledge and information sources of the youngsters who are under social protection in Turkey.

Materials and Methods: Participants of the study were 649 female and 739 males between the ages of 12 and 24 (M = 15.3, SD = 1.92) who are under social protection in Turkey. Data were collected using a demographic questionnaire, sources of HIV/AIDS information questionnaire, and HIV/AIDS questionnaire. The questionnaires were administered in the evenings when most of the youngsters under social protection were in the dormitory. Finally, we reached 1388 youngsters (39.5% of the total).

Results: Healthcare workers (e.g., doctors and nurses) and peers were the significant sources of HIV knowledge among youngsters under social protection and their HIV/AIDS knowledge was quite low. Gender differences did not affect knowledge on HIV/AIDS. However, level of education and age were positively correlated with the level of knowledge on HIV/AIDS. Finally, youngsters who lived urban areas most were more knowledgeable on HIV/AIDS.

Conclusions: We concluded that adolescents under social protection need education on sexually transmitted diseases.

Key Words: Youngster, social protection, information sources, and HIV/AIDS knowledge

Türkiye’de sosyal koruma altında bulunan gençlerin HIV/AIDS bilgisi

Amaç: Toplumsal koşullarda meydana gelen bir dizi radikal değişiklik gençler için yeni tehlikeler (örn. CYBH, HIV/AIDS) ortaya çıkarmıştır. Bu araştırmanın amacı Türkiye’de sosyal koruma altında olan gençlerin HIV/AIDS bilgi düzeyini ve bilgi kaynaklarını belirlemektir.

Yöntem ve Gereç: Bu çalışmaya sosyal koruma altında olan ve yaşları 12-24 (Ort = 15,3; SS = 1,92) arasında değişen 649 kadın ve 739 erkek genç katılmıştır. Araştırma verileri demografik sormaca, HIV/AIDS bilgi kaynakları sormacası ve HIV/AIDS bilgi sormacası ile toplanmıştır. Veriler sosyal koruma altında olan gençlerin kaldıkları yurtlarda en yoğun olarak buldukları akşam saatlerinde toplanmıştır. Araştırma sonucunda 1388 gence (yurtlarda kalan gençlerin % 39,5) ulaşılmıştır.

Bulgular: Sosyal koruma altında bulunan gençlerin HIV/AIDS konusundaki en önemli bilgi kaynakları sağlık personeli (örn. Doktorlar ve hemşireler) ve akranlar olarak belirlenmiştir ve gençlerin bilgi düzeyi oldukça düşük bulunmuştur. Cinsiyet farkı HIV/AIDS konusundaki bilgi düzeyi üzerinde etkili bir factor olarak saptanmamıştır. Bununla birlikte yüksek eğitim düzeyi ve yaş ile HIV/AIDS bilgi düzeyi arasında pozitif yönde ilişki bulunmuştur. Son olarak, kentsel bölgelerde yaşayan gençlerin HIV/AIDS konusundaki bilgi düzeyi daha yüksek olarak saptanmıştır.

Sonuç: Sosyal koruma altındaki ergenlerin cinsel yolla bulaşan hastalıklar ve HIV/AIDS konusunda eğitim gereksinimlerinin olduğu sonucuna ulaşılmıştır.

Anahtar Sözcükler: Genç, sosyal koruma, bilgi kaynakları, HIV/AIDS

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Introduction

A number of radical changes in social conditions have created new hazards in the very areas where young people are most vulnerable (1). Youngsters are at risk of catching HIV/AIDS because of their developmental level, which often leads to impulsiveness and desire for sexual experimentation. The increasingly younger age at first sexual intercourse is a trend that has been documented over the past 2 decades in several industrialized countries (2) and their sexual risk behaviors are changing (3). Sexual activity in early ages, increased numbers of sex partners and trading sex for money become more common among youngsters in Turkey (4-7). Many young people who are forced to live on the social and economic margins of the society have even less access to information, skills, services, and support compared to mainstream youth (8). One of these out-of-mainstream groups of young people is youngsters under social protection in Turkey.

Social services for youngsters in need of protection can only be carried out by the Social Services and Child Protection Agency, as clearly stated in Law No. 2828 in Turkey. The children who need protection, such as those whose parents are unknown or deceased, are the ones whose physical, emotional, and moral development is endangered (9) and these youngsters stay in children's homes (10-11). Most of these youngsters have no families, or have poor family relations (12). Consequently, they have no chance to get adequate sexual education in their families. While many of them get formal school education, some of them attend apprenticeship schools or occupational courses, some of them do not get any schooling at all (11). However, up until the last decade, Turkey had virtually no sexual education, either in courses or textbook materials (13). As a result, youngsters receive no adequate information about sexuality and AIDS. Although a majority of youngsters under social protection have heard of AIDS, many do not know how HIV spreads and do not believe that they are also at risk (14).

The literature covering AIDS among youngsters under social protection is very scarce.

Comprehensive studies on their knowledge and attitudes towards STDs are quite limited. In order to fill the gap, this study examined information on HIV/AIDS and sources of HIV/AIDS information among youngsters who are under social protection in Turkey.

Research Questions

In the present study we sought to determine the level of HIV/AIDS knowledge and information sources of the youngsters who are under social protection. The research questions that guided this study were:

1. What are the information sources of youngsters under social protection?
2. What is the information level of HIV/AIDS of youngsters under social protection?
3. Is there any relationship between demographic characteristics of the students and their level of HIV/AIDS knowledge?

Materials and Methods

Instruments

(1) Demographic Data. Demographic data inquired in the questionnaire were regarding gender, age, education level, where they lived most, and duration of living in the children's home.

(2) Sources of HIV/AIDS Information Questionnaire. The sources of HIV/AIDS information were assessed with yes/no questions that included doctors, nurses, books, magazines, newspapers, children's home, social workers, TV/Cinema, teachers, the Internet, courses in school, mothers, cassettes/CDs, sexual experience, counseling centers, fathers, other institutions, siblings, kinsfolk, and other friends.

(3) HIV/AIDS Questionnaire. The first part of this questionnaire was related to the sources of information of the youngsters under social protection. HIV/AIDS knowledge and attitudes were assessed with a 26-item questionnaire answered as "True", "False", and "I don't know". Respondents receive 1 point if their answer is "true", but they do not get zero if their answer is "false" or "don't know". The highest possible score is 26, and

the higher the score, the higher the level of HIV/AIDS knowledge. Questions included in the questionnaire were related to the knowledge of the disease (e.g., HIV attacks body's defense system and makes the person vulnerable to other infections), the riskiest ways of HIV transmission (e.g., unprotected sexual intercourse increases the risk of HIV infection), situations that have no risk for HIV transmission (e.g., you can get HIV from public toilets), and prejudiced beliefs about HIV infection (e.g., only homosexual men, injecting drug users, and prostitutes can be infected with HIV). The face validity of the constructed questionnaire was obtained through consultations with several experts in the field, and then a pilot study was conducted on a small group of youngsters under social protection before the questionnaire was administered to the whole sample. Then, reliability was assessed with Cronbach's alpha and found as 0.867.

Procedure

The questionnaires were implemented in the evenings when most of the youngsters under social protection were present in the home. The questionnaires were distributed before dinner or designated study time. They were treated in accordance with ethical guidelines of Association of Social Workers in Turkey for research with human participants. They were given incentives to participate in the study and no penalty for refusing to participate. They were told that the purpose of the study was to obtain information about their HIV/AIDS knowledge and sources of information, and asked not to put their names on the questionnaire. They were assured anonymity and therefore asked to answer the questionnaire honestly. There were 3517 youngsters recorded in the selected children's homes. It was not possible to reach all of them because some of them live with their families, which is permissible according to the "Regulation on Material and Financial Aid" prepared by the General Directorate of Social Services. Moreover, there are some others who live with their foster families, on leave, in hospital, ran away, or attending schools in different cities. The questionnaires that were not completed properly were not evaluated. As a result, the study included a total of 1388 questionnaires (39.5% of the total of

3518 individuals residing in children's homes all around the country). Completed forms were assigned individual code numbers.

As shown in Table 1, participants were 649 females (46.8%) and 739 males (53.2%), between the ages of 12 and 24 ($M = 15.3$, $SD = 1.92$) who are placed under social protection by the General Directorate of Social Services and Child Protection Agency in Turkey. During the research, there were

Table 1. Sociodemographic characteristics of the youngsters.

Sociodemographic characteristics	n	%
Gender		
Female	649	46.8
Male	739	53.2
Grade		
6	122	8.8
7	218	15.7
8	236	17.0
9	264	19.0
10	182	13.1
11	168	12.1
No school	198	14.3
Place of birth		
Province	500	36.0
District	469	33.8
Village	419	30.2
Where they lived most		
Village	264	19.0
Town	98	7.1
City	1026	73.9
Age *		
12	78	5.6
13	209	15.1
14	190	13.7
15	288	20.7
16	228	16.4
17	212	15.3
18	120	8.6
19	42	3.0
20 +	21	1.6
Duration of living in children's homes **		
1-5 years	502	36.2
6-10 years	505	36.4
11-15 years	320	23.1
16-20 years	61	4.4

* Mean = 15.3 (1.92) Minimum = 12, Maximum = 24

** Mean = 7.8 (4.4) Minimum = 1, Maximum = 20

115 children's homes in 68 provinces of Turkey. We conducted the research in children's homes located in 41 provinces.

Data Analysis

The data was analyzed by using the SPSS statistical package, version 11.5. HIV/AIDS knowledge scores were used as dependent variables. Socio-demographic characteristics of the students were used as independent variables. According to type of the variables %, SD, mean, F, Student's t, and r statistics were used. Minimum acceptable level of significance was set at 0.05. This data file is available for further analysis if additional questions arise.

Results

First of all, sociodemographic characteristics of the participants will be presented. Then, the results of the analyses are organized in accordance with the questions.

As shown in Table 1, participants were 649 females (46.8%) and 739 males (53.2%), between the ages of 12 and 24 ($M = 15.3$, $SD = 1.92$) who are under social protection by the General Directorate of Social Services and Child Protection Agency in Turkey. During the research, there were 115 children's home located in 68 provinces of Turkey. We conducted the research in 41 provinces. There were a total of 3518 individuals residing in those homes when we conducted the research. However, 1388 individuals could be reached, and of these, 26.1% ($n = 362$) were from rural areas, and 73.9% ($n = 1026$) from urban areas. Regarding the period of being under social protection, 36.2% ($n = 502$) said they were living in the dormitory for 1-5 years, 36.4% ($n = 505$) of them for 6-10 years, 23.1% ($n = 320$) of them for 11-15 years, and 4.4% ($n = 61$) of them for 16-20 years. All of them were in the school age, but 14.3% ($n = 198$) were not receiving formal education, and the rest, 85.7% ($n = 1190$), of them were attending to school (8.8% in grade 6, 15.7% in grade 7, 17.0% in grade 8, 19.0% in grade 9, 13.1% in the grade 10, and 12.1% in grade 11).

The first question focused on where youngsters under social protection got information about HIV/AIDS. Table 2 shows that the major source of

HIV/AIDS information obtained by youngsters was through doctors (36.9%), nurses (32.3%), and written sources like books (31.1%), magazines (30.0%), and newspapers (28.3%). One fourth of the youngsters pointed to children's homes (26.4%) and social workers working in these homes (25.4%), television and cinema (25.1%), school teachers (23.1%), Internet (22.7%), and teachers working in these homes (23.1%) as sources of HIV/AIDS information. The youngsters indicated that courses they take in school (19.5%) and mothers (18.5%), tape cassettes and CD's (18.2%) are other important information sources. Some youngsters also indicated that counseling centers (15.6%) and other institutions (10.0%) are other information sources for HIV/AIDS.

The second question focused on the knowledge level of HIV/AIDS of youngsters under social protection. As can be seen in Table 3, almost half of the participants (47.3%) know that HIV attacks body's defense system and makes a person vulnerable to other infections, almost a quarter of

Table 2. Sources of HIV/AIDS information.

Sources of HIV/AIDS Information	n*	%
Doctors	512	36.9
Nurses	449	32.3
Books	432	31.1
Magazines	417	30.0
Newspapers	393	28.3
Friends at the children's home	367	26.4
Professionals	353	25.4
TV/Cinema	348	25.1
School teacher	321	23.1
Internet Web sites	315	22.7
Teachers working at the children's home	308	22.2
Courses at school	270	19.5
Mother	257	18.5
Cassettes/CD	253	18.2
Sexual experience	246	17.7
Counseling centers	216	15.6
Father	166	12.0
Other institutions	139	10.0
Siblings	120	8.6
Kinsfolk	117	8.4
Other friends	114	8.2

* Respondents could check as many items as they wanted.

Table 3. HIV/AIDS knowledge.

AIDS Knowledge	True		False		Do not know	
	N	%	N	%	N	%
HIV attacks body's defense system and makes a person vulnerable to other infections (True)	656	47.3	150	10.8	582	41.9
If you are fit and healthy you won't become infected with HIV (False)	463	33.4	367	26.4	558	40.2
You can be infected with HIV and may not be aware of it (True)	603	43.4	158	11.4	627	45.2
Only a blood test can tell if you are infected (True)	592	42.7	164	11.8	632	45.5
HIV cannot survive outside the body (True)	521	37.5	198	14.3	669	48.2
If someone looks healthy, it means he/she did not get HIV (False)	318	22.9	462	33.3	608	43.8
Unprotected sexual intercourse increases the risk of HIV infection (True)	680	49.0	124	8.9	584	42.1
Condom use reduces the risk of HIV infection (True)	543	39.1	156	11.2	689	49.6
Anal sex is the riskiest sexual practice for becoming infected with HIV (True)	471	33.9	185	13.3	732	52.7
Coitus interrupts or withdrawal method protects from risk of HIV infection (True)	281	20.2	254	18.3	853	61.5
Condoms are useless as they perforated easily and they do not protect from the risk of HIV infection (True)	290	20.9	235	16.9	863	62.2
You cannot become infected when you have unprotected intercourse one time only with an HIV infected person (False)	264	19.0	514	37.0	610	43.9
HIV cannot transmit through sterile injectors and syringes (True)	422	30.4	177	12.8	789	56.8
Women who use birth-control pill cannot become infected with HIV (True)	264	19.0	291	21.0	833	60.0
An HIV infected pregnant woman can pass the virus to her unborn baby (True)	710	51.2	164	11.8	514	37.0
A baby can become infected with HIV through breastfeeding (True)	521	37.5	204	14.7	663	47.8
You can get HIV from public toilets (False)	578	41.6	252	18.2	558	40.2
You can be infected with HIV from sharing drinking glass (False)	406	29.3	344	24.8	638	46.0
HIV is not spread through coughing or sneezing (True)	458	33.0	257	18.5	673	48.5
Being bitten by a mosquito is a risk of HIV infection (False)	333	24.0	381	27.4	674	48.6
You can get HIV if you live in the same house with a HIV infected person (False)	434	31.3	343	24.7	611	44.0
If you hug or kiss someone who is infected with HIV, you can get HIV (False)	360	25.9	341	24.6	687	49.5
Only homosexual men, injecting drug users, and prostitutes can be infected with HIV (False)	498	35.9	289	20.8	601	43.3
Married people do not become infected with HIV (False)	260	18.7	550	39.6	578	41.6
If you know your partner and trust him/her, you do not get HIV infection (False)	358	25.8	379	27.3	651	46.9
If you have HIV, there is nothing to do, and that is your destiny (False)	356	25.6	401	28.9	631	45.5

them (26.4%) know that if someone is fit and healthy, he/she becomes infected with HIV and two fifth (43.4%) know that one can be infected and may not be aware of it. Besides, 42.7% of the youngsters know that AIDS is just determined by blood test. The percentage of the participants who know that AIDS cannot live outside of body is 37.5%. The table shows that 33.3% of them stated that people who look healthy can still catch AIDS.

About half of the participants (49.0%) reported that risk of getting AIDS increases by unprotected sexual intercourse. The research shows that 39.1% of the youngsters know that using condom decreases risk of getting AIDS, 33.9% of them know that anal intercourse is the most risky sexual behavior. One

fifth (18.3%) of the youngsters know that withdrawal before ejaculation cannot prevent HIV. The statement that condoms are ineffective for preventing AIDS infection as they are easily pierced is accepted by 20.9% of the participants and rejected by 16.9%. The rate of participants who know that AIDS can be transmitted by just 1 sexual intercourse with an infected person comprises 37.0% of the sample. Besides, 30.4% of the young people know that AIDS can be prevented using clear and sterile syringe and 21% of them know women who use birth control pills can also be infected with AIDS. The statement that pregnant women infected with AIDS can transmit the disease to their babies during birth is known by 51.2% of the young people and

Table 4. Relationship between some demographic characteristics of the youngsters and their AIDS knowledge.

Characteristics	HIV/AIDS Knowledge			Statistics
	N	M	SD	
Gender				
Female	649	8.17	5.72	t = -1.052
Male	739	8.49	5.69	
Age				
12-13	287	7.16	5.11	F = 20.121*
14-16	706	8.02	5.33	
17-24	395	9.77	6.44	
Grade at school				F=12.375*
6	122	6,25	4,66	
7	218	6,96	4,79	
8	236	7,59	5,01	
9	264	7,93	5,84	
10	182	9,34	5,81	
11	168	10,34	6,72	
Where lived most				
Rural	362	7.34	5.14	t = -3.900*
Urban	1026	8.70	5.85	

* P < 0.001

while nursing their babies is known by 37.5% of the youngsters.

The table indicates that 18.2% of the young people know that AIDS cannot be transmitted through public toilets, 24.8% of them admitted it is not possible to become infected by sharing drinking glasses, 24.7% of them accept that people cannot get sick by sharing belongings of infected person or living in the same house, 24.0% of them know that mosquitoes are not a transmission way. The percentage of the participants who recognize that AIDS cannot be caught by hugging and kissing an infected person is 24.6%.

While 39.6% of the participants reject the information that married people cannot get AIDS, 27.3% of them state that if the partner is known and reliable, people can still catch the disease. The belief that people with AIDS deserve the disease because of their immoral behavior is rejected by 24.4% of the youngsters. Moreover 20.8% of them indicate that it

is not just homosexuals, prostitutes, and drug users who have injection through their arteries who are likely to catch AIDS. The statement that there is nothing to do in case of being infected with AIDS and the case must be admitted as destiny is not accepted by 25.6% of the young people in the research.

The third question focused on the relationship between some demographic characteristics of the participants and HIV/AIDS knowledge. Male youngsters have slightly higher scores of HIV/AIDS knowledge, but difference is statistically insignificant (t = -1.052, P > 0.05). Also, there is a positive relationship between age and HIV/AIDS knowledge (F = 20.121, P < 0.001), and the relationship is strongest for education (F = 12.375, P < 0.001). Additionally, youngsters who lived in urban areas most have more information than youngsters who lived in rural areas most (t = 3,900, P < 0.001).

Discussion

In the present study we mainly focused on AIDS knowledge of youngsters who are under social protection and their information sources. We also examined the relations between some characteristics of these youngsters and their level of HIV/AIDS knowledge.

Doctors and nurses were significant sources of HIV knowledge among youngsters under social protection, which is consistent with previous study findings (14). Unlike young population in general, healthcare workers are one of the mostly used information sources. The reason for this must be that healthcare workers do work in childrens' homes and therefore they are accessible. Similar to previous studies (15-16), written materials like books, magazines and newspapers are popular information sources on HIV/AIDS. High percentage of friends living in the same dormitories being the information source is thought to be problematic owing to the risk of gaining wrong information. It is determined that technologies, such as television, cinema, Internet, CDs, and tape cassettes were utilized at a significant rate by youngsters (17). Reliable sources like teachers at school, school courses, counseling centers, and other institutions were found to be used very little. The reason for this may be inadequate knowledge of teachers and their negative attitudes about the subject. Percentage of utilizing counseling centers and other institutions were also found to be very low. This may be the result of Turkey's present inadequate health services that are far away from meeting youngsters' needs. According to UNFPA (18) politics in this area, prejudicial and wrong attitudes of healthcare workers prevent youngsters from utilizing health services. Mother, father, siblings, and relatives appear to be information sources that are not used much. Two factors are thought to be effective for this situation. The first and more important reason is related with the fact that they do not have mother and father or they are under social protection because of their parents' negative characteristics. The second reason is that subjects about AIDS are mostly related with sexuality and sexuality is not a subject that can be easily spoken.

Parental monitoring was statistically associated with delay of first intercourse in female students.

While the same influence was present for male students, they also were influenced by parental disapproval of the adolescent's sexual behavior. Furthermore, more parental communication about acquired immunodeficiency syndrome was related to delaying adolescents' first intercourse except for the relationship of father-female student (19). Youngsters under social protection have no families or have poor family relations; however, professionals in children's homes can monitor and provide information about HIV/AIDS to the youngsters.

This study found that the level of HIV/AIDS knowledge among youngsters under social protection was low ($M = 8.34$ ($SD = 5.71$)). The findings derived from the research are similar to the research carried out by Coşkun and Güçlü (14). Moreover, the research studies performed with youngsters who are living with their families (4; 20-22) show that they have more information than youngsters under social protection.

It is determined that many of the youngsters perceive some situations that do not have any risk of AIDS transmission as risky. This is a negative position that can result in discrimination against people with AIDS. Barnett & Whiteside (23) state that fear of transmission turns to fear of people with the disease. AIDS causes stigmatization of various groups of people who have different life styles like male homosexuals, prostitutes, and foreigners. Similar results were reported previously (20-22); however, it is determined that youngsters under social protection have less information.

AIDS is mentioned with social reactions like fear, denial, stigmatization, and discrimination from the beginning of the first recognition of the disease. Discrimination spread fast against people who are affected by the disease (24). The research participants' attitudes towards the disease and people with AIDS seem prejudiced, which is clearly reflected by the high acceptance rate of statements, such as "just homosexual, injecting drug users and prostitutes can get AIDS" and "people with AIDS deserve the disease because of their immoral behaviors". Presence of youngsters who think that there is no treatment of AIDS that extends the

quality and length of life and the disease must be admitted as destiny indicate an inadequate level of information and reflect their fatalistic view.

The youngsters' knowledge on AIDS did not differ by sex. This result is similar to the previous reports (14, 25-26). However, the prevalence of HIV is higher among young men than young women (27), so we need to provide more information about HIV/AIDS to male participants. Knowledge level of AIDS increases with the increase in the level of education, which is in line with Coşkun and Güçlü's (14) findings. There is a positive correlation with adolescents' education level and their knowledge, attitudes, and behaviors related with AIDS. In this regard, adolescents whose education level is high have high level of information, more positive attitudes, and low level of risky behavior (28-29).

The youngsters who lived in rural areas were found to have less information than others who lived in urban areas. One fourth of the women living in rural areas are not aware of AIDS; however, nine tenth of women living in urban areas know the disease (16). Lower information level of the people lived in rural areas is thought to be the result of difficulty of rural people in accessing written, visual, and institutional resources. The reason for high level of information of people living in urban areas is related with the facilities of urban areas. Relative freedom of sexuality in urban areas increases the risk of catching the disease and the need for learning about the disease. Moreover variety of information sources and easiness of reaching them enable urban people to be more well-informed (4, 20, 25, 27).

It appears clear from the research that youngsters who are under social protection have inadequate knowledge about HIV/AIDS. Besides their inadequate level of information, it is important to notice their misinformation. Consequently, it can be concluded that children's homes do not provide a suitable environment to youngsters to gather accurate and factual information about AIDS. The fact that they are not aware of the seriousness of HIV/AIDS increases the risk of becoming infected with AIDS. Furthermore we encounter with the problem of insufficiency of special services about their specific needs and reaching these services.

In the present study, the current state of youngsters under social protection regarding their HIV/AIDS knowledge was explored by quantitative methods. Qualitative research techniques, such as focus group and deep interview were not used, which could be a limitation of the study. Therefore, new studies in which both quantitative and qualitative research techniques are used are suggested.

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