

Investigation of the Relationship Between Sociodemographic Characteristics and Sexual Health Behaviours of University Students

Üniversite Öğrencilerinin Sosyodemografik Özellikleri ile Cinsel Sağlık Davranışları Arasındaki İlişkinin İncelenmesi

Şahika ŞİMŞEK ÇETİNKAYA¹, Esra DEMİRARSLAN²

ABSTRACT

Introduction: Adolescence is a unique stage of human development in which the foundations of physical, sexual, and psychosocial development are laid and risky sexual behaviours increase in this period. **Aim:** The aim is to determine risky sexual behaviours in university students and defining the relationships between sociodemographic characteristics and sexual health behaviours of university students.

Materials and methods: A total of 825 students participated in the research. The questionnaire and semi-structured interview form were used to collecting data. For evaluating the data, descriptive statistical methods, and Kruskal-Wallis test in independent samples, and Kendall's Tau-C correlation coefficient was used.

Results: 56.3% of the participants had their first sexual experience under the age of 18. 67% of the participants do not have a sexual partner and 70.8% have been sexually active for less than a year. 67% of the participants did not use contraception and the withdrawal method was used the most (73.5%) of the contraception. %86.6 of them did not take any sexual health education. There is a weak significant correlation between paternal education and age at first sexual intercourse and non-significant weak correlation between maternal education level and age first sexual intercourse, a factor that may affect parental supervision, and risky sexual health behaviours and age at first sexual intercourse. **Conclusion:** Although premarital sexual intercourse is common among university students, the rates are consistent with the literature. Among university students, there are risky sexual health behaviours. The students lack contraception knowledge and have not received any training on sexual health.

Keywords: University students, Sexual health, Sociodemographic characteristics

ÖZ

Giriş: Ergenlik, fiziksel, cinsel ve psikososyal gelişimin temellerinin atıldığı ve bu dönemde riskli cinsel davranışların arttığı, insan gelişiminin benzersiz bir aşamasıdır. **Amaç:** Bu çalışmanın amacı, üniversite öğrencilerinde riskli cinsel davranışları belirlemek ve üniversite öğrencilerinin sosyodemografik özellikleri ile cinsel sağlık davranışları arasındaki ilişkileri belirlemektir.

Gereç ve yöntem: Araştırmaya toplam 825 öğrenci katılmıştır. Veri toplamak için anket ve yarı yapılandırılmış görüşme formu kullanılmıştır. Verilerin değerlendirilmesi için tanımlayıcı istatistiksel yöntemler ve bağımsız örneklerde Kruskal-Wallis testi. Kendall's Tau-C korelasyon katsayısı kullanılmıştır.

Bulgular: Katılımcıların %56,3'ü ilk cinsel deneyimini 18 yaşının altında yaşamıştır. Katılımcıların %67'sinin cinsel partneri yoktur ve %70,8'i bir yıldan az süredir cinsel olarak aktiftir. Katılımcıların %67'si kontrasepsiyon kullanmamış ve en çok (%73,5) geri çekme yöntemi kullanılmıştır. %86,6'sı cinsel sağlık eğitimi almamıştır. Baba eğitimi ile ilk cinsel ilişki yaşı arasında zayıf anlamlı bir ilişki varken, anne eğitim düzeyi ile ilk cinsel ilişki yaşı arasında anlamlı olmayan ve anne-baba denetimini etkileyebilecek bir faktör olan riskli cinsel sağlık davranışları ve ilk cinsel ilişki yaşı arasında zayıf bir ilişki vardır. **Sonuç:** Üniversite öğrencileri arasında evlilik öncesi cinsel ilişki yaygın olmakla birlikte oranlar literatürle uyumludur. Üniversite öğrencileri arasında riskli cinsel sağlık davranışları görülmektedir. Öğrencilerin kontrasepsiyon bilgisi eksiktir ve cinsel sağlık konusunda herhangi bir eğitim almamışlardır.

Anahtar Kelimeler: Üniversite öğrencileri, Cinsel sağlık, Sosyodemografik özellikler

Before the research, ethical approval from the Non-Interventional Clinical Research Ethics Committee of XXX University (decision no. 12/1 dated 03.12.2018) and approval of the rectorate of the university (approval of the rectorate dated 12.12.2018 and numbered 80404136-044-E-50015) were obtained. Written informed consent was obtained from the participants who were volunteer.

¹ Dr. Öğr. Üyesi Şahika ŞİMŞEK ÇETİNKAYA, Kadın Hastalıkları Doğum Hemşireliği, Kastamonu Üniversitesi Sağlık Bilimleri Fakültesi Ebelik bölümü, scetinkaya@kastamonu.edu.tr, ORCID: 0000-0002-4518-5286

² Dr. Öğr. Gör., Esra DEMİRARSLAN, Cerrahi Hastalıklar Hemşireliği, Kastamonu Üniversitesi Sağlık Bilimleri Fakültesi Hemşirelik Bölümü, eertemur@kastamonu.edu.tr, ORCID: 0000-0001-5531-9439

İletişim / Corresponding Author: Esra DEMİRARSLAN
e-posta/e-mail: eertemur@kastamonu.edu.tr

Geliş Tarihi / Received: 27.12.2021
Kabul Tarihi / Accepted: 30.05.2022

INTRODUCTION

Adolescence is the period of life between childhood and adulthood, between the ages of 10 and 19. This period is a unique stage of human development in which the foundations of physical, sexual, and psychosocial development are laid. Adolescents make up one sixth of the world's population.¹ Approximately 85-90% of adolescents, who make up 18% of the entire world population, live in developing countries, including Turkey.² The transition from adolescence to adulthood is a complex and exciting period for young adults as they begin to explore their sexual identity and sexual relationships.³ When starting college, students gain more autonomy over their behaviour and responsibilities related to their health.⁴ As a result of this newly acquired autonomy, students frequently engage in various risky behaviours and endanger their health.⁵

Early sexual activity, which is one of the risky health behaviours among adolescents, is increasing worldwide. Various studies conducted in sub-Saharan Africa show that the initiation of premarital sexual intercourse is high among adolescents and this rate is increasing gradually.⁵⁻⁷ In a study conducted in North Carolina, it was determined that the first sexual intercourse age of adolescents was 16,5 and 66% of adolescents who had sexual intercourse were between the ages of 15-20.⁸ Mohammadi et al. (2006) reported that in their study in Iran 28% of youth aged 15-18 years had at least one sexual intercourse (including hugging, kissing, and any sexual experience from touching to sexual intercourse).⁹ In our country, it has been determined that 36,7% of university students have sexual experience and sexual experience is more common in men.¹⁰

University students are among the population with the highest risk of sexually transmitted infections, unwanted pregnancy and other adverse health outcomes.¹¹ Young people who are sexually active are exposed to risks such as sexually transmitted diseases and unwanted pregnancies, as their developmental status is insufficient in the assessment and management of these risks.¹² Evidence

suggests that young adults aged 20 to 24 are more susceptible to STIs than other age groups.¹³ In addition, adolescents are vulnerable to sexually transmitted diseases and infections, including HIV/AIDS, unplanned premature birth, and unsafe abortions as a result of early sexual intercourse due to their limited knowledge of their bodies and sexuality.¹⁴ Halcon, et al. (2001) found benign cellular changes in 15.6%, reactive changes in 9.2%, and epithelial cell abnormalities in 9.9% of the cervix of adolescent girls who started sexual intercourse at an early age.¹⁵

The age of first sexual experience decreases in adolescents, contraceptive use also decreases. As the result of non contraception, pregnancy rates were 22,3 per 1,000 women aged 15-19 years and 43% for women aged 18-19 years between 2007 and 2015, birth rates fell 54% for females aged 15-17 years.¹⁶ More than one third of all adolescent girls do not use any contraceptive method during the first sexual intercourse.¹⁷ Not using contraceptive methods may cause adolescent pregnancies.

In adolescent pregnancies, the risk of experiencing problems such as preterm labour, perinatal death, fetal and neonatal death, and low birth weight baby is high.^{18,19} However, depression symptoms and deterioration in self-image are more common in young people who start sexual intercourse at a young age.²⁰ It is noteworthy that the rate of becoming sexually active in adolescents and young people, who make up approximately 20% of the population of our country, is increasing. For this reason, studies are needed to examine the relationship between having a sexual partner and sexual health in university students who have sexual experience. It is thought that it will be important to investigate this relationship and to provide at-risk students with trainings that increase their awareness of sexual health and sexual education. With the results obtained, it is aimed to provide individuals with the necessary motivation, knowledge, and behavioural skills to determine the sexual

health problems of the students and to prevent their problems and to improve their sexual health.

MATERIALS AND METHODS

Participants

This cross-sectional study was conducted at 5 faculties and three vocational schools of a university. The population of the research consisted of 13420 undergraduate students studying at faculties and vocational schools. Students who attended the university during the study period and were willing to participate in the study were included in the sample. The minimum sample size of the study was determined according to the frequency formula in cases with a known population. The frequency of the investigated event was accepted as 37% according to the related literature.¹⁰ In conclusion, this study aimed to include 307 students with a minimum sample size for 0,05 deviation and 95% confidence interval ($\alpha = 0,05$). A total of 825 students participated in the research.

Setting

The research was carried out in a university located in the Western Black Sea region, within two weeks (4 weeks in total) when the final exams were held in the 2019 spring and 2020 fall semesters.

Data Collection Tools

In the data collection, a questionnaire consisting of open and closed-ended questions was used to determine the sociodemographic characteristics and sexual health behaviours prepared by the researchers in line with the literature.^{3,10,22-24} The form was finalized after receiving feedback from experts in the relevant field for content validity.

Data Collection

The questionnaire and semi-structured interview form were applied to the students during the 2019-2020 academic year fall

semester and spring semester final exams. Question papers were distributed to the students by the researchers in a sealed envelope before the exam time. After the students who volunteered to participate in the research filled out the forms, they submitted them to the researchers in a closed envelope. The practice started on the first day of the exams and continued until the last day.

Ethical Dimension of Research

Before starting the research, permission was obtained from the Non-Interventional Clinical Research Ethics Committee of XXX University (decision no. 12/1 dated 03.12.2018) and the rectorate of the university where the research would be conducted (approval of the rectorate dated 12.12.2018 and numbered 80404136-044-E-50015). Written informed consent was obtained from the students who volunteered to participate in the study. Throughout the study, the Helsinki Declaration was acted upon. Participants/non-participants did not have any gains/losses such as money, grades, absentee rights, etc.

Statistical Analysis:

While evaluating the data, descriptive statistical methods (Number, Percentage, Mean, Standard deviation, variance) were used. Kendall's Tau-C correlation coefficient was calculated for correlation analysis.

If t_c is between 0,01-0,19 means that there is no or negligible relationship. If t_c is between 0,20-0,29 means that there is weak relationship. If t_c is between 0,3-0,39 means that there is moderate relationship. If t_c is between 0,4-0,69 means that there is strong relationship. If t_c is higher than 0,7 there is very strong relationship.

RESULTS AND DISCUSSION

Table 1 shows the sociodemographic characteristics of the participants. It was determined that 90,3% of the participants were studying in the related departments of health and 46,1% were second year students.

The mean age of the participants was $20,09 \pm 2,647$ years, and more than half (64%) were men. Mothers (65%) and fathers (49,8%) are mostly primary school graduates. 48,5% of the participants reported their economic status as moderate.

Table 1. Participants' Sociodemographic Characteristics

Sociodemographic Characteristics		n	%
Age	18 and younger	5	,6
	18-24 years	796	96,4
	25 years and above	24	2,9
Average age	Mean \pm SD: $20,09 \pm 2,647$	min:17	max:30
Gender	male	529	64,0
	female	297	36,0
Department	Health related departments	702	90,3
	Other departments	123	9,7
Year	First year	325	39,3
	Second year	381	46,1
	Third Year	80	9,7
	Fourth year	40	4,8
Maternal education level	Illiterate	32	3,9
	Literate	70	8,5
	Primary school	537	65
	High School	116	14
	University and higher	70	8,5
Paternal education level	Illiterate	9	1,1
	Literate	28	3,4
	Primary school	411	49,8
	High School	238	28,9
	University and higher	139	16,8
Economic status	Low	33	4,0
	Medium	401	48,5
	High	392	47,5

%: Percentage, n= number,

Table 2 shows the sexual health behaviour of the participants. It was determined that 56,3% of the participants had their first sexual experience under the age of 18. 67% of the participants do not have a sexual partner and 70,8% have been sexually active for less than a year. It was determined that more than half of the participants (67%) did not use a contraceptive method and the withdrawal method was used the most (73,5%) of the contraceptive methods.

Almost all the participants did not have a history of unintended pregnancy (96,3%) and curettage (96,3%). 76% of the participants did not have an STI and most of them (89,5%) had a urinary system infection during their university life. %86,6 participants did not take sexual health education. 48,9% of the participants would apply to a health institution if they had a sexual health problem. and 28,7% reported that they obtained information about sexual health from their friends.

Table 2. Participants' Sexual Health Behaviours

	Participants' sexual health behaviours	n	%
Age at first sexual intercourse	18 and younger	465	56,3
	18-24 years	361	43,7
Presence of sexual partner(s)	Yes	271	32,9
	No	554	67,1
Sexually active time	less than 1 year	585	70,8
	1-5 years	51	6,2
	more than 5 years	190	23,0
Use a contraceptive method	Yes	271	32,8
	No	554	67,2
Contraceptive methods used	Condom	72	26,5
	withdrawal	199	73,5
History of unwanted pregnancy	Yes	10	3,7
	No	261	96,3
Abortion history	Yes	10	3,7
	No	261	96,3
Sexually transmitted infections	Yes	198	24,0
	No	627	76,0
Urinary tract infection during university life	Yes	739	89,58
	No	81	9,8
	I don't know	5	0,6
The first thing to do in case of a sexual health problem	I Apply to the Health Institution	404	48,9
	I Consult My Friends	217	26,3
	I Share with My Family	69	8,3
	I don't consult anyone; I try to be treated in line with the information I get from the Internet	135	16,3
Sexual health education	Yes	111	13,4
	No	714	86,6
Resources of sexual health education	From my friends	237	28,7
	From books	68	8,2
	From my family	72	8,7
	From the media	448	54,3

According to Table 3, there is very strong positive correlation between gender and having STI ($t_c=0,860$, $p=0,00$) which means that men participants have more STI than women participants. How understanding urinary track infections which means that men know urinary track infection symptoms more than women has very strong positive correlation with gender ($t_c=0,721$, $p=0,00$). Also contraception methods used- age at first intercourse ($t_c=0,734$, $p=0,00$) and age at first sexual intercourse - resources of sexual health education ($t_c=0,721$, $p=0,00$) have very strong positive correlations. There are strong

correlations between economic status - history of unwanted pregnancy ($t_c=0,520$, $p=0,00$), economic status - abortion history ($t_c=0,522$, $p=0,00$), economic status - presence of STI ($t_c=0,526$, $p=0,00$), economic status- having an urinary tract infection during university life ($t_c=0,526$, $p=0,00$), age at first sexual intercourse - contraceptive methods used ($t_c=0,455$, $p=0,00$), education year- age at first sexual intercourse ($t_c=0,459$, $p=0,00$), and education year-contraceptive methods used ($t_c=0,494$, $p=0,00$).

Table 3. Correlation Coefficients of Demographic Characteristics and Sexual Behaviours

	AAFS I	POS P	SA T	SI F	UOC M	CM U	HU P	A H	PST I	HUIDU L	TFTT D	SH E	RSH E	HTU HUT I
Gender	t_c								,860					,721
	p								0,00					0,00
EY	t_c		,284		-,305	,494							-,247	
	p		0,00		0,00	0,00							0,00	
MEL	t_c						,219	,225	,209	,210				
	p						0,00	0,00	0,00	0,00				

Table 3.
(Continued)

ES	tc	,249	,226	,520	,522	,526	,526	,232	,499
	p	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
PLTDUE	tc			,203	,211	,210			,231
	p			0,00	0,00	0,00			0,00
AAFSI	tc		,455	,734				,459	,276
	p		0,00	0,00				0,00	0,00

AAFSI: Age at first sexual intercourse, POSP: Presence of sexual partners, SAT: Sexually active time, SIF: Sexual intercourse frequency, UOCM: Use of a contraceptive method, CMU: Contraceptive methods used, HUP: History of unwanted pregnancy, AH: Abortion history, PSTI: Presence of sexually transmitted infection, HUIDUL: Having an urinary tract infection during university life, TFTTD: The first thing to do in case of a sexual health problem, SHE: Sexual health education, RSHE: Resources of sexual health education, HTUHUTI: How to understand having an urinary tract infection, t_c : Kendall's tau-c correlation coefficient, EY: Education Year, MEL=Maternal education level, PEL: Paternal education level, ES: Economic status, PLTDUE: People living together during university education

Adolescence is a transitional period of great importance for learning how to interact in intimate romantic and sexual relationships. Decision-making about participating in sexual activity is a complex process influenced by many individual, social and cultural factors²³. In our study, it was determined that 56,3% of the students had their first sexual experience under the age of 18. Firmeza et al. (2016) also determined in their study that the first sexual experience age of students was before the age of 18.²⁴ Rizkianti et al (2020) found in their study that, 72,7% of boys and 90,3% of girls stated that they had their first sexual experience before the age of 15.²² In the study conducted by Aras et al. (2005) in our country, 32,4% of the young people aged 16-20 had sexual intercourse.²⁷ In the study of Arslan et al. (2014), this rate was 44,9%.²⁶ This situation is important in terms of showing that the age of onset of sexual intercourse starts in the adolescence period.

Risky sexual behaviours include early sexual intercourse, having multiple partners, and unprotected sex.²⁷ In our study, it was determined that 32,8% of the students had sexual partners and 70,8% of them were sexually active for less than 1 year. Siyez and Siyez (2009) stated in their study that 27% of the students had sexual intercourse in the last year.²⁸ In the study of Mavhandu Mudzusi (2016) et al., more than half of the students were sexually active in the last three months and most of the participants (54,8%, n=80) with sexual experience have had a sexual partner for the last 1 year.⁷ In another study, approximately one-fifth of students are

sexually active, and students have had more than one partner throughout their lives.²⁹

Safe sex and prevention of unwanted pregnancy are necessary measures to maintain health among university students. In our study, 32,8% of the students were sexually active and 73,5% of the sexually active students used the contraceptive withdrawal method. In the study conducted by Sevil et al. (2012), students it was determined that 76,5% used condom, 12,1% used pills, 14,8% used withdrawal method.³⁰ In other studies, students mostly preferred condoms as a contraceptive method.^{29,31,32} The reason for obtaining a different result from the literature in our study is thought to be because the withdrawal method is costless for students and reduces the risk of stigma. In our study, sexually active students had an unwanted pregnancy and had a history of curettage. In a study conducted with 69,842 female university students in China, it was reported that the prevalence of unwanted pregnancy in sexually active female university students was 31,8%.³² In another study, it was found that 10,6% of sexually active male students and 11,6% of female students had an undesirable pregnancy with their sexual partner, and 10,0% of male students and 11,3% of female students had a history of unintended abortion that reported.³³ It is estimated that there are 20 million STI cases in the United States each year because of risky sexual behaviour, and half of the cases occur among adolescents and young adults aged 15-24.¹³ In our study, 73% of sexually active individuals experienced STI infection. It is thought that the result obtained from our study is caused by starting sexual

activity at an early age and not using condoms during sexual intercourse.

Urinary tract infections are an important public health problem faced by women in any of their life cycles. In our study, 89,58% of the students stated that they had urinary tract infections during their university life. According to the results of another study conducted in our country, when the reasons for applying to health institutions of adolescent girls are examined, they are in the first three places; vaginal discharge, itching and burning are seen.³⁴ The reason why urinary system infections are common among university students is thought to be because most of the students live in crowded dormitories, use the toilet and bathroom together, and do not have enough knowledge about hygiene issues. In our study, about half of the students reported that they would apply to a health institution if they had a sexual health problem. In another study, students stated that they would be treated in a health institution when they saw any symptoms in themselves or in their partners' sexual health education.³¹ It is the process of acquiring knowledge, forming values, attitudes and beliefs about identity, relationships, and privacy throughout the life span of individuals.²¹ In our study, it was determined that most of the students did not receive sexual health education. In other studies, conducted in our country, it was determined that the majority of university students did not receive sexual education.^{28,35} Li et al. (2017) reported that nearly half of the students did not receive sexual health education.³⁶ In our study, students mostly get information about sexuality from the media (54,3%) and their friends (28,7%). Our study results are similar

to the results of other studies conducted in our country. In other studies, students stated that the sources they refer to about sexual health are mostly media, internet and book friends.^{37,38} This result can be said that sexuality is seen as a taboo in our country, students are afraid of being stigmatized, and as a result, the sources from which they obtain their knowledge are environments where they feel safe.

As demonstrated in a study by Rizkianti et al(2020)²², current study demonstrates that male gender is correlated with having sexual partner during university life ($t_c = 0,144$, $p=0,00$). Additionally, this study found positive weak correlation between sexually active time and gender ($t_c=0,250$, $p=0,00$).

As mentioned in literature protective factors, such as positive attitudes from friends and frequent parental supervision were found to be associated with lower engagement in sexual activity.^{22,39,40} Although not presented in table3, we found a weak significant correlation between paternal education ($t_c = 0,066$, $p=0,003$) and age at first sexual intercourse and non-significant weak correlation between maternal education ($t_c = 0,30$, $p=0,31$) and age first sexual intercourse, a factor that may affect parental supervision, and risky sexual health behaviours and age at first sexual intercourse. Also, we found weak non significant correlations between maternal education level and contraception ($t_c=0,055$, $p=0,051$) and significant weak correlation between paternal education level and contraception ($t_c=-,127$, $p=0,00$). In general, there are a number of studies about sexual health of adolescents and only a few correlations analysis to compare.

CONCLUSION AND SUGGESTIONS

According to our study results, although premarital sexual intercourse is common among university students, the rates are consistent with the literature. Among university students, there are risky sexual health behaviours such as a history of STIs, unprotected sexual intercourse, unwanted

pregnancy and abortion. The students lack contraception knowledge and have not received any training on sexual health. Universities should prioritize sexual education and focus on strategies for counseling college students about sex, contraception and pregnancy.

LIMITATIONS

This study has some limitations. These data were obtained from students studying at a university in Turkey. Therefore, it cannot be generalized to young people who are not enrolled in other colleges and universities or universities. In addition, some selection bias may have occurred, as well as the bias that is

inherent in self-reported data. At last, because in our country sexual intercourse before age of 18 is accepted as sexual abuse, participants may not want to report their age at first sexual intercourse although they had read and signed the informed consent.

REFERENCES

1. World Health Organization (WHO). (2020). "Adolescent health". Available at: https://www.who.int/health-topics/adolescent-health/#tab=tab_1 (retrieved 10.12.2021)
2. Cappa, C, Wardlaw, T, Langevin Falcon, C. and Diers, J. (2012). "Progress for Children: A Report Card on Adolescents". *The Lancet*, 379 (9834), 2323-2325.
3. Alexander, K.A, Jemmott, L.S, Teitelman, A.M. and D'Antonio, P. (2015). "Addressing Sexual Health Behaviour During Emerging Adulthood: A Critical Review of the Literature". *J Clin Nurs*, 24, 4-18. <https://doi.org/10.1111/jocn.12640>
4. Ankomah, S, Jahanfar, S. and Inungu, J.A. (2021). "Study of Sexual Health Information Among Central Michigan University Students". *Journal of Public Health*, 29 (4), 1-7. <https://doi.org/10.1007/s10389-020-01192-4>
5. Basic, J. and Erdelez, S. (2015). "The Role of Risky Behaviours and Health Education in College Students' Health Information Acquisition on The Internet". *Proc Assoc Inf Sci Technol*, 52 (1), 1-10.
6. Mavhandu Mudzusi, A.H. and Asgedom, T. (2016). "The Prevalence of Risky Sexual Behaviours amongst Undergraduate Students in Jigjiga University, Ethiopia". *Health Sa Gesondheid*, (21), 179-186. <https://doi.org/10.1016/j.hsag.2015.11.002>
7. Mulugeta, Y. and Berhane, Y. (2014). "Factors Associated with Pre-Marital Sexual Debut among Unmarried High School Female Students in Bahir Dar Town, Ethiopia: Cross-Sectional Study". *Reproductive Health*, 11 (40), 1-6. <https://doi.org/10.1186/1742-4755-11-40>
8. Vasilenko, S.A, Kugler, K.C. and Rice, C.E. (2016). "Timing of First Sexual Intercourse and Young Adult Health Outcomes". *Journal of Adolescent Health*, 59 (3), 291-297. <https://doi.org.10.1016/j.jadohealth.2016.04.019>
9. Mohammadi, M.R, Mohammad, K, Farahani, F.K, Alikhani, S, Zare, M, Tehrani, F.R, Ramezankhani, A. and Alaeddini, F. (2006). "Reproductive Knowledge, Attitudes and Behaviour among Adolescent Males in Tehran, Iran". *Int Fam Plan Perspect*, 32 (1), 35-44. <https://doi.org.10.1363/3203506>
10. Birlik, T, Engin, E. ve Öztürk Turgut, E. (2019). "Üniversite Öğrencilerinin Cinsel Tutumlarının İncelenmesi". *Journal of International Social Research*, 12 (64), 430-437. <https://doi.org/10.17719/jisr.2019.3365>
11. Cassidy, C, Steenbeek, A. and Langille, D. (2019). "Designing an Intervention to Improve Sexual Health Service Use among University Undergraduate Students: A Mixed Methods Study Guided by the Behaviour Change Wheel". *BMC Public Health*, 19 (1734), 1-12. <https://doi.org.10.1186/s12889-019-8059-4>
12. Shore, H. and Shunu, A. (2017). "Risky Sexual Behaviour and Associated Factors among Youth in Haramaya Secondary and Preparatory School, East Ethiopia". *Journal of Public Health and Epidemiology*, 9 (4), 84-91.
13. Centers for Disease Control and Prevention (CDC). (2017). "STDs in Adolescents and Young Adults - 2016 STD Surveillance Report". Available at: <https://www.cdc.gov/std/life-stages-populations/adolescents-youngadults.htm> (Retrieved 30.11.2021)
14. Lee, L.K, Chen, P.C.Y, Lee, K.K. and Kaur, J. (2006). "Premarital Sexual Intercourse among Adolescents in Malaysia: A Cross-Sectional Malaysian School Survey". *Singapore Medical Journal*, 47 (6), 476-481.
15. Halcón, L.L, Lifson, A.R, Shew, M, Joseph, M, Hannan, P.J. and Hayman, C.R. (2002). "Pap Test Results among Low-Income Youth: Prevalence of Dysplasia and Practice Implications". *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 31 (3), 294-304. <https://doi.org/10.1111/j.1552-6909.2002.tb00051.x>
16. Martin, J.A, Hamilton, B.E, Osterman, M.J, Driscoll, A.K. and Mathews, T.J. (2017). "Births: Final Data for 2015". Report number: 66:1. Hyattsville. Available at: https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_01.pdf (Retrieved March 3, 2021).
17. Rada, C, Albu, A. and Petrariu, F.D. (2013). "Age at Initiation of Sexual Life, Protection at First Intercourse and Sources of Information Regarding Sexual and Reproductive Health". *The Medical-Surgical Journal*, 117 (4), 994-1001.
18. Chen, X.K, Wen, S.W, Fleming, N, Demissie, K, Rhoads, G.G. and Walker, M. (2007). "Teenage Pregnancy and Adverse Birth Outcomes: A Large Population Based Retrospective Cohort Study". *International Journal of Epidemiology*, 36 (2), 368-373. <https://doi.org/10.1093/ije/dyl284>
19. Ogawa, K, Matsushima, S, Urayama, K.Y, Kikuchi, N, Nakamura, N, Tanigaki, S, Sago, H, Satoh, S, Saito, S. and Morisaki, N. (2019). "Association between adolescent pregnancy and adverse birth outcomes, a multicenter cross sectional Japanese study". *Sci Rep* 9, Article number:2365(2019). <https://doi.org/10.1038/s41598-019-38999-5>
20. Lara, L.A.S. and Abdo, C.H.N. (2016). "Age at Time of Initial Sexual Intercourse and Health of Adolescent Girls". *Journal of Pediatric and Adolescent Gynecology*. 29 (5), 417-423.
21. Sexuality Information and Education Council of the United States (SIECUS). (2004). "Guidelines For Comprehensive Sexuality Education". New York: SIECUS.
22. Rizkianti, A, Maisya, I.B, Kusumawardani, N, Linhart, C. and Pardosi, J.F. (2020). "Sexual Intercourse and its Correlates among School-Aged Adolescents in Indonesia: Analysis of the 2015 Global School-Based Health Survey". *Journal of Preventive Medicine and Public Health = Yebang Uihakhoe Chi*, 53 (5), 323-331. <https://doi.org/10.3961/jpmph.20.028>
23. Moreau, N, Költő, A, Young, H, Maillochon, F. and Godeau, E. (2019). "Negative Feelings about the Timing of First Sexual Intercourse: Findings from the Health Behaviour in School-Aged Children Study". *International Journal of Public Health*, 64 (2), 219-227. <https://doi.org/10.1007/s00038-018-1170-y>

24. Firmeza, S.N.R.D.M, Fernandes, K.J.S.D.S, Santos, E.N.D, Araújo, W.J.G.D, Oliveira, E.S.D. and Silva, A.R.V.D. (2016)."Sexual Behaviour among Students of a Public University". *Rev Rene*, 14 (4), 506-511. <https://doi.org/10.15253/2175-6783.2016000400010>
25. Aras, Ş, Şemin, S, Günay, T, ve Orçin, E. (2005). "Lise Öğrencilerinin Cinsel Tutum ve Davranış Özellikleri". *Türk Pediatri Arşivi*, 40 (2), 72-82.
26. Aslan, E, Bektaş, H, Başgöl, Ş, Demir, S, ve Vural, P.I. (2014). "Üniversite Öğrencilerinin Cinsel Sağlık Konusundaki Bilgi Düzeyleri ve Davranışları". *STED*, 23 (5), 174-182.
27. Wana, G. W, Arulogun, O, Roberts, A. and Kebede, A. S. (2019)."Predictors of Risky Sexual Behaviour among Pre-College Students in Adama Town, Ethiopia". *The Pan African Medical Journal*, 33, 135-147.
28. Siyez, D.M. and Siyez, E. (2009). "Evaluation of the Knowledge Levels of University Students about Sexually Transmitted Diseases". *Turkish Journal of Urology*, 35 (1), 49-55
29. Perera, U.A.P. and Abeysena, C. (2018)."Prevalence and Associated Factors of Risky Sexual Behaviours among Undergraduate Students in State Universities of Western Province in Sri Lanka: A Descriptive Cross Sectional Study". *Reprod Health*, 15 (1), 105-115. <https://doi.org/10.1186/s12978-018-0546-z>
30. Sevil, Ü, Atan, Ş.Ü, Duran, E.T, ve Bolsoy, N. (2012). "Üniversite Öğrencilerinin Cinsellik ve Aile Planlaması Yöntemleri Konusundaki Bilgi, Görüş ve Uygulamaları". *Ege Üniversitesi Hemşirelik Fakültesi Dergisi*, 28 (1), 13-25.
31. Folasayo, A.T, Oluwasegun, A.J, Samsudin, S, Saudi, S.N.S, Osman, M. and Hamat, R.A. (2017)."Assessing the Knowledge Level, Attitudes, Risky Behaviours and Preventive Practices on Sexually Transmitted Diseases among University Students as Future Healthcare Providers in the Central Zone of Malaysia: A Cross-Sectional Study". *International Journal of Environmental Research and Public Health*, 14 (2), 159.
32. Wang, H, Long, L, Cai, H, Wu, Y, Xu, J, Shu, C, Wang, P, Li, B, Wei, Q, Shang, X, Wang, X, Zhang, M, Xiong, C. and Yin, P. (2015)."Contraception and Unintended Pregnancy among Unmarried Female University Students: A Cross-Sectional Study from China". *PLOS One*, 10 (6), e0130212. <https://doi.org/10.1371/journal.pone.0130212>
33. Ma, Q, Ono Kihara, M, Cong, L, Xu, G, Pan, X, Zamani, S, Ravari, S.M. and Kihara, M. (2008)."Unintended Pregnancy and its Risk Factors among University Students in Eastern China". *Contraception*, 77 (2), 108-113.
34. Ardahan, M. ve Bay, L. (2009)."Hemşirelik Yüksek Okulu 1. ve 4. Sınıf Öğrencilerinin Vajinal Akıntı ve Bireysel Hijyen Hakkındaki Bilgi Düzeyleri". *Ege Tıp Dergisi*, 48 (1), 33-43.
35. Öz, H.G, G.A. Sözer, And H.B. Yangin, Hemşirelik öğrencilerinin cinsel mitlere inanma durumları ve etkileyen faktörler. *Ordu Üniversitesi Hemşirelik Çalışmaları Dergisi*, 2020. 3(2), 136-145.
36. Li, C, Cheng, Z, Wu, T, Liang, X, Gaoshan, J, Li, L, Hong, P. and Tang, K. (2017)."The Relationships of School-Based Sexuality Education, Sexual Knowledge and Sexual Behaviours - a Study of 18,000 Chinese College Students". *Reproductive Health*, 14 (1), 103-111.
37. Dağ, H, Dönmez, S, Şirin, A, ve Kavlak, O. (2012) "Üniversite Gençliğinin Cinsel ve Üreme Sağlığıyla İlgili Bilgi Düzeyleri ve Akran Eğitimi". *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi*, 15 (1), 10-17.
38. Pınar, G, Doğan, N, Ökdem, Ş, Algier, L, ve Öksüz, E. (2009). "Özel Bir Üniversitede Okuyan Öğrencilerin Cinsel Sağlıkla İlgili Bilgi Tutum ve Davranışları". *Tıp Araştırmaları Dergisi*, 7 (2), 105-113.
39. Peltzer, K. and Pengpid, S. (2015)."Early Sexual Debut and Associated Factors among in School Adolescents in Six Caribbean Countries". *The West Indian Medical Journal*, 64 (4), 351-356. <https://doi.org/10.7727/wimj.2014.025>
40. Seidu, A.A, Ahinkorah, B.O, Ameyaw, E.K, Darteh, E.K.M, Budu, E, Iddrisu, H. and Nartey, E.B. (2021)."Risky Sexual Behaviours among School-Aged Adolescents in Namibia: Secondary Data Analyses of the 2013 Global School-Based Health Survey". *Journal of Public Health*, 29 (2), 451-461. <https://doi.org/10.1007/s10389-019-01140-x>