

Genç Bireylerin Acil Kontrasepsiyon Bilgisinin Aile Planlaması, Cinsel Sağlık ve Üreme Sağlığı Tutumları ile İlişkisi: Kesitsel Bir Çalışma

The Relationship of Emergency Contraception Knowledge of Young Individuals with Family Planning, Sexual and Reproductive Health Attitudes: A Cross-Sectional Study

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ÖZ

Amaç: Türkiye'de yaşayan ve üniversitede okuyan 18-25 yaş arası kadın ve erkeklerde acil kontrasepsiyon (AK) bilgisi ile aile planlaması ve cinsel sağlık ve üreme sağlığına (CSÜS) yönelik tutumlar arasındaki ilişkiyi araştırmak amaçlandı.

Gereç ve Yöntem: Kesitsel çalışma Şubat-Ekim 2023 tarihleri arasında 492 katılımcı ile gerçekleştirilmiştir. Araştırmanın verileri "Veri Toplama Formu" ve "Üreme Sağlığı ve Aile Planlaması Tutum Ölçeği (ÜSAPTÖ)" aracılığıyla elde edilmiştir.

Bulgular: Kadınlarda, AK'yi duyanlar, kullanım zamanını, erişimini ve yan etkilerini bilenler ile RHFPAS arasında anlamlı bir fark vardı. Erkeklerde, AK'yi duyanlar, kullanım zamanı, erişim ve yan etkiler ile infertilite ve yardımcı üreme tedavileri arasında istatistiksel olarak anlamlı bir fark vardı. Kadın ve erkeklerde CSÜS bilgi düzeyi ile RHFPAS toplam ortalama puanı arasında zayıf ve orta düzeyde pozitif bir korelasyon vardı ($p<0.05$).

Sonuç: Çalışmada kadın ve erkeklerin CSÜS bilgi düzeylerinin orta düzeyde olduğu, CSÜS bilgisi ve olumlu tutum arttıkça AK hakkında bilgi düzeyinin arttığı, CSÜS konularını ailesi ve karşı cinsle konuşabilen kadın ve erkeklerde CSÜS tutumu ve cinsel yolla bulaşan enfeksiyonlar hakkında bilginin arttığı görülmüştür.

Anahtar Kelimeler: Acil kontrasepsiyon, Cinsel sağlık, Doğurganlık, Erkek, Kadın, Küretaj, Üreme sağlığı

ABSTRACT

Aim: To investigate the relationship between emergency contraception (EC) knowledge and attitudes towards family planning and sexual and reproductive health (SRH) among men and women aged 18-25 years living in Turkey and studying at university.

Methods: The cross-sectional study was conducted between February-October 2023 with 492 participants Turkey. The data of the study were obtained through "Data Collection Form" and "Reproductive Health and Family Planning Attitude Scale (RHFPAS)".

Results: In women, there was a significant difference between those who had heard of EC, knew the time of use, access, and side effects and RHFPAS. In men, there was a statistically significant difference between those who had heard of EC, time of use, access and side effects and infertility and assisted reproductive treatments. There was a weak moderate positive correlation between SRH knowledge level and RHFPAS total mean score in women and men ($p<0.05$).

Conclusion: In the study, it was observed that SRH knowledge of women and men was at a moderate level, the level of knowledge about EC increased as SRH knowledge and positive attitude increased, SRH attitude and knowledge about sexually transmitted infections increased in women and men who could discuss SRH issues with their family and opposite sex.

Keywords: Curettage, emergency contraception, fertility, man, reproductive health, sexual health, woman

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Introduction

Human sexuality is multifactorial due to the integration of psychological, biological, relational, and sociocultural determinants (1). Although the concept of Sexual and Reproductive Health (SRH) is often used interchangeably in the literature, sexual health is also considered as a part of reproductive health (2). Sexual health is not only the absence of disease, dysfunction, or disability, but also a state of complete psychological, mental, and social well-being related to sexuality. Reproductive health is not only the absence of any disease or disability related to the reproductive system, but also a state of complete biopsychosocial well-being, individuals having a safe and effective sexual life and having the right to reproduce at the time and frequency of their own choosing (3). Sexual and reproductive health rights for all are enshrined in 2030 Sustainable Development Goals agenda in SDGs (3.7, 4.7 and 5.6) (4).

Improving SRH affects global health outcomes. Sexual and Reproductive Health education and awareness is important to help adolescents prevent the problems they face in sexual health and help them make better decisions (Joseph, 2023). Various educational interventions to improve SRH in adolescents and young people have been reported to improve SRH (5). With the latest technology, it has been reported that chatbots may also have a positive effect on SRH (6).

Globally, the large number of centers providing SRH services in urban areas offers opportunities in terms of access to services and diversity of modalities, but stigma, pricing and sociocultural reasons continue to be barriers. In rural areas, structural factors such as geographical and infrastructural challenges, intense poverty, legal and political environments affecting access to services and information, affordability, and security negatively affect SRH outcomes (7,8). Lack of SRH knowledge, information and access increases the rates of unprotected sexual intercourse, unintended pregnancy, and curettage (7).

Preventing unintended pregnancy is a vital step in improving women's reproductive health. Emergency contraception (EC) refers to contraceptive options that can be used within a

few days after unprotected or protected sexual intercourse or sexual assault to reduce the risk of pregnancy. Although intrauterine device and oral options are available as methods, access varies according to countries (9). Globally, unprotected sex and sexual assault are common. Approximately 40 per cent of patients seeking EC had experienced multiple unprotected sexual encounters prior to EC use, and 14 per cent reported at least one unprotected sexual encounter six or more days before seeking EC (9,10).

Although awareness of SRH has increased globally, studies have been conducted mostly in developed and high-income countries, in women, adults and individuals with SRH-related problems (7,9,10). In the literature, there were no studies examining the relationship between emergency contraception knowledge, which will significantly affect the rates of unwanted pregnancy and curettage after unprotected sexual intercourse, and family planning, SRH knowledge and attitudes in young women and men. This study was conducted to examine the relationship between EC knowledge and attitudes towards family planning and sexual and reproductive health (SRH) among men and women aged 18-25 years living in Turkey and studying at university. Within the scope of the study, answers to the following questions were sought.

- What is the level of SRH and RHFPAS in women and men?
- What is the level of knowledge about EC in women and men?
- Is there a relationship between knowledge about EC and SRH and RHFPAS in women and men?

Material and Method

The cross-sectional descriptive study was conducted between February-October 2023 in Turkey. STROBE notification was complied with during the study.

The universe of the descriptive study consisted of 1286 students studying at a university's faculty of health sciences (nutrition and dietetics, physiotherapy and rehabilitation, midwifery and nursing), while the sample was calculated as 296 using the known sample calculation method. The study was completed

with 492 participants during the 30 days that the online link was left active (women n= 283, men n=209).

Data Collection Tools

The data of the study were obtained through the "Data Collection Form" and "Reproductive Health and Family Planning Attitude Scale (RHFPAS)".

Data Collection Form: The data collection form, which was prepared in line with the literature (7,8,11,12), consists of 12 questions on sociodemographic, SRH and EC method.

Reproductive Health and Family Planning Attitude Scale (RHFPAS): This scale, developed by Alper Tunga Kökçü in 2010, is 5-point Likert type and consists of 52 questions. The scale has 3 sub-dimensions: 'unwanted pregnancies', 'sexually transmitted infections' and 'infertility and assisted reproductive treatments'. There is no cut-off point in the scale. As the score obtained from the scale increases, attitudes towards reproductive health and FP are in a positive direction. The highest score that can be obtained from the scale is 5. Cronbach's alpha of the scale is 0.88 (13). In this study, the total scale Cronbach's alpha value was 0.844.

Data Collection Process

After obtaining the necessary permissions, the data collection link was shared with a group of 50 participants to assess the clarity of the questions. Since no corrections were required after the pilot application, the data collection process was initiated. Online survey links were shared with women and men who met the sample selection criteria. The link was left active for 30 days to collect data. At the end of the process, the research was completed with 492 participants (women n= 283, men n=209).

Statistical Analysis

Completion of the questionnaires was checked. Statistical Package for Social Science (SPSS) version 24.0 for Windows software (SPSS, Inc., Chicago, IL, USA) was used for all statistical analyses. The Kolmogorov-Smirnov test was used to evaluate the distribution of the data before statistical analysis. Descriptive statistics including frequency, percentage for nominal variables and mean and standard deviation for continuous variables were calculated. Mann Whitney U and Kruskal Wills test were used to test the relationship between categorical variables and RHFPAS and its sub-dimensions, Spearman Correlation Test was used to determine the relationship between continuous

variables, and Bonferroni test was used for post-hoc analysis. The significance level was determined as $p < 0.05$.

Ethical Consent

Ethics committee approval was obtained from the Non-Interventional Clinical Research Ethics Committee (Ethics Committee Date: 28.12.2022; No: 259) before starting data collection. Permission was obtained from the authors of the scale. It was stated on the first page that necessary information about the study and participation in the study were on a voluntary basis. If they agreed to participate in the study, they were asked to mark the statement "I consent to participate in the study". They were not offered any incentive to participate in the study. The questionnaires were anonymous. The principles of the Declaration of Helsinki were followed throughout the study period.

Results

In this study, SRH knowledge level was 5.28 ± 2.37 in women and 5.41 ± 2.11 in men. RHFPAS total score was 3.16 ± 0.13 in women and 3.13 ± 0.13 in men. It was found that 64.0% of the female participants lived in the city and 50.5% of them had no sexual experience, while 56.0% of the male participants lived in the city and 60.3% of them had sexual experience. It was determined that 50.9% of women and 57.4% of men obtained SRH information from media and internet. Women reported that 48.1% of them could talk about SRH issues with their families, 50.9% with the opposite sex, and 70.7% with their same sex. Among men, 46.4% reported that they could discuss SRH issues with their families, 36.3% with their opposite sex, and 69.4% with their same sex. It was observed that 92.2% of women and 87.6% of men stated that SRH centers were necessary in universities. It was determined that 64.7% of women and 72.7% of men had not heard of EC, 59.4% of women and 50.22% of men did not know when to use it, 62.2% of women and 59.8% of men did not know its side effects and 51.6% of women and 50.2% of men did not know where to access it. (Table 1).

In men, there was a statistically significant difference between those who could discuss SRH issues with their family and RHFPAS, unplanned and unwanted pregnancies and termination of pregnancy and sexually transmitted infections sub-dimension. There was a statistically significant difference

between those who could discuss SRH issues with their family and RHFPAS, unplanned and unwanted pregnancies and termination of pregnancy, sexually transmitted infections and infertility and assisted reproductive treatments sub-dimension. In women, there was a statistically significant difference between those who accessed SRH information from the media and the internet and the sub-dimension of infertility and assisted reproductive treatments. In men, there was a statistically significant difference between those who could discuss SRH issues with the opposite sex and the sub-dimension of sexually transmitted infections. In women, there was a significant difference between those who had heard of EC, knew the time of use, access, and side effects and RHFPAS. In men, there was a statistically significant difference between those who had heard of EC, time of use, access and side effects and infertility and assisted reproductive treatments ($p < 0.05$; Table 2).

There was a weak moderate positive correlation between SRH knowledge level and RHFPAS total mean score in women and men. There was a moderate-high positive correlation between the mean RHFPAS total score and the subscales of the scale ($p < 0.05$; Table 3).

Discussion

The aim of this study was to investigate the relationship between EC knowledge and attitudes towards family planning and SRH among women and men aged 18-25 years living in Turkey and studying at university. In the study, it was observed that SRH knowledge of women and men was at an intermediate level, knowledge about EC increased as knowledge and positive attitude towards SRH increased, SRH attitude and knowledge about sexually transmitted infections increased in women and men who could discuss SRH issues with their family and opposite sex.

In a meta-analysis of studies conducted in Sub-Saharan African countries, 24 studies were included, and it was reported that SRH knowledge and behaviors in young people were incomplete and worrying (14). In this study, it was observed that the SRH knowledge of women and men was approximately five out of 10, and as SRH knowledge increased in participants, positive attitudes towards SRH and FP increased. Studies have reported that the rates of unintended pregnancy and curettage are

high among young people and that the frequency of condom use, unprotected sexual intercourse and unintended pregnancy decreases after SRH interventions (5,15–18). In a systematic review study, SRH training was given to medical faculty students, and it was reported that there were deficiencies in contraception and curettage, although the level of SRH knowledge was positively affected after evaluation (19). In a review study, it was reported that the knowledge and autonomy of female adolescents about SRH is limited and if this situation is prevented, unwanted pregnancies may decrease (20). In another study, it was reported that almost all participants (96%) had knowledge about modern contraceptives and 37% of the participants were sexually active, but 79% of the sexually active participants did not use modern contraceptive methods (21). The results of this study are in parallel with the results especially in developing countries, and it seems that SRH knowledge is inadequate in young individuals. This situation suggests that public trainings with proven effectiveness should be integrated into policies to increase the level of community welfare and health.

The internet, which provides access to infinite information with the developing technology, may also cause misinformation and erroneous behaviors (6). About half of the women and men who participated in this study accessed information about SRH from the internet and media, and knowledge and favorable attitudes towards infertility and assisted reproductive techniques were higher among these women. Studies have reported that young people identified radio, television, friends or peers, teachers/school-based courses or programmers, family members other than parents (e.g. sisters, aunts' parents for girls), social media/internet, health professionals, parents, newspapers, magazines, books, and religious leaders as sources of SRH information (14,22). In a Cochrane meta-analysis study, the effect of mobile devices on SHR in adolescents and adults was examined in the results of studies conducted until July 2019, and it was reported that it had a limited effect on sexual health knowledge and contraceptive use, while the results on condom use and utilization of health services were uncertain and the evidence was low (23). The findings of the study are in parallel with the findings of the literature and

Table 1. Distribution of Sociodemographic, Emergency Contraception and Reproductive Health Characteristics of the Individuals (N=492)

Variables	Women (n=283)		Men (n=209)	
	Mean \pm SD	Min-Max	Mean \pm SD	Min-Max
Age	20.79 \pm 1.42	18.00-25.00	21.10 \pm 1.65	18.00-25.00
Level of SRH* knowledge (0-I don't know at all-10 I know very well)	5.28 \pm 2.37	0.00-10.00	5.41 \pm 2.11	0.00-10.00
RHFPA* Total Score Average	3.16 \pm 0.13	2.81-3.64	3.13 \pm 0.13	2.72-3.45
1. Dimension *Total Score Average	3.20 \pm 0.21	2.31-3.62	3.18 \pm 0.22	2.42-3.69
2. Dimension *Total Score Average	3.06 \pm 0.23	2.26-3.74	3.07 \pm 0.22	2.11-3.47
3. Dimension *Total Score Average	3.21 \pm 0.23	2.38-4.08	3.15 \pm 0.20	2.46-3.77
	n	%	n	%
The place where most of life takes place				
Village	59	20.8	34	16.2
Town	43	15.2	58	27.8
City	181	64.0	117	56.0
Sexual Experience				
Yes	140	49.5	126	60.3
No	143	50.5	83	39.7
Source of SRH* information				
Parents and/or siblings	89	31.4	58	27.8
Friend	50	17.7	31	14.8
Media and internet	144	50.9	120	57.4
SRH issues with my family;				
I can talk	92	32.5	54	25.8
I can speak in a limited way	136	48.1	97	46.4
I can't talk	55	19.4	58	27.8
SRH* subjects with the same sex;				
I can talk	200	70.7	145	69.4
I can speak in a limited way	68	24.0	47	22.5
I can't talk	15	5.3	17	8.1
SRH issues with my opposite sex;				
I can talk	79	27.9	71	34
I can speak in a limited way	144	50.9	76	36.3
I can't talk	60	21.2	62	29.7
SRH unit in universities and high schools				
Necessary	261	92.2	183	87.6
Unnecessary	22	7.8	26	12.4
EC* hearing status				
Yes	100	35.3	57	27.3
No	183	64.7	152	72.7
Knowing when to use EC*				
Yes	115	40.6	104	49.8
No	168	59.4	105	50.2
Knowing EC* side effects				
Yes	107	37.8	84	40.2
No	176	62.2	125	59.8
Knowing where to access EC*				
Yes	137	48.4	104	49.8
No	146	51.6	105	50.2

EC: Emergency Contraception, SRH: Sexual and Reproductive Health, RHFPA: Reproductive Health and Family Planning Attitude Scale, 1st Dimension: Unplanned and unwanted pregnancies and termination of pregnancy, 2nd Dimension: Sexually transmitted infections, 3rd Dimension: Infertility and assisted reproductive treatments. SD: Standard Deviation

Table 2. Comparison of the Mean Total Score of RHFPAS* and its Subscales with Sociodemographic, Emergency Contraception and Reproductive Health Characteristics (N=492)

Variables	Women (n=283)				Men (n=209)			
	RHFPAS* Total Score Average	1. Dimension* Total Score Average	2. Dimension* Total Score Average	3. Dimension* Total Score Average	RHFPAS* Total Score Average	1. Dimension* Total Score Average	2. Dimension* Total Score Average	3. Dimension* Total Score Average
The place where most of life takes place								
Village	3.16±0.18	3.23±0.12	3.06±0.22	3.18±0.23	3.12±0.17	3.17±0.25	3.06±0.28	3.11±0.20
Town	3.14±0.11	3.17±0.23	3.03±0.18	3.23±0.22	3.15±0.12	3.20±0.17	3.12±0.23	3.10±0.18
City	3.16±0.14	3.20±0.20	3.07±0.25	3.21±0.24	3.13±0.13	3.17±0.24	3.04±0.19	3.18±0.21
X²/ KW	1.350	2.600	1.541	3.195	.424	.446	8.207	5.850
p	.509	.273	.463	.202	.809	.800	.017	.054
Sexual Experience								
Yes	3.16±0.13	3.20±0.21	3.08±0.25	3.18±0.24	3.12±0.15	3.15±0.24	3.08±0.23	3.12±0.19
No	3.16±0.13	3.21±0.22	3.04±0.20	3.23±0.22	3.15±0.11	3.22±0.18	3.04±0.20	3.18±0.22
U	9707.500	9610.000	9137.000	8887.000	4582.000	4404.500	4502.500	4252.000
p	.660	.560	.203	.100	.130	.053	.088	.021
Source of SRH* information								
Parents and/or siblings (a)	3.17±0.14	3.21±0.24	3.08±0.24	3.15±0.19	3.16±0.14	3.21±0.23	3.09±0.24	3.12±0.21
Friend (b)	3.17±0.13	3.24±0.16	3.05±0.22	3.22±0.26	3.13±0.10	3.19±0.14	3.01±0.26	3.17±0.16
Media and internet (c)	3.15±0.13	3.19±0.21	3.06±0.23	3.24±0.24	3.13±0.14	3.17±0.24	3.07±0.19	3.15±0.21
X²/ KW	1.433	3.721	1.030	10.283	1.270	1.653	1.265	2.446
p	.489	.156	.597	.006	.530	.438	.531	.294
Bonferroni								
SRH issues with my family;								
I can talk (a)	3.25±0.12	3.20±0.24	3.11±0.25	3.17±0.21	3.20±0.13	3.24±0.27	3.18±0.15	3.17±0.21
I can speak limitedly (b)	3.16±0.13	3.23±0.19	3.03±0.21	3.21±0.23	3.07±0.13	3.13±0.20	2.97±0.23	3.16±0.20
I can't talk (c)	3.16±0.15	3.16±0.22	3.09±0.22	3.15±0.26	3.07±0.16	3.11±0.22	2.56±0.22	3.16±0.20
X²/ KW	7.721	4.068	.660	4.245	28.577	9.941	24.963	1.872
p	.021	.131	.719	.120	.000	.007	.000	.392
Bonferroni	a>b,c				a>b,c	a>b,c	a>c	

EC: Emergency Contraception, SRH: Sexual and Reproductive Health, RHFPAS: Reproductive Health and Family Planning Attitude Scale, 1st Dimension: Unplanned and unwanted pregnancies and termination of pregnancy, 2nd Dimension: Sexually transmitted infections, 3rd Dimension: Infertility and assisted reproductive treatments. *Kruskal Wills, *Mann Whitney U; *Post Hoc Bonferroni, p<0.05

Table 2 (cont.). Comparison of the Mean Total Score of RHFPAS* and its Subscales with Sociodemographic, Emergency Contraception and Reproductive Health Characteristics (N=492).

Variables	Women (n=283)				Men (n=209)			
	RHFPAS* Total Score Average	1. Dimension* Total Score Average	2. Dimension* Total Score Average	3. Dimension* Total Score Average	RHFPAS* Total Score Average	1. Dimension* Total Score Average	2. Dimension* Total Score Average	3. Dimension* Total Score Average
SRH* subjects with the same sex;								
I can talk (a)	3.17±0.13	3.21±0.21	3.10±0.24	3.28±0.23	3.14±0.15	3.17±0.24	3.10±0.20	3.14±0.20
I can speak limitedly (b)	3.15±0.13	3.21±0.20	2.98±0.21	3.18±0.24	3.12±0.11	3.19±0.19	3.02±0.24	3.11±0.20
I can't talk (c)	3.05±0.08	3.04±0.18	2.96±0.05	3.20±0.16	3.11±0.13	3.22±0.22	2.88±0.22	3.24±0.20
X²/ KW	12.215	10.898	18.029	5.625	3.054	1.079	18.284	2.700
p	.002	.004	.000	.050	.217	.583	.000	.259
Bonferroni	a>b,c	a,b>c	a>b,c	a>b,c			a>b>c	
SRH issues with my opposite sex;								
I can talk (a)	3.18±0.14	3.19±0.21	3.15±0.24	3.17±0.27	3.16±0.14	3.19±0.23	3.14±0.25	3.13±0.19
I can speak limitedly (b)	3.15±0.12	3.21±0.21	3.04±0.23	3.20±0.20	3.11±0.15	3.14±0.25	3.05±0.21	3.13±0.18
I can't talk (c)	3.16±0.14	3.22±0.20	3.01±0.22	3.26±0.26	3.14±0.11	3.21±0.17	3.00±0.17	3.19±0.23
X²/ KW	20.870	.165	2.956	4.672	4.631	1.269	19.634	3.710
p	.000	.921	.228	.097	.099	.530	.000	.156
Bonferroni	a>b.c						a>b.c	
SRH unit in universities and high schools								
Necessary	3.16±0.13	3.21±0.21	3.07±0.23	3.20±0.24	3.12±0.13	3.16±0.22	3.07±0.22	3.13±0.20
Unnecessary	3.13±0.10	3.17±0.16	2.97±0.18	3.26±0.20	3.21±0.12	3.30±0.18	3.04±0.20	3.25±0.17
U	2407.000	2373.500	2108.000	2468.500	1666.000	1494.500	2169.000	1483.500
p	.208	.176	.038	.271	.013	.002	.465	.002
EC* hearing status								
Yes	3.65±0.12	3.19±0.22	3.15±0.23	3.17±0.24	3.19±0.11	3.23±0.24	3.18±0.16	3.17±0.17
No	3.15±0.13	3.21±0.21	3.02±0.22	3.23±0.23	3.11±0.14	3.16±0.21	3.02±0.22	3.11±0.21
U	6111.500	9013.500	7908.500	8256.500	2821.500	3664.500	2428.000	2823.500
p	.000	.835	.059	.171	.000	.086	.000	.002

EC: Emergency Contraception, **SRH:** Sexual and Reproductive Health, **RHFPAS:** Reproductive Health and Family Planning Attitude Scale, **1st Dimension:** Unplanned and unwanted pregnancies and termination of pregnancy, **2nd Dimension:** Sexually transmitted infections, **3rd Dimension:** Infertility and assisted reproductive treatments. *Kruskal Wills, *Mann Whitney U; *Post Hoc Bonferroni, p<0.05

Table 2 (cont.). Comparison of the Mean Total Score of RHFPAS* and its Subscales with Sociodemographic, Emergency Contraception and Reproductive Health Characteristics (N=492).

Variables	Women (n=283)				Men (n=209)			
	RHFPAS*	1. Dimension*	2. Dimension*	3. Dimension*	RHFPAS*	1. Dimension*	2. Dimension*	3. Dimension*
	Total Score Average	Total Score Average	Total Score Average	Total Score Average	Total Score Average	Total Score Average	Total Score Average	Total Score Average
Knowing when to use EC*								
Yes	3.24±0.11	3.19±0.20	3.13±0.22	3.20±0.23	3.11±0.15	3.16±0.25	3.07±0.23	3.22±0.18
No	3.15±0.14	3.22±0.22	3.02±0.23	3.21±0.24	3.16±0.11	3.20±0.20	3.06±0.19	3.07±0.20
U	7040.500	8713.500	8637.500	9622.500	4664.500	4966.000	5011.500	2822.000
p	.000	.161	.130	.955	.068	.258	.303	.000
Knowing EC* side effects								
Yes	3.23±0.11	3.20±0.20	3.13±0.23	3.19±0.23	3.12±0.15	3.18±0.25	3.08±0.24	3.25±0.16
No	3.15±0.13	3.20±0.21	3.02±0.23	3.22±0.23	3.14±0.12	3.18±0.21	3.06±0.20	3.19±0.21
U	6667.500	9363.000	7921.500	9113.000	5005.000	5375.000	4896.000	3287.500
p	.000	.937	.025	.647	.567	.573	.407	.000
Knowing where to access EC*								
Yes	3.25±0.12	3.19±0.22	3.12±0.23	3.21±0.23	3.13±0.14	3.18±0.24	3.09±0.22	3.20±0.17
No	3.15±0.13	3.22±0.21	3.01±0.23	3.20±0.23	3.14±0.13	3.18±0.21	3.04±0.21	3.09±0.22
U	7202.500	9303.500	8954.500	9670.000	5440.500	5252.500	4820.500	3755.500
p	.000	.310	.128	.628	.964	.634	.142	.000

EC: Emergency Contraception, SRH: Sexual and Reproductive Health, RHFPAS: Reproductive Health and Family Planning Attitude Scale, 1st Dimension: Unplanned and unwanted pregnancies and termination of pregnancy, 2nd Dimension: Sexually transmitted infections, 3rd Dimension: Infertility and assisted reproductive treatments. *Kruskal Wills, *Mann Whitney U; *Post Hoc Bonferroni, p<0.05

Table 3. The Relationship between the Mean Total Score of RHPAS* and its Subscales, Age and SRH Knowledge Level (N=492)

Variables		SRH knowledge level	Women (n=283)				Men (n=209)				
			1. Dimension* Total Score Average	2. Dimension* Total Score Average	3. Dimension* Total Score Average	RHPAS* Total Score Average	1. Dimension* Total Score Average	2. Dimension* Total Score Average	3. Dimension* Total Score Average	1. Dimension* Total Score Average	2. Dimension* Total Score Average
Age	r	.273**	.079	.022	.109	.059	.183**	.137*	.109	.065	.064
	p	.000	.183	.708	.068	.325	.008	.048	.118	.351	.356
RHPAS* Total Score Average	r	.204**	-	.766**	.550**	.303**	.227**	-	.743**	.489**	.442**
	p	.001	-	.000	.000	.000	.001	-	.000	.000	.000
1. Dimension* Total Score Average	r	.022	-	-	.123*	.020	209	-	-	209	209
	p	.712	-	-	.038	.741	.095	-	-	-.027	.169*
2. Dimension* Total Score Average	r	.301**	-	-	-	-.163**	.170	-	-	-	.014
	p	.000	-	-	-	.006	209	-	-	-	209
3. Dimension* Total Score Average	r	.113	-	-	-	-	.239**	-	-	-	-
	p	.058	-	-	-	-	.001	-	-	-	-

EC: Emergency Contraception, SRH: Sexual and Reproductive Health, RHPAS: Reproductive Health and Family Planning Attitude Scale, 1st Dimension: Unplanned and unwanted pregnancies and termination of pregnancy, 2nd Dimension: Sexually transmitted infections, 3rd Dimension: Infertility and assisted reproductive treatments.

show that young individuals frequently prefer to access SRH information from the media and the internet. This situation suggests that the internet, where information pollution is high, may lead to erroneous information, attitudes and behaviors related to SRH in young individuals.

Although SRH is a human right, a quarter of men report using SRH services (24). In the interventions, most of the male targeted SRH interventions are in the field of family planning (25). In a systematic review, it was reported that there are problems in accessing family planning services, unsafe sexual intercourse and gender inequalities in Kenya, Nigeria, and India in the south of the world and that this situation has negative consequences in terms of sexual and reproductive health (7). In this study, it was observed that more than half of men and women did not discuss SRH issues with their family and opposite sex. In men, it was observed that the knowledge and attitude of sexually transmitted infections were positively high in those who could discuss SRH issues with the opposite sex. In a systematic review, it was reported that the need for SRH was higher in men in developed countries (25). Sexual and Reproductive Health knowledge and access was found to be limited in men living in low- and middle-income countries (24). In a study evaluating SRH status in the United States, it was reported that SRH communication with the parents of the participants was low, almost half of the young people who had SRH communication with their families could discuss limited topics, and 60% of the young people were embarrassed to talk about condom use with their partner (3). The findings of the study are in parallel with the literature, and it is believed that informing men about SRH and including them in the processes will increase positive health outcomes. Male-specific sexual reproductive health interventions are scarce worldwide and improving SRH in men can improve outcomes (25).

Studies conducted in many developed countries have reported very high levels of awareness of emergency contraceptives, ranging from 61% to 93% (26,27). Although there is an increasing trend of early sexual activity in developing countries, knowledge about emergency contraceptives lags that in developed countries. This increases the risk of unintended pregnancy (28). In this study, it was

observed that more than half of the women and men had not heard of EC, did not know where to access it, side effects and time of use. It was observed that knowledge and attitude towards SRH and FP, unintended pregnancy, sexually transmitted diseases and infertility in women and sexually transmitted infections in men were positively high. In a study conducted with medical students in India, it was reported that the level of knowledge of resident doctors about EC was higher than that of general practitioners (28). In a study comparing the EC knowledge of Obstetrics and Gynecology physicians and Family physicians, it was found that the knowledge level of family physicians was lower than Obstetrics and Gynecology physicians. In the same study, it was reported that both physician groups need to have more knowledge about EC (29). EC efficacy depends on the timing of administration. Adequate stock and easy access are important to ensure timely access. In a study conducted in Georgia, it was reported that access to EC agents was limited at almost similar levels in central and provincial pharmacies (30). The findings of the study are similar to the findings of studies conducted in developing countries. EC knowledge among young individuals is quite low. In addition, the price and access difficulties of oral EC agents in Turkey also pose a risk for unintended pregnancies. Future studies on EC use in developing countries in terms of economic access may be recommended.

The low knowledge of SRH and EC in the study suggests the necessity of integrating proven public trainings into policies to increase the level of community welfare and health. Future studies on the use of EC in developing countries in terms of economic access may be recommended. In addition to being one of the limited studies conducted in Turkey, this study provides a comprehensive result that emergency contraception knowledge should be addressed separately in women and men at the university level. It may provide the addition of emergency contraception to family planning counseling and sexual and reproductive health education.

Strengths and limitations

Since the study was conducted only with young women and men studying at university, it is a limitation of the study that it cannot be generalized to the whole society. The strength of the study is that it was conducted with a large sample group in a certain age group.

Conclusion

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References

1. Esin, A., Mihçioğur, S., Demir, C., & Kanal, G. (2021). Türkiye’de Cinsel Sağlık ve Üreme Sağlığı Durum Analizi Raporu. [Internet]. [cited 2024 Jan 31]. Available from: https://scholar.google.com/scholar?hl=tr&as_sdt=0%2C5&q=Esin%2C+A.%2C+Mihçioğur%2C+S.%2C+Demir%2C+C.%2C+%26+Kanal%2C+G.+%282021%29.+Sexual+and+Reproductive+Health+Situation+Analysis+Report+in+Turkey.+&btnG=
2. Oğul Z. adölesan ve gençlerde cinsel sağlık üreme sağlığı: etkileyen faktörler ve sorunlar. Kadın Sağlığı Hemşireliği Dergisi, 2021;7(2):149-165.
3. Ford J V., Ivankovich MB, Coleman E. Sexual health indicators for the United States: Measuring progress and documenting public health needs. Front Public Heal. 2023 Jan 26;10.
4. Transforming our world: the 2030 Agenda for Sustainable Development | Department of Economic and Social Affairs [Internet]. [cited 2024 Jan 31]. Available from: <https://sdgs.un.org/2030agenda>
5. Martínez-García G, Ewing AC, Olugbade Y, DiClemente RJ, Kourtis AP. Crush: A Randomized Trial to Evaluate the Impact of a Mobile Health App on Adolescent Sexual Health. J Adolesc Heal. 2023 Feb 1;72(2):287–94.
6. Mills R, Mangone ER, Lesh N, Mohan D, Baraitser P. Chatbots to Improve Sexual and Reproductive Health: Realist Synthesis. J Med Internet Res. 2023;25:e46761
7. Akwara E, Pinchoff J, Abularrage T, White C, Ngo TD. The Urban Environment and Disparities in Sexual and Reproductive Health Outcomes in the Global South: a Scoping Review. J Urban Heal. 2023 Jun 1;100(3):525–61.
8. Ganle JK, Baatiema L, Ayamah P, Ofori CAE, Ameyaw EK, Seidu AA, et al. Family planning for urban slums in low- and middle-income countries: a scoping review of interventions/service delivery models and their impact. Int J Equity Health. 2021 Dec 1;20(1).
9. Salcedo J, Cleland K, Bartz D, Thompson I. Society of Family Planning Clinical Recommendation: Emergency contraception. Contraception. 2023 May 1;121.
10. BakenRa A, Gero A, Sanders J, Simmons R, Fay K, Turok DK. Pregnancy risk by frequency and timing of unprotected intercourse before intrauterine device placement for emergency contraception. Obstetrics & Gynecology, 2021;138(1):79-84.
11. Chant S, Klett-Davies M, Ramalho J. Challenges and potential solutions for adolescent girls in urban settings: a rapid evidence review. 2017. <https://eprints.lse.ac.uk/84297/1/Young%20Female%20Adolescents%20in%20Urban%20Areas%20RER%20FINAL.pdf>
12. Duminy J, Cleland J, Harpham T, Montgomery MR, Parnell S, Speizer IS. Urban family planning in low- and middle-income countries: a critical scoping review. Front Glob Women’s Heal. 2021;2:749636
13. Kökcü A. TSK’nin bir eğitim birliğinde verilmekte olan üreme sağlığı ve aile planlaması eğitimlerinin bu alandaki etik sorunlar üzerine etkisi. 2010. Doktora Tezi. Eskişehir: Eskişehir Osmangazi Üniversitesi Sağlık Bilimleri Enstitüsü
14. Amanu A, Birhanu Z, Godesso A. Sexual and reproductive health literacy among young people in Sub-Saharan Africa: evidence synthesis and implications. Global Health Action, 2023;16(1):2279841.
15. Lohan M, Brennan-Wilson A, Hunter R, Gabrio A, McDaid L, Young H, et al. Effects of gender-transformative relationships and sexuality education to reduce adolescent pregnancy (the JACK trial): a cluster-randomised trial. Lancet Public Heal. 2022 Jul 1;7(7):e626–37.
16. Manlove J, Welti K, Whitfield B, Faccio

- B, Finocharo J, Ciaravino S. Impacts of Re:MIX—A School-Based Teen Pregnancy Prevention Program Incorporating Young Parent Coeducators. *J Sch Health*. 2021 Nov 1;91(11):915–27.
17. Mbizvo MT, Kasonda K, Muntalima NC, Rosen JG, Inambwae S, Namukonda ES, et al. Comprehensive sexuality education linked to sexual and reproductive health services reduces early and unintended pregnancies among in-school adolescent girls in Zambia. *BMC Public Health*. 2023 Dec 1;23(1).
 18. Miller MK, Catley D, Adams A, Staggs VS, Dowd MD, Stancil SL, et al. Brief Motivational Intervention to Improve Adolescent Sexual Health Service Uptake: A Pilot Randomized Controlled Trial in the Emergency Department. *J Pediatr*. 2021 Oct 1;237:250-257.e2.
 19. French V, Steinauer J. Sexual and reproductive health teaching in undergraduate medical education: A narrative review. *Int J Gynecol Obstet*. 2023 Oct 1;163(1):23–30.
 20. Groenewald C, Isaacs N, Qoza P. Hope, agency, and adolescents' sexual and reproductive health: A mini review. *Front Reprod Heal*. 2023;5.
 21. Moyo S, Rusinga O. Contraceptives: Adolescents' knowledge, attitudes and practices. A case study of rural Mhondoro-Ngezi District, Zimbabwe. *Afr J Reprod Health*. 2017;21(1):49–63.
 22. Namukonda ES, Rosen JG, Simataa MN, Chibuye M, Mbizvo MT, Kangale C. Sexual and reproductive health knowledge, attitudes and service uptake barriers among Zambian in-school adolescents: a mixed methods study. *Sex Education*, 2021;21(4):463-479.
 23. Palmer MJ, Henschke N, Villanueva G, Maayan N, Bergman H, Glenton C, et al. Targeted client communication via mobile devices for improving sexual and reproductive health. *Cochrane Database Syst Rev*. 2020 Aug 11;2020(8).
 24. Nyalela M, Dlungwane T. Men's utilisation of sexual and reproductive health services in low- and middle-income countries: A narrative review. *South African J Infect Dis*. 2023 Apr 21;38(1).
 25. Sawalma M, Shalash A, Wahdan Y, Nemer M, Khalawi H, Hijazi B, et al. Sexual and reproductive health interventions geared toward adolescent males: A scoping review. *J Pediatr Nurs*. 2023 Nov 1;73:e19–26.
 26. Bearak J, Popinchalk A, Ganatra B, Moller AB, Tunçalp Ö, Beavin C, Alkema L. Unintended pregnancy and abortion by income, region, and the legal status of abortion: estimates from a comprehensive model for 1990–2019. *The Lancet Global Health*, 2020;8(9):e1152-e1161
 27. Walker DM, Torres P, Gutierrez JP, Flemming K, Bertozzi SM. Emergency contraception use is correlated with increased condom use among adolescents: results from Mexico. *Journal of Adolescent Health*, 2004;35(4):329-334.
 28. Panda S, Das R, Das A, Sharma N, Sharma A. A study to assess the knowledge and awareness among young doctors about emergency contraception. *Journal of Family Medicine and Primary Care*, 2021;10(6):2304-2312.
 29. Rapkin RB, Griner SB, Godcharles CL, Vamos CA, Neelamegam M, Thompson EL, Daley EM. Obstetrics and gynecology and family medicine residents' training and knowledge on emergency contraception. *Journal of Women's Health*, 2019;28(6):794-801.
 30. Stone RH, Gross S, Reardon B, Young HN. Emergency contraception access and counseling in metropolitan and nonmetropolitan pharmacies in Georgia. *J Pharm Pract*. 2023 Jun 1;36(3):523–31.