



Sexual knowledge, attitudes, and behaviours of teacher candidates¹

Ümit DENİZ^a *, Aysel TÜFEKÇİ^b, Ömer Rıfki ÖNDER^c

^aAssoc. Prof. Dr. Gazi University Gazi Faculty of Education, Ankara, Turkey

^bAsst. Prof. Dr. Gazi University Gazi Faculty of Education, Ankara, Turkey

^cAssoc. Prof. Dr. Ankara University Faculty of Health Sciences, Ankara, Turkey

Abstract

The aim of this research is to investigate sexual knowledge, sexual attitudes, and sexual behaviors of teacher candidates. The subject population for the research consists of undergraduates attending to the Gazi University, Gazi Faculty of Education during academic year 2011-2012. The sample consists of 1407 randomly selected students from 11 different programs. Descriptive statistical techniques were used primarily in analyzing the data. Chi square was utilized to test whether teacher candidates' sexual knowledge, sexual attitudes, and sexual behaviors differ by variables such as their class level and gender. It was found that the teacher candidates' sexual knowledge, sexual attitudes, and sexual behaviors were below a desired level that was expected from teacher candidates. It was also found that the sexual knowledge, attitude and behaviors were associated with such variables as class level, gender, socioeconomic status, the place lived longest, and the education level of parents.

Keywords: Sexual knowledge, sexual attitudes, sexually transmitted infections (STI), sexual development, teacher candidates;

1. Introduction

Sexuality reflects not only the reproduction system, but also all characteristics, biologic structure, learning experiences and behaviors of a person (Saygılı, 2007; Lamb, 1996). Sexuality is not shaped solely with impulses, but being affected by many factors differing by person to person, such as the physical changes (including the development and change of body), psychological factors (including the body image, self-respect, sexuality knowledge and attitudes, tendencies towards gender roles, and sexual partner preferences) and gender, age, life styles, culture and sexual experiences (Bulut et al. 2003; Tuğut and Gölbaşı, 2010).

Sexual training develops positive values and attitudes towards sexuality, and enables people to make rational and responsible choices within the scope of sexual behavior. To this end, sexual training includes anatomy and physiology of sexual organs, development by age, emotional development, personal relationships, human dignity, family roles, status of woman and man in family, healthy and sensitive woman-man relationship, respect, commitment concept and sexually transmitted infections (Bulut et al., 2003). Learning develops with training. Training is basically under the effect of family and culture (Bulut et al. 2003; Tuğut and Gölbaşı, 2010).

¹ This study was produced out of the project named "Sexual Knowledge, Attitudes, and Behaviors of Teacher Candidates", having been carried out within the content of Scientific Research Projects of Gazi University Rectorship, and was presented to III. European Conference on Social and Behavioural Sciences on February 6-8 2014.

*E-mail address: sea_edu2003@yahoo.com

Families have responsibilities to train their children by being role-model in sexuality-related issues, informing them in a planned way, and meeting their needs in appropriate ways. However, differences in the approaches to sexuality, false attitudes and values, bans or insufficient knowledge prevent families from fulfilling this responsibility. This fact may result in misinformation of the children, lead them to satisfy their curiosity (arising in the course of their development) in undesirable ways, and may thereby cause numerous psycho-social problems in the long term (San Bayhan and Artan, 2004).

According to a research conducted by Bulut and Ortaylı (2004), while most of the male workers feel incompetent in teaching sexual information to their children, and that they verbalize their concern (that their authority over their children may be shaken due to speaking of such issues with them) by saying "it is no good to be too intimate with children, school is the place to learn", they also demand training to meet their information deficit in this issue.

In a study conducted by Tuğrul and Artan (2001), with the participation of 665 mothers from sub socio-cultural strata, having children at the age group of 2-18 years, it was found that most of the mothers do not know about sexual training. One of the remarkable finding of this research is the mothers' pointing to the fact that, their children's sexual development and sexual training concur in high-school years, that they remain silence in such issues before their children ask questions respectively, and that they feel shy while answering such questions of their children. It was also found that, a group of mothers defined sexual training as sexual intercourse.

In their study conducted to determine the sexual attitudes and behaviors of the students in the Faculty of Medicine, Ozan et al. (2004) found out that, while friends were their initial source of information in their adolescence periods, main sources of information thereof varied as mothers, books, newspapers-magazines for girls, and newspapers-magazines, and television for boys. In addition, students expressed their wishes and values at the top among the determining factors of their sexual attitudes and behaviors. Social factors, religious requirements, familial expectations and sexually transmitted diseases were mentioned at high rates as well.

As can be understood from research results, it is a well-known fact that, children and young people are not trained satisfactorily by their families due to various reasons. In order to prevent this phenomenon, which is ignored in the development of the children and youth, and which lays the ground for undesired situations, the well-accepted approach is that, such training should be given by teachers at schools (Bulut et al. 2003). However, the competency of teachers in this issue should be ensured during teacher training. For that reason, it is important to have information about the knowledge, attitudes, and behaviors of teacher candidates towards sexuality, and to train them in line with their needs.

2. Methodology

2.1. The aim of the research

The aim of this research is to investigate the sexual knowledge, attitudes, and behaviors of teacher candidates.

2.2. Research design

The descriptive survey model was used in this research. Survey model aims to describe a former, or existing phenomenon as it is. In this model, the person or object to be researched is defined as it is within its own conditions. There is no effort to change or affect it in any matter (Arseven, 2001; Karasar, 2002).

2.2. Target population and sampling of the research

The target population consisted of all undergraduate students in Gazi Faculty of Education at Gazi University in the academic year of 2011-2012. The research sampling consisted of a total of 1407 students, who were selected randomly among 11 Departments.

2.3. Data collection

Having benefited from the literature, and from the previously conducted studies, the researchers prepared questionnaires with closed-end and open-end questions in order to collect the findings of the study (Başer, 2000; Bülbül, 2004; Deniz et al, 2004; Giray, 2004; 2010; Set, 2006; Ministry of Health, 2007; Tümer and Ünal, 2001).

The questionnaire consisted of questions to determine the knowledge and attitudes towards sexual life experiences, sexual behaviors, sexually transmitted infections, resources used to gain information about sexuality, sexual problems, sexual development etc. After taking an expert opinion on this questionnaire, and making the required arrangements, pilot scheme was applied. Pilot scheme was conducted with a total of 50 students who were studying in Gazi Faculty of Education, but were not included in the research. The questionnaire was finalized in line with the findings obtained from the pilot scheme.

2.4. Data assessment

SPSS programme was used to analyze the data collected with the questionnaire in this research. Descriptive statistical methods were used primarily to assess the research data. Frequency and percentages of teacher candidates' opinions about knowledge, attitudes, and behaviors towards sexuality were determined. Chi-square test was used to examine the statistical significance of these opinions by the variables of education grade, gender, socio-economic level, the place resided in for the longest time, education level of mother and father. Only the findings with significant chi-square values are available in this study.

3. Findings and discussion

In this chapter, findings are analyzed under three categories being; "Introductory Information of Research Group", "Sexual Health Knowledge, Attitudes and Behaviors of the Research Group" and "Assessment on Sexual Health Knowledge, Attitudes and Behaviors of the Research Group in view of Certain Variables".

3.1. Introductory information of the research group

Among the teacher candidates in the research, 24.7% were students from the first grade, 27.1% from the second, 23.4% from the third grade, and the remaining 24.0% were students from the fourth grade. Among the teacher candidates, 75.6% were female, and 99.1% thereof were single. Among the teacher candidates, 89.9% stated to have moderate socio-economic status, while 5.8% thereof stated to have lower socio-economic status. The rate of those who stated to have high socio-economic status is 4.1%. In addition, 90.4% thereof stated that urban areas were the place they had resided for the longest time. Among the teacher candidates, 54.7% stated that their mothers are primary school graduates, and 28.8% stated that their fathers are primary school graduates while 33% thereof stated that their mothers are secondary-high school graduates and 70.8% thereof stated that their fathers are secondary-high school graduates. Among the parents of the same teacher candidates, 12.2% of the mothers thereof, and 28.8% of the fathers thereof are higher education graduates.

3.2. Findings on sexual health knowledge, attitude and behaviors of the research group

Of teacher candidates, 70.7% stated to have necessary information about HIV/AIDS while 27.7% stated to have heard only the name of this disease. 79.9% stated to have heard only the name of gonorrhoea, and 97.5% stated to have heard of syphilis. The rate of those who stated to have sufficient information about Hepatitis B-C was 61.5%, while it was 1.5% for chlamydia. Among all teacher candidates, 36.7% thereof heard only the name of hepatitis B-C. The rate of those who heard only the name of chlamydia infection was 95.0%. The rate of those who heard only the name of trichomonas infection was 97.5%, while it was 84.4% for genital fever blister. These results indicate that teacher candidates generally do not have satisfactory information about the aforementioned diseases. In their study conducted to determine the needs in sexual health knowledge, Kurt et al. (2003) found that 48.0% of students had insufficient knowledge about sexual health.

Table 1. Information resources of teacher candidates about sexuality

Information Resources (n: 1348)	f	%
Mother	149	11.1
Father	16	1.2
Siblings	42	3.1
Same-sex friends	754	55.9
Opposite-sex friends	93	6.9
Relatives	67	5.0
Healthcare personnel	70	5.2
Teacher	42	3.1
Book-encyclopedia	195	14.5
Newspaper-magazine	157	11.6
Television	126	9.3
Radio	12	.9
Internet	403	29.9
Sexual experience	62	4.6

As can be seen in Table 1, among the teacher candidates, 55.9% named their information source about sexuality as same-sex friends, 29.9% as Internet, 14.5% as related books-encyclopedia, 11.6% as newspaper-magazine, and 11.1% thereof named their mothers as their information source about sexuality. Teacher candidates' naming their same-sex friends as their information source about sexuality is parallel with the results of many other researches. Kurt et al. (2003) found that the most frequently resorted information source about sexuality by students is their friends. In their research conducted to determine sexual attitude and behaviors of students in Medicine Faculty, Ozan et al. (2004) found that first information sources of students in their adolescence periods are their friends; and that the main information sources thereof are their mother, books, newspapers-magazines for girls, and newspapers-magazines and television for boys. Tuğrul and Artan (2001) reported that, mothers pointed to the concurrence of sexual development and sexual training in high school years. It was found that, mothers do not inform their children without request, and that they feel shy while responding to the questions of their children. .

The most accurate sources of information about sexuality are health personnel, educators and books prepared appropriately for the age of young people. The professionals who can determine whether these books are appropriate for the age of students are educators. The books to be used may create the desired effect only if they are recommended by educators. The finding that students did not mention health personnel, educators, or books as their resources at desired levels may be a significant indicator of the lack of consultancy in these issues.

Table 2. Contraceptive methods that teacher candidates can name

Contraceptive methods (n: 1198)	f	%
Oral pill	970	81.0
Mini pill	2	,2
Injectors	77	6.4
Implant	34	2.8
Intrauterine devices	373	31.1
Vaginal ring	25	2.1
Condom	907	75.7
Diaphragm	12	1.0
Spermicidal	17	1.4
Tube ligation	120	10.0
Vasectomy	15	1.3
Emergency contraception	7	.62
Other	287	24.0

Of all teacher candidates, 81.0% stated to have heard only the name of oral pill. This rate was 75.7% for condom, 31.1% for intrauterine devices, and 10.0% for tube ligation methods.

Table 3. Sexual experiences of teacher candidates

Sexual experience (n:1407)	f	%
It happened (Once)	394	28.0
It did not happen	947	67.3
Unanswered	66	4.7
First sexual partner (n:391)		
Opposite sex	390	27.7
Same sex	1	1
The title of the first sexual partner (n:386)		
A special boyfriend-girlfriend	321	22.8
A non-special person	65	4.6
First sexual experience action (n: 598)		
Kissing	348	89.5
Caressing genital organs	70	18.0
Rubbing	74	19.0
Vaginal intercourse	52	13.4
Anal intercourse	26	6.7
Oral intercourse	28	7.2
The impulsion of the first sexual experience (n:390)		
Physical pleasure	84	6.0
Curiosity and wish for gaining experience	287	20.4
Expectations in social environment	4	34
The persistency of the partner	15	1.1
The number of sexual partners (n:323)		
One	142	44.0
More than one	181	56.0
Birth control methods that are used (n:332)		
None	205	14.6
Condom	115	8.2
Intrauterine device	2	15
Other	10	70
The person who decided on the birth control method (n:360)		
No method	95	6.8
Self-decision	265	18.8

It was found that, 67.3% of teacher candidates had neither any sexual experience, nor sexual intercourse. The rate of those having at least one sexual experience is 28.0%. In the first sexual intercourse, curiosity and wish for gaining experience was effective in 20.4%, and physical pleasure was effective in 6.0% of teacher candidates. According to the findings of Martson and King (2006), sexual partners have a significant determining effect on sexual behaviors, condoms are perceived as a sign of insecurity between sexual partners, prejudices on gender roles have a determining effect on social expectancy and behaviors towards sexuality, there are price and penalty systems about sexuality in society, and social expectations prevent the communication about sexuality. Physical pleasure, curiosity

and wish for gaining experience are inherent in many young people as a natural part of their development. It is developmentally impossible to eliminate these features. However, sexual actions of young people, which may result in some negative situations, may be minimized, on the condition that teachers, who are knowledgeable about the developmental features of young people, are to steer them into appropriate social interactions, and to create environments, where they may discharge their energy, and satisfy their curiosity within the scope of the education.

Table 4. The reactions of teacher candidates in first menstrual bleeding (girls) and first ejaculation (boys)

Reactions for the first menstrual bleeding-ejaculation (n: 1355)	f	%
I expected it	663	48.9
I felt panic	160	11.8
I felt excited	356	26.3
I felt scared	192	14.2
I felt shy	218	16.1
Other	47	3.5

As can be seen in the table, 11.8% of teacher candidates stated to have felt panic during their first menstrual bleeding/ejaculation, while 26.3% thereof felt excited, 14.2% thereof felt scared, and 16.1% thereof felt shy. However, almost half of the teacher candidates (48.9%) stated to have been expecting to have menstrual bleeding/ejaculation.

Table 5. The education subjects which teacher candidates recommended to take place in curriculum in case that the lecture of "Sexual Health/Reproduction Health" starts to be given in university

Education subjects(n: 806)	f	%
Recommendations	78	9.7
Privacy	13	1.6
Sexually transmitted infections	268	33.3
Birth control methods-pregnancy	271	33.6
Any subject related to sexuality	162	20.1
Sexual development	50	6.2
Parent training	30	3.7
Healthy sexual intercourse	108	13.4
Sexuality and religion	26	3.2
Social pressure	24	3.0
Man-woman relationship, marriage	81	10.0
Psychology	27	3.3

As regards to the lecture to be given in universities, among the teacher candidates, 33.6% thereof recommended that, this lecture should include birth control methods and pregnancy, while 33.3% thereof recommended the mention of sexually transmitted infections, 13.4% thereof recommended the mention of healthy sexual intercourse, 10.0% thereof recommended the mention of woman-man relationship and marriage, 6.2% thereof recommended the mention of sexual development, and 20.1% of the teacher candidates recommended that, such a lecture should include any kind of subject related to sexuality.

All of the findings on sexual health knowledge, attitudes, and behaviors of the research group could not be presented within tables in this article due to the intensity of data. Therefore, these findings are summarized as follows.

Among the teacher candidates, the rate of those who knew the correct age to start sexual training of children is 22.5%, who stated the correct age to acquire sexual protection is 18.2%, who knew the correct age when girls may

meet their first menstrual bleeding is 89.8%, who knew the correct age of breast-development of girls is 86.4%, and who knew the correct age of the first ejaculation of boys is 47.3%.

The sexual development and training of children start with pregnancy. In addition, children ask questions about sexuality at the age of 2.5-3 years. The answers to these questions shape the approaches, attitudes and perceptions of children towards sexuality, self-perception, values, social roles and behaviors. Therefore, teachers' recognition about developmental features of children and young people, and teacher's appropriate approaches to them are very important. Teachers who do not know about these features may have problems, such as incorrect assessments on students, making students shy, failing to be comforting and informing. This situation may result in significant problems in training, and future of students.

The factors which affect sexual attitudes and behaviors from the points of view of the teacher candidates are the ones' own desires and values by 50.7%; religious requirements by 33.3%, and the protection of virginity by 16.8%. In response to the statement, "if I had any sexually transmitted disease I would know without any test", 17.7% of teacher candidates disagreed, while 81.3% were undecided. In response to the statement, "I would understand the presence of a sexually transmitted disease in my sexual partner even if s/he does not tell me about it", 47.8% were undecided, and 50.2% disagreed. In response to the statement, "Sexuality is not a need for women. Sexuality is a responsibility to be fulfilled for their husband and to have children", 64.0% of teacher candidates disagreed. The most desirable approach towards both sexually transmitted infections and other sexuality-related opinions is the expression of "I disagree". Sexually transmitted infections may not have any symptoms, and it is not possible to understand it during social or sexual relationship. However, treatment of an infected person, and protection of any person from these infections are possible. As being knowledgeable in these issues, teacher candidates' self-protection from many problems and their consultancy for the students bring significant contributions in terms of fundamental life skills that should be acquired by the whole society. For that reason, teacher candidates' statement of "I am undecided", or their leaving the question unanswered suggests that none of the teacher candidates has satisfactory knowledge in this issue.

Among the teacher candidates, 81.2% stated to have been informed before their first menstrual bleeding and ejaculation. According to the statements of teacher candidates, 39.5% have a girlfriend/boyfriend, 1.3% had sexual intercourse within the last three months, 23.3% have sexual satisfaction through masturbation, 8.9% still have a regular and active sexual life and only 5.4% use condom during intercourse.

3.3. The assessment on sexual health knowledge, attitude and behaviors of the research group by some variables

Table 6. Distribution of students' ideas on their knowledge of sexually transmitted infections by gender

	Gender				χ^2 p
	f	Female %	f	Male %	
HIV/AIDS					
I have satisfactory knowledge	738	70.3	256	76.9	5.433
I heard only the name of it	312	29.7	77	23.1	.011
Total	1050	100.0	333	100.0	
Gonorrhoea					
I have satisfactory knowledge	145	13.9	104	31.3	51.191
I heard only the name of it	895	86.1	228	68.7	.000
Total	1040	100.0	332	100.0	
Syphilis					
I have satisfactory knowledge	122	11.8	55	16.6	5.214
I heard only the name of it	914	88.2	276	83.4	.016
Total	1036	100.0	331	100.0	
Urethritis					

Teacher Candidate

I have satisfactory knowledge	627	60.2	127	38.5	47.873
I heard only the name of it	414	39.8	203	61.5	,000
Total	1041	100.0	330	100.0	
Hepatitis B-C					
I have satisfactory knowledge	673	64.3	190	57.2	5.350
I heard only the name of it	374	35.7	142	42.8	,013
Total	1047	100.0	332	100.0	
Chlamidia					
I have satisfactory knowledge	10	1.0	10	3.1	7.507
I heard only the name of it	1018	99.0	315	96.9	,010
Total	1028	100.0	325	100.0	
Fungus					
I have satisfactory knowledge	506	48.3	97	29.1	37.854
I heard only the name of it	541	51.7	236	70.9	,000
Total	1047	100.0	333	100.0	
Trichomonas					
I have satisfactory knowledge	4	0.4	8	2.4	11.930
I heard only the name of it	1044	99.6	326	97.6	,002
Total	1048	100.0	334	100.0	
Genital fever blister					
I have satisfactory knowledge	151	14.4	71	21.3	8.908
I heard only the name of it	896	85.6	262	78.7	,002
Total	1047	100.0	333	100.0	
Genital wart					
I have satisfactory knowledge	130	12.4	66	19.8	11.456
I heard only the name of it	919	87.6	267	80.2	,001
Total	1049	100.0	333	100.0	

As can be seen in the table, the rate of female teacher candidates who stated to have satisfactory knowledge about HIV/AIDS is 70.3%. This rate is 13.9% for gonorrhoea, 11.8% for syphilis, 60.2% for urethritis, 64.3% for hepatitis B-C, 1.0% for chlamidia, 48.3% for fungus, 0.4% for trichomonas, 14.4% for genital fever blister and 12.4% for genital wart.

Table 7. Attitudes of teacher candidates towards sexuality and the distribution by the place resided in for the longest time

	The Place		Resided in for the Longest Time		χ^2 p
	Rural	Urban	Rural	Urban	
	f	%	f	%	
Sexuality is not a need for women. Sexuality is a responsibility to be met for their husband and to have children.					
Disagree	71	55.0	830	66.5	6.731
Undecided	58	45.0	419	33.5	.009
Total	129	100.0	1249	100.0	
A woman's taking pleasure from sexual intercourse does not comply with my values					
Disagree	92	70.8	981	78.8	4.424
Undecided	38	29.2	264	21.2	.026
Total	130	100.0	1245	100.0	
A married woman must meet sexual demands of her husband even if they are not parallel with her own demands					
Disagree	66	50.4	746	59.4	3.971

Undecided	65	49.6	510	40.6	,029
Total	131	100.0	1256	100.0	
Men can have sexual intercourse as long as it is legal					
Disagree	72	55.4	634	50.8	1.008
Undecided	58	44.6	615	49.2	181
Total	130	100.0	100.0		

In response to the attitude statement, "Sexuality is not a need for women. Sexuality is a responsibility to be met for their husband, and to have children", 55.0% of those who resided in rural, and 66.5% of those who resided in urban for the longest time answered as "I disagree". In response to the attitude statement, "A woman's taking pleasure from sexual intercourse does not comply with my values", 70.8% of those who resided in rural, and 78.8% of those who resided in urban for the longest time answered as "I disagree".

All the findings of the assessment on sexual health knowledge, attitudes, and behaviors of the research group in terms of some variables could not be presented within tables in this article due to the intensity of data. Therefore, these findings are summarized as follows.

Teacher candidates' knowledge about gonorrhea, hepatitis B-C, and urinary system infections increase correspondingly with their grade. The increase of teacher candidates' knowledge about these issues at higher grades may be associated partly with the content of lessons they take, or with their ages and experiences. Ok et al. (2002) found that, knowledge scores of students who took education about sexually transmitted infections were significantly higher than those who did not.

In response to the statement, "A woman's taking pleasure from sexual intercourse does not comply with my values", the answer "I disagree" was received by 71.5% of those from 1st grade, 78.9% of those from 2nd grade, 77.8% of those from 3rd grade, and by 83.1% of those from 4th grade. In response to the question, "Have you ever had/Do you have a sexual intercourse with your girlfriend/boyfriend?", the rate of the answer received as "Yes" increased correspondingly with grade. The rate of the answer received as "Yes" in response to the question, "Have you ever had any sexual experience with anyone?" was much lower. This situation may suggest that, the teacher candidates did not reflect their sexual experiences to the questionnaire completely.

In response to the question, "Is pre-marital sexual intercourse of men appropriate?", the answer "Yes" was received by 20.6% of those from 1st grade, 26.5% of those from 2nd grade, 26.1% of those from 3rd grade, and 30.1% of those from 4th grade. In response to the question, "Is pre-marital sexual intercourse of women appropriate?", the answer "Yes" was received by 7.0% of those from 1st grade, 13.8% of those from 2nd grade, 12.7% of those from 3rd grade, and 12.8% of those from 4th grade. This result shows that, the teacher candidates' attitudes in these issues change by the grade variable, and that the approval rate of pre-marital sexual intercourse of men and women gets correspondingly higher after the 1st grade. In addition, the teacher candidates find the pre-marital sexual intercourse of men more acceptable than the pre-marital sexual intercourse of women. This situation indicates that, the teacher candidates' attitudes towards sexuality may differ by female and male gender. In response to the question, "Do you talk about sexuality with others?", the answer "Yes" was received by 55.7% of those from 1st grade, 71.6% of those from 2nd grade, 72.1% of those from 3rd grade, and 75.2% of those from 4th grade. In response to the question, "Is there any need for a sexual health program for teacher candidates in universities?", the answer "Yes" was received by 68.0% of those from 1st grade, and 77.8% of those from 4th grade. In their study conducted on the sexual knowledge experiences of the teacher candidates for the second stage of primary school, Klein and Breck (2010) found that, 69% of the teacher candidates stated that, their teachers were not good role-models for them. Teacher candidates stated that, they wished they could have gained deeper, more honest and more reliable sexual information from their teachers.

For undesirable attitudes towards sexuality, female teacher candidates used the expression of "I disagree" more than the male teacher candidates did. The rates of male teacher candidates were found to be higher than those of the female candidates in response to talking about sexuality with others, and to the acceptance of the importance of virginity at the time of marriage.

As regards to having any sexual experience, the rate of girls is 22.8% and of boys is 50.6%. In their study, Kara et

al. (2003) found that, among all students who had a sexual intercourse, 97.6% were boys, and 2.4% were girls. These results show that, the rate of male students in having a sexual experience is much higher than that of the female students; in other words, gender is important in having sexual experience. Oswalt, Cameron, and Koob (2005) found that, among all students having a sexual experience, 71% thereof felt regret at least for once. It was reported that, 86.9% of female teacher candidates were aware of menstrual bleeding prior to their first experience, and that 62.7% of male teacher candidates were aware of ejaculation prior to their first experience. In response to the question, "Did you use condom in your first intercourse", the answer "Yes" was received by 2.6% of the girls, and by 21.2% of the boys.

Among the teacher candidates, the female candidates showed their confidence in their sexual knowledge for guiding their future female students the more, while the same confidence was shown by the male candidates for guiding their future male students the more. In response to the question, "Do teachers have an effect on children to acquire gender roles?", the answer "Yes" was received by higher rates from the female candidates.

In correspondence with the increase in the socioeconomic level, the rate of those having satisfactory knowledge about urethritis, hepatitis B-C, fungus, chlamydia, human papilloma virus (genital wart) also increased. These results show that, socioeconomic level is effective on knowledge level of teacher candidates -in line with their own statements- on sexually transmitted infections. The increase in socioeconomic level may have enabled teacher candidates, having families at higher socio-economic levels, to state that they have knowledge about these issues thanks to their own life experiences, and thanks also to their families who gave many opportunities such as having more book-like information sources, and informing them directly in many issues.

As socioeconomic level increases, the frequency of those having girlfriend/boyfriend increases. As socioeconomic level decreases, the frequency of those masturbating increases. In response to the question, "Do you think your sexual knowledge is sufficient to guide students when you become a teacher?", the rate of receiving the answer "Yes" increased in correspondence with the increase of the socioeconomic level. These results show that, candidates with higher socioeconomic level think that they have satisfactory knowledge to guide female students about sexuality at higher rates.

According to the analysis of teacher candidates' sexual knowledge, attitudes, and behaviors by the place resided in for the longest time, it was found that, the teacher candidates who resided in urban areas for the longest time stated to have knowledge about any sexually transmitted infection at higher levels. In addition, the rate of having a sexual experience, and that of having a girlfriend/boyfriend was found to be higher in those who resided in urban for the longest time. There is a global increase in premarital sexual experience (Wellings et al. 2006).

In response to the questions, "Is premarital sexual intercourse of men appropriate?", "Is premarital sexual intercourse of women appropriate?", and "Do you think your sexual knowledge is sufficient to guide female students?", the answer "Yes" was received by higher rates from those living in urban.

According to the analysis on sexual knowledge, attitudes, and behaviors of the teacher candidates, it was found that as mother's education increased, the knowledge of teacher candidates about all sexually transmitted diseases, except for trichomonas, increased. In a study conducted on senior class of a high school in Keçiören District by Sarp et al. (2001), it was found that as the education level of parents increased, knowledge score means of students on HIV/AIDS increased.

In a study conducted on 1129 soldiers by Bakır et al. (2003), it was found that the recognition of the fact that AIDS is an infectious disease and transmits sexually was at high rates. It was found that education level of parents and residential area were effective variants on knowledge levels of soldiers. This result is parallel with the findings of the present research. According to their own statements, education level of mother is effective on students' knowledge on sexually transmitted infections.

It was observed that the number of those who answered as "I disagree" to the statement of "A woman's taking pleasure from sexual intercourse does not comply with my values" increased as the education level of mother increased, while the number of those who answered as "I disagree" to the statement of "Men can have sexual intercourse as long as it is legal" decreased as the education level of mother increased. It was observed that the number of those who answered as "Yes" to the questions of "Have you ever had a boyfriend/girlfriend?", and "Have you ever had any sexual experience with anyone?" increased as the education level of mother increased. The rates of

those who stated to have had a sexual intercourse within last three months, to have an active sexual life, to have used condom in their first intercourse, and those who found the premarital sexual intercourse of women and men appropriate, those who can talk about sexuality with others, and those who stated to have satisfactory sexual knowledge to guide female students increased with the education level of mother as well. The rate of those who believed that importance should be attached to virginity of wives in marriage decreased as the education level of mother increased.

Conclusion and recommendations

In the study having been conducted to inquire about the sexual knowledge, attitudes, and behaviors of the teacher candidates, it has been discerned that, the levels of the sexual knowledge, attitudes, and behaviors of the teacher candidates are lower than expected. It has further been seen that, the aforementioned knowledge, attitudes, and behaviors are closely associated with the factors, including class, gender, socioeconomic level, longest lived place of residence, and with the educational backgrounds of the parents, and the conclusions are listed as follows:

- Majority of the teacher candidates told to have only heard the names of the sexually transmitted infection;
- The ratio of those having told to be knowledgeable in the sexually transmitted infections is higher among those with higher levels of socioeconomic level, with more educated parents, and among those living in the cities.
- It has further been ascertained that, the main source of knowledge in the issues of sexuality consists of friends of same gender.
- Quite lower percentages are in questions for those having truly told their ages of starting to receive sexual education in the childhood period truly, and having known the children's age of starting to obtain sexual protection.
- In response to the undesired sexual attitudes, the expression "I do not agree" came more from the female teacher candidates than the male candidates.
- "My own wishes and values", "Religious requirements", and "Need to save one's virginity" have successively been referred as the factors influencing the sexual attitudes and behaviors.
- Among those having had sexual experiences, number of male candidates having had sexual experiences is twice more than the number of female candidates having had sexual experiences.
- Majority of the teacher candidates having had sexual experiences described their first sexual experiences as "Kissing". It is successively succeeded by "Caressing genital organs" and "Vaginal intercourse".
- Among the factors having influenced the ones' first sexual experiences, "Whim, and the wish to gain experience".
- Majority of the teacher candidates told that, they had not received formal education in terms of sexuality, that the teachers were influential on the children, and so that the teachers had to guide children also in terms of sexuality.

In view of the aforementioned conclusions;

- "Sexual Development and Sexual Education" courses consisted of all sexual issues are to be given in the Educational Faculties educating teachers.
- Teacher candidates' respective knowledge and attitudes are to be carved out by means of such organizations as conferences, seminars, etc. to be delivered by experts.
- Researches are to be made in different schools and by way of collecting more detailed and profound knowledge by means of individual interviewing methods.
- Units to render guidance in the aforementioned issues are to be established in the universities.

References

Arseven, A. D. (2001). *Field research method (Alan araştırma yöntemi)*. Ankara: Gündüz Eğitim Yayıncılık.

- Bakır, B., Tümerdem, N., Özer, M., Tüfekçi, F., Uçar, M., & Hasde, M. (2003). The views of solders in Istanbul and Ankara on AIDS (İstanbul ve Ankara'daki bir grup askerin AIDS konusundaki yaklaşımları). *Gülhane Tıp Dergisi* 45 (1), 19-24.
- Başer, M. (2000). Adolescent sexuality and pregnancy (Adölesan cinselliği ve gebelik). *C. Ü. Hemşirelik Yüksek Okulu Dergisi* 4 (1), 50-54.
- Bulut, A., Çokar, M., Eylen, B., Akalın, A., Gürşimşek, I., Hamurcu, H., & Et al. (2003). *Sexual health education for teachers and teacher candidates (Öğretmen ve öğretmen adayları için cinsel sağlık eğitimi)* (2 nd ed.), İstanbul: Uygun Matbaası.
- Bulut, A., & Ortaylı, N. (2004). Thoughts a research has provoked: sexual health but how? (Bir Araştırmanın Düşündürdükleri: Cinsel Sağlık Ama Nasıl?) *Sürekli Tıp Eğitimi Dergisi (STED)*, 13(2), 60-63.
- Bülbül, S. H. (2004). Adolescent ethics (Ergen etiği). *Sürekli Tıp Eğitimi Dergisi (STED)*, 13 (6), 206-210.
- Deniz, Ü. Kurt, M. Önder, Ö. & Acuner, A. 2004. University students' views on sexually transmitted infections (Cinsel yolla bulaşan enfeksiyonlar konusundaki üniversite öğrencilerinin görüşleri). *HIV/AIDS Dergisi*, 7(2), 63-68.
- Giray, H., & Kılıç, B. (2004). Single women and reproductive health (Bekar kadınlar ve üreme sağlığı). *Sürekli Tıp Eğitimi Dergisi (STED)*, 13 (8), 286- 289.
- Kara, B., Hatun, Ş., Aydoğan, M., Babaoğlu, K., & Gökalp, A. S. (2003). Evaluation of high school students' sexually risky behaviors in Kocaeli (Kocaeli ilindeki lise öğrencilerinde sağlık açısından riskli davranışların değerlendirilmesi). *Çocuk Sağlığı ve Hastalıkları Dergisi*. 46, 30-37.
- Karasar, N. (2002) . *Scientific research method (Bilimsel araştırma yöntemi)*. Ankara: Nobel Yayın Dağıtım.
- Klein, N.A. & Breck, S.E.(2010). "I Wish I Had Known the Truth Sooner": Middle School Teacher Candidates' Sexuality Education Experiences. *Research in Middle Level Education Online*, 33(6), 1-10.
- Kurt, M. Deniz, Ü. Önder, ÖR. & Acuner, AM. (2003). Determination of sexual knowledge needs: A sample of Ankara University Health Education Faculty (Cinsel sağlık bilgisi gereksinimlerinin saptanması) (Ankara Üniversitesi Sağlık Eğitim Fakültesi örneği), 8. Halk Sağlığı Günleri, Halk Sağlığı ve Sosyal Bilimler Bildiri Özetleri 23-25 Haziran, s: 101, Sivas.
- Lamb, M.A. (1996). Sexuality and sexual functioning. In R. McCorkle, M. Grant , M. Frank-Stromborg & S.B. Baird (Eds.), *Cancer Nursing – A Comprehensive Textbook*, (2 nd ed.), (pp: 1105-27). Philadelphia: W.B. Saunders Company.
- Marston, C. & King, E. (2006). Factors that shape young people's sexual behaviour: A systematic review. *Lancet*, 368, 1581–1600.
- Ok, Ş., Zincir, H., & Ege, E. (2002). Determination of the nursing and midwifery programs students' knowledge on sexually transmitted diseases and evaluation of contributing factors at the İnönü University Health Services Vocational College (İnönü Üniversitesi Sağlık Hizmetleri meslek Yüksek Okulu hemşirelik ve ebelik programı öğrencilerinin cinsel yolla bulaşan hastalıklar hakkındaki bazı bilgilerinin ve bunu etkileyen faktörlerin değerlendirilmesi). *İnönü Üniversitesi Tıp Fakültesi Dergisi*. 9 (1), 59- 63.
- Oswalt, S.B. Cameron, K.A. & Koob, J.J. (2005). Sexual regret in college students. *Archives of Sexual Behavior*, 34, 663–669.
- Ozan, S., Aras, Ş., Şemin, S., & Orçin, E. (2004). University students' sexual attitudes and behavioral characteristics at the Dokuz Eylül University Medical Faculty (Dokuz Eylül Üniversitesi tıp Fakültesi öğrencilerinin cinsel tutum ve davranış özellikleri). *DEÜ Tıp Fakültesi Dergisi*, 18 (1), 27-39.
- San Bayhan, P., & Artan, İ. (2004). *Child development and education (Çocuk gelişimi ve eğitimi)*. İstanbul: Morpa.
- Sarp, N., Önder, Ö. R., Yıldız, A., & Kütük. (2001). Senior high school students' approaches to sexual life, knowledge and attitudes towards HIV/AIDS in Keçiören Municipality (Keçiören İlçesindeki Lise Son Sınıf Öğrencilerinin Cinsel Yaşama İlişkin Yaklaşımları, HIV/AIDS Konusunda Bilgi ve Tutumları). *Türk HIV/AIDS Dergisi*, 4(3).
- Saygılı, P. (2007). *The coverage of reproduction health consultancy (Üreme Sağlığı Danışmanlığı Neleri Kapsar?)* 5. Uluslararası Üreme Sağlığı ve Aile Planlaması Kongre Kitabı, Ankara..
- Set, T., Dağdeviren, N., & Aktürk, Z. (2006). Adolescent sexuality (Ergenlerde cinsellik). *Genel Tıp Dergisi*, 16 (3), 137-141.
- T. C. Sağlık Bakanlığı (2007). *A framework for sexual health and reproduction health services (Cinsel sağlık ve üreme sağlığı hizmet çerçevesi)*. Ankara: T. C. Sağlık Bakanlığı Ana Çocuk Sağlığı ve Aile Planlaması Genel Müdürlüğü.
- Tuğrul, B. & Artan, İ. (2001). Examination of mothers' views regarding children's sexual education (Çocukların cinsel eğitimi ile ilgili anne görüşlerinin incelenmesi). *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 20, 141-149.

- Tuğut, N. & Gölbaşı, Z. (2010). The quality of sexual life scale: Women - Validity and reliability study of the Turkish version (Cinsel Yaşam Kalitesi Ölçeği - Kadın Türkçe versiyonunun geçerlik ve güvenilirlik çalışması). *Cumhuriyet Tıp Dergisi*, 32, 172-180.
- Tümer, A., & Ünal, S. (2001). HIV/AIDS epidemiology and protection (HIV/AIDS epidemiyolojisi ve korunma). *Sürekli Tıp Eğitimi Dergisi (STED)*, 10 (12), 446-449.
- Wellings, K., Collumbien, M., Slaymaker, E. & Et al (2006). Sexual behaviour in context: A global perspective, *Lancet*, 368 (9548), 1706–1728.