



ARAŞTIRMA / RESEARCH

Effect of training program given to the students upon family planning attitudes: a semi-experimental study

Öğrencilere uygulanan eğitiminin aile planlaması tutumuna etkisi: yarı deneysel bir çalışma

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Abstract

Purpose: Family planning is an effective strategy to minimize maternal mortality, child death, miscarriages and unintended pregnancies. Nursing students, the future's health personnel, should have sufficient knowledge and a positive attitude towards family planning services. This study was undertaken to examine the effect of training program given to the nursing students upon family planning attitudes.

Materials and Methods: The study, with a control group and semi-experimental design, was done at a university located in southern Türkiye. The sample of the study was consisted of 100 students, 50 students assigned to the experimental group and another 50 students to the control group. The experimental group students received weekly a two-hour family planning training for 10 weeks (except for the 1st and 10th weeks). The control group received no training. "Information Request Form" -which included students' socio-demographic aspects- and "Family Planning Attitude Scale" was administered to the participants in the experimental and control groups in the 1st week and last week- were used.

Results: Following the family planning training, the experimental group students' family planning attitude scores went up and this rise was found to statistically be significant. In the study, it was concluded that training intervention affected students' family planning attitudes positively.

Conclusion: There is an urgent need for behavior change interventions so that a positive attitude change towards family planning can be achieved among students.

Keywords: Family planning training, student, attitude

Öz

Amaç: Aile planlaması anne ölümlerini, çocuk ölümlerini, düşükleri ve istenmeyen gebelikleri azaltmak için etkili bir stratejidir. Geleceğin sağlık personeli olacak olan hemşirelik öğrencileri, aile planlaması hizmetleri hakkında yeterli bilgi ve olumlu tutuma sahip olmalıdır. Bu çalışma öğrenci hemşirelere uygulanan eğitimin AP tutumlarına etkisini incelemek amacıyla yapıldı.

Gereç ve Yöntem: Kontrol gruplu yarı deneysel olarak yapılan çalışma Türkiye'nin güneyinde yer alan bir üniversitede gerçekleşti. Çalışmanın örneklemini deney grubu (50 öğrenci) ve kontrol grubu (50 öğrenci) olmak üzere toplam 100 öğrenci oluşturdu. Deney grubu öğrencilere 10 hafta boyunca (ilk ve son haftalar hariç) haftada 2 saat aile planlaması eğitimi verildi. Kontrol grubuna eğitim verilmedi. Öğrencilerin sosyo-demografik özelliklerinin yer aldığı "Kişisel Bilgi Formu" ve "Aile Planlaması Tutum Ölçeği", ilk ve son haftada olmak üzere deney ve kontrol gruplarına iki kez uygulandı.

Bulgular: Aile planlaması eğitim müdahalesi sonrasında deney grubu öğrencilerinin aile planlaması tutum puanları artış gösterdi ve bu artış istatistiksel olarak anlamlı bulundu. Çalışmada eğitim müdahalesinin öğrencilerin AP tutumlarını olumlu yönde etkilediği sonucuna ulaşıldı.

Sonuç: Öğrencilerde aile planlamasına yönelik olumlu tutum değişimi sağlamak için davranış değişikliği müdahalelerine acilen ihtiyaç vardır.

Anahtar kelimeler: Aile planlaması eğitimi, öğrenci, tutum

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INTRODUCTION

Family planning (FP) is a key intervention for individuals to have children when they intend and as many as they want, to adjust the time that passes between pregnancies, to prevent themselves from undesired pregnancies and helps those without children have children. FP is one of the effective strategies used in the developing countries to minimize maternal and child deaths and to prevent miscarriages and unintended pregnancies¹. Using FP methods; there may be positive contributions in the sense that birth control can be encouraged, women can be reinforced, individual and social knowledge level can be increased and social health can be protected and improved². For the long term outcomes; FP is essential in order to slow down population growth rate, to improve socio-economic status and to attain regional and national objectives³.

World Health Organization (WHO) reported that more than 200 million individuals in the developing countries unsatisfactorily use modern FP methods. According to WHO 2018 figures; cases of sexually transmitted diseases have been increasing day by day and 357 million individuals catch numerous diseases each year such as –particularly- chlamydia, trichomonas, syphilis, gonorrhea owing to lack or misuse of FP³. Besides; it is reported that among young people aged 10-24 years, representing 24% of the world population, rate of unplanned and unintended pregnancies continues to climb up annually due to lack of use of FP methods⁴.

In Türkiye, the last *Turkey Demographic and Health Survey* TDHS-2018 reported that the rate of those using any kind of FP methods was 70%, modern methods 49% and traditional methods 21%. In the same survey; it was concluded that 12% of the married women demonstrated unmet FP needs. Unmet FP needs may result in unwanted pregnancies and unsafe abortions⁵. Besides, in the systematic review undertaken by Gavas and İnal⁶; it was reported that withdrawal -one of the traditional methods- was mainly preferred by individuals (9.1%-61.3%) despite varying rates in the studies (9.1%-61.3%). Use of condom ranged between 13.2% and 47.3%, intrauterine device between 19.1% and 25.2% and oral contraceptives between 13.9% and 50.9%⁶.

In spite of recent wide use of FP methods; many socio-demographic and socio-cultural variables influence these methods⁷. Age, education status,

economical status, social security, ethnic origins, religions, languages, relationship status, number pregnancies and children, marriage duration, intention for pregnancy, status of satisfaction with the methods used⁸ and FP attitudes play a key role in deciding to use methods⁹. However; training and educational interventions may help raise awareness of FP methods and help individuals make conscious decisions and use FP methods effectively. FP training interventions should be provided by health professionals. The concept of FP and trainings given about FP methods are the basic step in using suitable contraceptive methods. Therefore; FP training to be delivered to young people is very important. Many young people are less knowledgeable and experienced in receiving FP services as compared to adults⁷. Also, young people generally do not have any access to basic FP information on reproductive health. Additionally; in this age period -which triggers curiosity, learning and experience among young people- their behavior change takes place quickly and some health and social dangers appear¹⁰. Governments should focus on the needs of the young people more so that a healthy transition to adulthood can occur⁴. This is important because general population of Türkiye exceeded 82 million at the end of 2018 and the population of 15-24 age group reached 13 million⁵. Particularly young adults generally do not show basic knowledge^{11,12} and positive attitudes about reproduction health and FP methods. As a result of the fact that young individuals are unable to reach FP services or may use these services inadequately/wrongly; adolescent pregnancies, sexually transmitted diseases, undesired pregnancies, unsafe sexual experiences and miscarriages may occur¹³.

Nursing student education aims at enriching theoretical knowledge, improving clinical skills and having positive effects upon social perception and attitudes. In order to deliver better FP services in society; nursing students are expected to have sufficient knowledge and positive attitudes towards FP concept and methods. Therefore; this study focused on examining the effect of training program given to the nursing students –who are in the young age group and will be employed as health personnel in the future- upon their FP attitudes.

MATERIALS AND METHODS

The study was done in semi-experimental design with control group and experimental group of students

who studied at nursing school of a university located in southern Türkiye. This study received ethics approval from the Ethics Board for Scientific Researches of Medicine Faculty of Hatay Mustafa Kemal University (Date: 26/12/2019, Meeting Number:15, Decision no:21). Also, necessary official approvals were obtained from the university where the study was conducted. Before the study initiated, the participants were thoroughly instructed in the aims and details of the study and informed consent was obtained. The Principles set out by the Declaration of Helsinki were also followed.

The population of the study was consisted of the third grade students who studied at nursing school of a university located in southern province of Türkiye during 2019-2020 spring semester (N=110). The "Family Planning Nursing" course given to the third year is among the elective courses. Therefore, a group of students did not take this course or a group of students. Based on this, the students who took the course constituted the experimental group and the students who did not take the course formed the control group. After all the students were explained and informed of the purpose of the study, they gave informed consents. All the students were targeted. Students who received FP training constituted the experimental group (n=55) whereas those who did not receive FP training constituted the control group (n=55). Five experimental group students who did not perform the last test although they received the training and two control group students who did not volunteer to the study were dropped out of the study. Also, questionnaire forms of three control group students who were concluded to have given incorrect and untrue responses were not evaluated. Thus the study was concluded with 100 students; the experimental group (n=50) and the control group (n=50).

Data collection tools

Information form

The form, developed by the researchers in line with the relevant literature¹⁻¹³ targeted at information about students' socio-demographic characteristics (age, gender, employment status, mother and father's educational status and profession, place of family residence, family type, income status perception, number of siblings), ideal number of children intended to have in the future and knowledge of FP methods and was consisted of 19 questions.

Family Planning Attitude Scale (FPAS)

The scale, measuring individuals' attitudes towards FP, was developed by Örsal and Kubilay¹⁴. It is a 5 point Likert scale with 34 items and three sub-dimensions. The sub-dimensions are "Attitude of Society to FP", "Attitude towards FP Methods", and "Attitude towards Pregnancy". Attitude of Society to FP sub-dimension includes 15 items (15-75 score), Attitude towards FP Methods 11 items (11-55 score) and Attitude towards Pregnancy 8 items (8-40 score). Total score of the scale varies between 34 and 170. Higher scores mean more positive FP attitudes. Scale Cronbach alpha coefficient was reported to be 0.90. In the current study Cronbach alpha coefficient was 0.82.

Implementation

Experimental group

FP training was conducted by one of the researchers. The data were collected between the 27th of December 2019 and the 13th of March 2020. The experimental group students received a two-hour family planning training in a week for 10 weeks (except for the 1st and the last weeks). Each training session lasted averagely 40 ± 5 minutes and was given at the same place each week. Arrangement and lightening of the training setting and place of projectors and computer were realized by the researcher. Training sessions, held by the researchers, provided interactive learning methods such as question-answer, discussion and brain storming using PowerPoint presentations. Before the next training session initiated, training topics taught previous week were revised. The sessions initiated after the aim and objectives of the training were explained. In the first session (1st week), the researchers introduced themselves to the students and explained the aim and importance of the study, confidentiality of the study, how the study would be conducted, how long it would take to undertake the study, the study results/achievements and expectations of the researchers. In the same session, students' informed consents were obtained, too. Then, all data collection forms were administered to the experimental group students. Each week, a different topic of FP methods (2nd week: FP definition and status of FP services across the world and Türkiye, 3rd week: Anatomies Women-Men reproduction systems and physiology of pregnancy, 4th week: Sexually transmitted diseases, 5th week: FP counseling and communication, 6th week: Hormonal contraceptives, 7th week: Barrier

methods, 8th week: Intra-uterine Devices, 9th week: voluntary surgical sterilization, 10th week: Traditional methods, 11th week: FP during menstruation and extraordinary situations) was taught in the experimental group. In the last session (12th week), data collection tools were again administered and students were told that the training sessions were completed.

Control group

The control group did not receive FP training. The first and the last training sessions of the control group were realized in the same way as in the experimental group. In the first session; the researchers introduced themselves to the students and explained the aim and importance of the study, confidentiality of the study, how the study would be conducted, how long it would take to undertake the study, the study results/achievements and expectations of the researchers. In the same session, students' informed consents were collected, too. Then, all data collection tools were administered to the control group students (1st week). In the last session, data collection tools were again administered and students were told that the training sessions were completed.

Statistical analysis

The data were analyzed using IBM SPSS (version 25) (SPSS, IBM Corporation, New York, USA) package program. Whether or not the data followed a normal distribution was assessed using Kolmogorov Smirnov test and coefficient of skewness and coefficient of kurtosis. Besides descriptive statistics, Chi-square tests (pearson chi-square test, fisher's exact test, likelihood ratio test) were used to determine the difference between the sociodemographic and FP knowledge status of the experimental and control group students. We performed an independent samples t-test to analyze the differences between the experimental and control groups in the FP attitude scores. In addition, we conducted a paired samples t-test to determine differences among the pre-training and post-training scores of the experimental and control groups. Results were considered significant at $p < 0.05$.

RESULTS

Five students in the experimental group and another five students in the control group could not finish the study and were dropped out of the study in final

analysis. The study was completed with 66 female students (average age = 20.62, sd= 1.82) and 34 male students (average age = 21.97, sd = 2.83).

Table 1 presented distribution of socio-demographic characteristics of the experimental and control groups. Majority of the experimental group was consisted of female (60%), single (94%) and unemployed (92%) students. It was identified that among the experimental group students, 64% of the mothers had an educational level of ≤ 8 years while 44 % of the fathers had an educational level of ≤ 8 years.

Most of the students (84%) had nuclear families and 66% of them reported a moderate level of income. Majority of the control group students were female (72%), single (92%) and unemployed (92%) students. It was identified that among the control group students, 74% of the mothers had an educational level of ≤ 8 years while 56% of the fathers had an educational level of ≤ 8 years.

Most of the students (84.6%) had nuclear families and 56% of them reported a moderate level of income. Besides, no statistically significant difference was found between the experimental and control groups in terms of gender, marital status, employment status, mother-father education and employment status, place of family residence, income status perception, number of siblings and ideal number of children intended to have in the future ($p > 0.05$, Table 1).

Table 2 showed distribution of FP knowledge status of the participants of the experimental and control groups. In the experimental group; it was noted that 74% of them knew the term FP whereas 50% of them knew FP methods (Table 2) but 38.8% of the participants of the same group reported to have received FP information from more than one source (television, radio, internet, social media). As for the control group, 68% of them knew the term FP and 30% of them knew FP methods (Table 2). Most of the participants (41.2%) received FP information from family and friends.

Also, there was a statistically significant difference between the experimental and control groups in terms of knowing the term FP ($p = 0.21$). However; this difference was on behalf of the experimental group. Yet, no difference was identified between the experimental and control groups in terms of knowing FP methods (oral contraceptives, intrauterine device, preservatives, vasectomy) ($p > 0.05$, Table 2). When

pre-training and post-training average scores of the experimental group were compared in Table 3, it was noted that a statistically significant difference existed

in all sub-scales and total score –except Attitude towards FP Methods sub-dimension ($p=0.161$) ($p<0.05$, Table 2).

Table 1. Participants' descriptive characteristics

Variables	Experimental group		Control group		p value
	X ± SD		X ± SD		
Average age	21.52 ± 2.16		20.64±2.36		
	n	%	n	%	
Gender					
Female	30	60.0	36	72.0	p*=.123
Male	20	40.0	14	28.0	
Marital status					
Married	3	6.0	4	8.0	p**=.226
Single	47	94.0	46	92.0	
Employment status					
Unemployed	46	92.0	46	92.0	p**=.297
Employed	4	8.0	4	8.0	
Mothers' education					
≤8 years	32	64.0	37	74.0	p*=.830
≥9 years	18	36.0	13	26.0	
Mothers' employment status					
Housewives	43	86.0	39	78.0	p**=.064
Employed	7	14.0	11	22.0	
Fathers' education					
≤8 years	22	44.0	28	56.0	p*=.449
≥9 years	28	56.0	22	44.0	
Fathers' employment status					
Unemployed / Retired	16	32.0	18	36.0	p**=.642
Employed	34	68.0	32	64.0	
Family residence					
Province	10	20.0	21	42.0	p***=.269
County	26	52.0	22	44.0	
Village	14	28.0	7	14.0	
Family type					
Nuclear	42	84.0	44	84.6	p***=.357
Extended / traditional	6	12.0	7	13.5	
Separated	2	4.0	1	1.9	
Income status perception					
Satisfactory	9	18.0	9	18.0	p***=.739
Moderate	33	66.0	26	56.0	
Dissatisfactory	8	16.0	13	26.0	
Number of siblings					
≤ 2	27	54.0	33	63.5	p*=.091
≥ 3	23	46.0	19	36.5	
Ideal number of children intended to have in the future					
≤ 2	30	60.0	33	66.0	p*=.815
≥ 3	20	40.0	17	34.0	
Total	50	100.0	50	100.0	

*Pearson Chi-Square test, **Fisher's Exact test, ***Likelihood Ratio test

Also, there was a statistically significant difference between the experimental and control groups in terms of knowing the term FP ($p=0.21$). However; this difference was on behalf of the experimental group. Yet, no difference was identified between the experimental and control groups in terms of knowing FP methods (oral contraceptives, intrauterine device, preservatives, vasectomy) ($p>0.05$, Table 2). When pre-training and post-training average scores of the

experimental group were compared in Table 3, it was noted that a statistically significant difference existed in all sub-scales and total score –except Attitude towards FP Methods sub-dimension ($p=0.161$) ($p<0.05$, Table 2). When pre-training and post-training average scores of the control group were compared in Table 4, no statistically significant difference was found in all sub-scales and total score ($p>0.05$, Table 3).

Table 2. Participants' knowledge status of family planning

Variables	Experimental group		Control group		p value
	n	%	n	%	
Knowledge status of the term FP					p**=.021
Yes	37	74.0	34	68.0	
No	13	26.0	16	32.0	
Knowledge status of FP methods					p*=.758
Yes	25	50.0	15	30.0	
No	25	50.0	35	70.0	
Knowledge status of oral contraceptives					p***=.571
Yes	9	18.0	13	26.0	
No	41	82.0	37	74.0	
Knowledge status of intra-uterine Devices					p***=.598
Yes	8	16.0	8	16.0	
No	42	84.0	42	84.0	
Knowledge status of tubal ligation					p***=.016
Yes	7	14.0	5	10.0	
No	43	86.0	45	90.0	
Knowledge status of preservatives					p***=.416
Yes	10	20.0	12	24.0	
No	40	80.0	38	76.0	
Knowledge status of vasectomy					p***=.060
Yes	3	6.0	1	2.0	
No	47	94.0	49	98.0	
Are FP services necessary at universities?					p***=.523
Yes	47	94.0	35	70.0	
No	3	6.0	15	30.0	
Total	50	100.0	50	100.0	

*Pearson Chi-Square test, **Fisher's Exact test, ***Likelihood Ratio test FP=Family Planning

Table 3. Pre-training and post-training average scores of the experimental group

Variables	Experimental group			T test, p value
	Min-max.	Pre-education	Post-education	
		Mean \pm SD	Mean \pm SD	
Attitude of Society to FP	15-75	62.35 \pm 7.47	65.20 \pm 14.38	t=-1.424 p<0.001
Attitude Towards FP Methods	11-55	37.26 \pm 6.29	44.22 \pm 6.68	t=-6.369 p=0.161
Attitude Towards Pregnancy	8-40	31.98 \pm 4.37	34.18 \pm 4.39	t=-3.406 p=0.001
Total	34-170	131.46 \pm 14.37	143.60 \pm 19.03	t=-4.588 p<0.001

SD=Standard Deviation, T-test=Paired Sample t test, FP=Family Planning

Table 4. Pre-training and post-training average scores of the control group

FPAS	Control group			t test, p value
	Min-max.	Pre-education Mean ± SD	Post-education Mean ± SD	
Attitude of Society to FP	15-75	58.18±7.86	54.56±12.67	t=1.606 p=0.115
Attitude Towards FP Methods	11-55	37.32±7.68	38.02±7.60	t=-0.508 p=0.614
Attitude Towards Pregnancy	8-40	29.78±5.10	31.10±6.29	t=-1.148 p=0.257
Total	34-170	125.28±17.29	123.68±22.31	t=0.399 p=0.692

SD=Standard Deviation, t=Paired Sample t test FPAS= Family Planning Attitude Scale FP=Family Planning

Table 5 demonstrated the comparison of the pre-training and post-training average scores of the experimental and control group participants. When pre-training average scores of the experimental and control groups were investigated; a correlation was found in two sub-dimensions (Attitude of Society to FP and Attitude towards Pregnancy) ($p < 0.05$). In

these two sub-dimensions; the experimental group students had higher average scores than the control group. Also, there was statistically significant difference between the experimental and control groups in terms of post-training average scores in all sub-dimensions and total average score ($p < 0.05$).

Table 5. Experimental and control groups' pre-training and post-training average scores

FPAS	Experimental group		Control group		t-Test and p* value	
	Pre-education Mean ± SD	Post-education Mean ± SD	Pre-education Mean ± SD	Post-education Mean ± SD		
Attitude of Society to FP	62.35±7.47	65.20±14.38	58.18±7.86	54.56±12.67	t=2.694 p=0.008	t=3.923 p<0.001
Attitude Towards FP Methods	37.26±6.29	44.22±6.68	37.32±7.68	38.02±7.60	t=-0.039 p=0.969	t=4.330 p<0.001
Attitude Towards Pregnancy	31.98±4.37	34.18±4.39	29.78±5.10	31.10±6.29	t=2.312 p=0.023	t=2.835 p=0.006
Total	131.46±14.3 7	143.60±19.0 3	125.28±17.29	123.68±22.31	t=1.910 p=0.059	t=4.803 p<0.001

SD=Standard deviation, t: Independent Sample t test *Comparison of pre-training scores of the experimental and control groups ** Comparison of post-training scores of the experimental and control groups FPAS=Family Planning Attitude Scale FP=Family Planning

DISCUSSION

Of the strategies used to minimize maternal and child mortality and to prevent miscarriages and unintended pregnancies; the most important one is FP services. Considering the fact that today 24% of the global population is consisted of young people aged 10-24

years¹⁵ and 15.8% of the Turkish population is consisted of those aged 15-27 years³; it is important to reach young individuals through FP training interventions.

The current study was done with nursing students, who will build up health sector –accepted as one of the most significant sectors in the society. In the

study, it was identified that most of the nursing students were female and single, were not employed, lived in nuclear families, had moderate income level and had ≤ 2 siblings (Table 1). Although the number of male nurses in Türkiye has been increasing day by day, nursing is still accepted as women's profession¹⁶. Therefore; the number of the female students was found to be bigger than that of male students.

Male and female nurses –future's health personnel– should be educated and trained about safe, effective, cost-effective and acceptable FP methods and health services that help women be pregnant. Most of the students in the current study wanted to have ≤ 2 children. However; half of the experimental group students and most of the control group students explained that they did not know FP methods (Table 2). It was identified that students of all academic departments in a university¹⁰ and students of social sciences department of another university¹⁷ in Turkey; students of health schools and graduate students of non-health schools¹⁸ and students of pharmacy¹⁹ in Malaysia; and studies done with young adults in Yemen reported that they did not have enough knowledge on FP. However; another study done with university students in Portugal argued that students had high level of knowledge, positive attitudes and skills on contraception and sexually transmitted diseases²⁰. In the relevant literature; there are differences among the relevant studies, therefore it may not be correct to generalize conclusions of knowledge level because knowledge level may be associated with age, educational level, academic department where the students study, economical status, mothers and fathers' educational status, social security, ethnic origin, religion, language, relation status, mass media²¹, status to use methods⁹ status of satisfaction with methods⁸ and **different attitudes towards methods**. When knowledge sources of FP methods in the current study were examined, it was noted that most of the experimental group received the information from television, radio, internet, social media while the control group from family and friends (Table 2). In the study of El-Ghany²¹ done at Hadhramout University, it was reported that majority of female students receive FP information from television, radio, internet, social media. In the current study, the experimental group showed similarities to the literature in terms of information sources while the control group demonstrated a difference from the literature; to which attention should be paid because peer and friend groups –considered as FP sources– may be wrong sources –particularly– in youth.

Therefore; the information provided –especially– by health personnel and health care academicians should be taken into account and that is why curriculums of health sciences as well as social sciences should include FP educations and trainings.

In Türkiye, there is a need for training and educational interventions for -in general– reproduction health and sexual health and -in particular– FP services, FP methods, FP counseling and sexually transmitted diseases in order to achieve a positive change in young people's FP attitudes. In the current study; it was identified that after the training intervention, the experimental group demonstrated high scores in FPAS sub dimensions - Attitude of Society to FP and Attitude towards Pregnancy and total score (Table 3). In other words; the training intervention improved young individuals' positive attitudes about FP. In a randomized controlled study undertaken by Ali et al.²² in Jordan to investigate the effect of interactive teaching/education upon university students' knowledge and attitudes towards reproductive health; it was suggested that students utilized the training intervention positively. Besides; after FP training was integrated into curriculum of medicine faculty, the effect of the training was associated with students' higher scores in FP knowledge, clinical skills and individual competence²³. Similarly; many studies underlined the positive effect of training and education upon FP knowledge, attitude and behaviors²⁴⁻²⁸. Our study findings concurred with the findings in the literature. Attitude, described as the reaction of knowledge that people have about particular events around their environment, is not an unchangeable and fixed concept but –to the contrary– may be altered through learning processes²⁹. In this sense; training interventions -which produce highly desirable outcomes when they are realized in a planned and cost-effective manner^{22,30} are valuable in attaining positive attitude changes and -therefore– may contribute to raising awareness for a positive attitude change towards FP, to make conscious decisions^{31,32} and to use FP methods in a more effective way.

In this study; the control group participants' pre-training and post-training average scores were slightly above the average in FPAS; which made us conclude that the control group students demonstrated a neutral attitude towards FP methods and birth. Meanwhile, following the training intervention no increase was seen in control group's FPAS total score

and subscale scores (Table 4). Leon-Larios and Macías-Seda³³ studied university students' knowledge, attitude and experiences on sexual health and contraceptives in Spain and came to the conclusion that students' sexual health level and attitudes was poor. Another study done in Italy with 413 female students who were aged 18-30 years and studied in a university in Italy identified that students do not have enough awareness about contraceptive methods and need counseling about contraceptive methods⁷. Likewise, a study assessed university students' contraceptive knowledge and practices in Uganda and reported that students' awareness and theoretical knowledge about contraceptive methods are not put into practice³⁴. In this study findings were similar to the relevant literature. With no doubt, attitude changes are affected by training interventions as well as sociodemographic and sociocultural factors. Negative attitudes towards FP services and inability to use FP methods may lead to serious reproductive health problems such as risky sexual behaviors, unplanned pregnancy and sexually transmitted diseases. It is essential for nurses employed in primary health care institutions to deliver effective training interventions and counseling services in order to terminate above mentioned serious reproductive health problems.

It was found that nursing students to whom FP training and education was provided demonstrated more positive scores in "Attitude Towards FP Methods", and "Attitude Towards Pregnancy" and total score as compared to those who did not receive any training (Table 5). Likewise, Eryılmaz and Ege³⁵ identified that women who received FP counseling services had higher scores in "Attitude towards FP Methods" and "Attitude towards Pregnancy" as compared to those who did not receive FP counseling services. A similar result was also found in the study of Aktoprak³⁶. Our study findings concurred with the literature. So, it may be concluded that FP training or counseling to be delivered to individuals affects FP attitudes positively.

Although the current study was one of the rare studies that investigated the effect of a planned training upon family planning attitudes, it was conducted only with undergraduate students who studied at nursing school of a university. Therefore, the study findings can be generalized only to this group.

The study demonstrated that training intervention influenced positively the development of students'

FP attitudes. Since family planning services are one of the effective strategies to minimize maternal mortality, child death and unintended pregnancies, effective training and counseling should be accessible for everyone. Nursing students, providers of future health services, should have effective knowledge, positive attitudes and perceptions. Knowing all FP methods –including natural FP methods- will help them give patient-centered and individualized options.

Therefore, it should be encouraged that particularly in the primary health care services FP training and counseling should be provided by nurses and protection and improvement of social health should be promoted. Besides, it is also recommended that in preparing training programs, a direct communication and contact should be created with different professionals like gynecologists, urologists, nurses, midwives, infectious diseases specialists and psychologists.

Yazar Katkıları: Çalışma konsepti/Tasarımı: RE, YGŞ; Veri toplama: YGŞ, RE; Veri analizi ve yorumlama: YGŞ; Yazı taslağı: RE; İçeriğin eleştirel incelenmesi: RE, YGŞ; Son onay ve sorumluluk: RE, YGŞ; Teknik ve malzeme desteği: RE; Süpervizyon: RE, YGŞ; Fon sağlama (mevcut ise): yok.

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