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Investigation of the Effect of Antenatal Family Planning Counseling in Primary Care on Postpartum Family Planning Method Use

Birinci Basamakta Verilen Doğum Öncesi Aile Planlaması Danışmanlığının Doğum Sonrası Aile Planlaması Yöntemi Kullanımına Etkisinin İncelenmesi

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ABSTRACT

Objective: This study aimed to assess the effect of family planning (FP) counseling provided to pregnant women who attended a family health center on their use of FP after pregnancy.

Methods: The antenatal and postpartum records of 219 of 225 women registered at a family health centre in Kastamonu between 2017 and 2022, whose follow-up was complete and without missing information, were retrospectively examined. The patients' sociodemographic data, obstetric information, the FP method they planned to use after birth (recorded at the third and fourth antenatal follow-ups), and information on postpartum FP method use were recorded.

Results: The mean age of the participants in this study was 29.6 years, and 41.5% were university graduates. The study reported an unplanned pregnancy rate of 16.4%. When asked about the FP method they would use in the postpartum period during the third antenatal visit (28–32 weeks), 52.5% of participants were undecided, 42.0% preferred a modern method, and participants were then provided FP method counselling. At the fourth antenatal follow-up (36–38 weeks), the rate of undecided individuals decreased significantly to 35.6%, while the rate of those preferring a modern method increased significantly to 59.4% ($p < 0.001$). At the postpartum follow-up (30–42 days after birth), 95% of women had started using FP methods: condoms were the most commonly used modern method (63.9%) and injections were the least used (1.9%).

Conclusion: FP consultancy services provided during the antenatal period facilitate women's ability to make informed choices in the

ÖZ

Amaç: Bu çalışmada aile sağlığı merkezinde gebelik döneminde verilen aile planlaması danışmanlığının, gebelik sonrası aile planlaması kullanım durumuna etkisinin incelenmesi amaçlanmıştır.

Yöntemler: 2017–2022 yılları arasında Kastamonu'daki bir aile sağlığı merkezine kayıtlı olan 225 kadından, izlemleri tam ve eksik bilgi olmayan 219 kadının gebe-lohusa izlem dosyaları retrospektif olarak incelendi. Hastaların sosyodemografik verileri, obstetrik bilgileri, doğumdan sonra kullanmayı planladıkları aile planlaması (AP) yöntemi (üçüncü ve dördüncü antenatal izlemde kaydedilen) ve postpartum AP yöntem kullanımı hakkında bilgiler kaydedilmiştir.

Bulgular: Çalışmaya katılanların ortalama yaşı 29,6 ve %41,5'i üniversite mezunuydu. Çalışmada, plansız gebelik oranı %16,4 bulundu. Üçüncü antenatal izlemde yapılan gebe izlemde (28–32 hafta) postpartum dönemde kullanacakları AP yöntemi sorulduğunda, katılımcıların %52,5'i kararsızdı, modern yöntem tercih edenlerin oranı %42,0 olarak bulundu, sonrasında AP yöntem danışmanlığı verildi. Dördüncü antenatal izlemde (36-38 hafta), kararsızların oranı anlamlı olarak azalmış (%35,6) ve modern yöntem tercih edenlerin oranı ise anlamlı olarak artmıştı (%59,4) ($p < 0,001$). Doğumdan 30-42 gün sonra yapılan lohusa izleminde, kadınların %95'i aile planlaması yöntemini kullanmaya başladı; kondom en çok tercih edilen modern yöntemdi (%63,9), enjeksiyon ise en az tercih edilen yöntemdi (%1,9).

Sonuç: Antenatal dönemde verilen AP danışmanlık hizmetleri, kadınların doğum sonrası dönemde bilinçli seçimler yapabilmelerini kolaylaştırarak hem kendi sağlıklarını hem de yeni doğan bebeklerinin sağlığının korunmasına katkıda bulunur.

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ABSTRACT

postpartum period, thereby contributing to the protection of both their own health and that of their newborns.

Keywords: Family planning counselling, postpartum contraception, family planning, modern family planning

ÖZ

Anahtar Sözcükler: Aile planlaması danışmanlığı, doğum sonrası kontrasepsiyon, aile planlaması, modern aile planlaması

INTRODUCTION

Family planning (FP) refers to the conscious effort of a couple to limit the number of children they will have or to determine the intervals between births, typically through the use of contraceptive methods (1). The most important goals of FP are to protect and improve maternal and fetal health, to inform couples, to prevent unwanted pregnancies, and to provide assistance to individuals who cannot have children (2). FP affects the reproductive health of the mother, fetus, and the whole family by promoting adequate birth intervals for the mother, reducing unwanted pregnancies and abortions, and preventing sexually transmitted diseases (3).

FP methods are classified into modern and traditional contraceptive methods (4). Modern contraceptive methods include male and female sterilization, intrauterine devices (IUDs), implants, injectables, oral contraceptive pills, male and female condoms, and vaginal barrier methods (diaphragm, cervical cap, and spermicidal foam). In contrast, traditional contraceptive methods include the calendar method and withdrawal (5).

As long as humanity exists, the need for FP will persist; there will be girls and boys who reach sexual maturity and people who require FP and other health services (6). According to a study conducted by the United Nations in 2022, among 1.9 billion women of reproductive age (15-49 years), approximately 874 million women use modern contraceptive methods, while 92 million women use traditional FP methods (7). In Türkiye, FP services were legalized in 1965, and their use has become increasingly widespread since then (8). According to the results of the 2018 Türkiye Demographic and Health Survey, the most commonly used FP methods are withdrawal (20%), male condom (19%), IUD (14%), and tubal ligation (10%) (9).

If women become pregnant again during the early postpartum period, problems may occur for maternal and infant health (10). An important aspect of maternal care during the postpartum period is FP (11). According to the Prenatal Care Guidelines and Postpartum Care Guidelines of the Ministry of Health of the Republic of Türkiye, FP education and counseling are provided to pregnant women in primary health care institutions during the third (28–32 weeks) and fourth (36–38 weeks) antenatal follow-ups and in the postpartum period (12,13). During these follow-ups at health centers, family physicians and nurses provide both personalized general and method-specific counseling.

This study aimed to examine the effect of FP education, provided to pregnant women who applied to a family health center, on their use of FP after pregnancy.

MATERIALS AND METHODS

This study examined the antenatal and postpartum records of women who gave birth between 2017 and 2022 and who were registered at a family medicine center in Kastamonu Province. According to the "Prenatal Care Management Guide" published by the General Directorate of Public Health, each pregnant woman should have at least four follow-up visits, and counseling on reproductive health methods should be provided at the 3rd (28–32 weeks) and 4th (36–38 weeks) visits and during the postpartum period (12).

In this retrospective cross-sectional study, all antenatal and postpartum records from the relevant institution within the specified date range were included. The inclusion criteria for the study included access to all prenatal and postnatal records of 225 women who were registered at the family health center and who applied for prenatal follow-up between 2017 and 2022. However, six participants were excluded from the study due to missing information in their files. The study included 219 women whose follow-up was complete from the beginning of pregnancy through the puerperium and who had no missing information in the antenatal and postpartum records.

The patients' sociodemographic data, obstetric information the FP method they planned to use after birth (at the 3rd and 4th antenatal follow-ups), and information on postpartum FP method use were recorded.

Statistical Analysis

In this study, all statistical analyses were performed using Pearson's chi-square test and Fisher's exact test to compare categorical variables, which were presented as numbers and percentages in the descriptive results section, using IBM SPSS Statistics version 22 (IBM Corp.). The threshold for statistical significance was established at $p < 0.05$.

RESULTS

Sociodemographic information and the percentage distribution of participants, based on data from 219 antenatal and postpartum records included in the study, are presented in Table 1. Participants' ages ranged from 18 to 42 years (mean: 29.6 ± 5.0 years). 41.5% of the participants were university graduates, 68.5% were housewives, and 83% were from nuclear families. Twenty-seven (12.3%) of the participants reported having a chronic disease before pregnancy, and 18 (8.2%) reported smoking during pregnancy. Participants' ages at first marriage ranged from 16 to 36 years, with a mean age of 23.6 ± 3.8 years.

Information on FP use and the obstetric history of the participants is shown in Table 2. Among the 219 participants, 83.6% did not use any FP method during the pre-pregnancy period because they were planning to become pregnant, and became pregnant unintentionally while using a FP method. Unplanned pregnancies (n = 36) occurred primarily during condom use (55.6%) and secondarily during withdrawal (38.9%).

During the study, 32.4% of the participants had their first pregnancy, 37.4% had their second pregnancy, 4 participants (1.8%) had multiple pregnancies, 26.5% had experienced a miscarriage before their current pregnancy, 41.6% had no living children, and 44.3% had one living child.

During the pregnancy follow-up at 28–32 weeks, when asked which FP method they planned to use in the postpartum period, 52.5% responded "uncertain", 25.6% chose condom, 9.1% chose IUD, and 5.9% chose tubal ligation. At the 36–38-week pregnancy follow-up, 35.6% reported "uncertain", 35.6% reported condom use, 11.4% reported IUD use, and 8.7% reported tubal ligation.

In the postpartum follow-up conducted between days 30 and 42 after birth, 5% of the participants had not yet started using a FP

Table 1. Descriptive characteristics of the participants.

	n	%
Age (n = 219)		
18–23	33	15.1
24–29	72	32.9
30–35	91	41.6
36 and over	23	10.5
Occupation (n = 219)		
Housewife	150	68.5
Teacher	22	10.0
Worker	17	7.8
Other*	30	13.7
Educational status (n = 219)		
Not completed any school	1	0.5
Primary school graduate	29	13.2
Middle school graduate	32	14.6
High school graduate	63	28.8
University graduate	91	41.5
Master's/PhD	3	1.4
Smoking (n = 219)		
No	201	91.8
Yes	18	8.2
Chronic disease (n = 219)		
No	192	87.7
Yes	27	12.3
Types of family (n = 219)		
Nuclear family	183	83.6
Extended family	36	16.4
Marriage age (n = 219)		
16–21	69	31.5
22–27	118	53.9
28–33	29	13.2
34 and over	3	1.4
Number of people living in the household n = 219		
2	79	36.1
3	82	37.4
4	28	12.8
5 and more	30	13.7

*Other: Academician, nurse, officer

Table 2. Distribution of some reproductive and FP use characteristics of the participants.

	(n)	(%)
Total number of pregnancies(n = 219)		
1	71	32.4
2	82	37.4
3	37	16.9
4	20	9.1
5 and over	9	4.2
Total number of living children (n = 219)		
0	91	41.6
1	97	44.3
2	25	11.4
3	6	2.7
Miscarriage/abortion status (n = 219)		
No	161	73.5
Yes	58	26.5
Multiple pregnancy status (n = 219)		
No	215	98.2
Yes	4	1.8
Blood type incompatibility (n = 219)		
No	205	93.6
Yes	14	6.4
Use of FP before pregnancy (n = 219)		
Does not use	183	83.6
Is using	36	16.4
FP method used before pregnancy (n = 36)		
Withdrawal	14	38.9
Condom	20	55.6
Oral contraceptive pills	1	2.8
Injectables	1	2.8
The decision to use the FP method in the postpartum period was made after the first interview (n = 219)		
Uncertain	115	52.5
Condom	56	25.6
IUD	20	9.1
Tubal ligation	13	5.9
Withdrawal	10	4.6
Injectables	2	0.9
Oral contraceptive pills	1	0.5
Does not want to use	1	0.5

Table 2. Continued.

	(n)	(%)
The decision to use the FP method in the postpartum period was made after the second interview (n = 219)		
Uncertain	78	35.6
Condom	78	35.6
IUD	25	11.4
Tubal ligation	19	8.7
Withdrawal	9	4.1
Injectables	4	1.8
Oral contraceptive pills	3	1.4
Does not want to use	1	0.5
The status of postpartum FP use (n = 219)		
No	11	5.0
Yes	208	95.0
FP method used after pregnancy (n =2 08)		
Condom	133	63.9
Tubal ligation	19	9.1
Withdrawal	22	10.6
IUD	15	7.2
Oral contraceptive pills	6	2.9
Injectables	4	1.9
Lactational amenorrhea	9	4.3

IUD: Intrauterine device

method, while 95% had; among the 209 method users, condoms were the most preferred (63.9%) and injections the least (1.9%).

Table 3 shows the FP methods used before and after the training. In our study, participants were asked during the third pregnancy follow-up which FP method they planned to use in the postpartum period. The 53.4% of the participants stated that they were uncertain or would not use a method; 4.6% that they; and 42.0% that they would prefer modern methods. Subsequently, FP counseling was provided as part of the third and fourth pregnancy follow-up visits. When participants were asked at the fourth pregnancy follow-up which FP method they planned to use during the postpartum period, the proportion who were uncertain or who said they would not use a method decreased to 36.5%. The rate of those who preferred the withdrawal method decreased to 4.1%, while the rate of those who preferred modern methods increased to 59.4%. As a result of FP counseling, there was a significant increase in plans to use modern methods and a significant decrease in the rate of uncertainty or unwillingness $p < 0.001$.

Table 3. Distribution of FP methods used before and after education

	Before education		After education		
	n	%	n	%	
Traditional methods	10	4.6	9	4.1	**p < 0.001**
Modern methods	92	42.0	130	59.4	**p < 0.001**
Uncertain/unwilling	117	53.4	80	36.5	**p < 0.001**

In our study, no significant relationship was found between postpartum FP method use and either age or educational status.

DISCUSSION

This study assesses the current use of FP methods among women who gave birth at a family health center by comprehensively analyzing five-year follow-up slips for pregnant and postpartum women. The findings show that women who were educated about the subject during the antenatal period had increased use of modern methods.

Worldwide, 42% of pregnancies are unintended (14). Unintended pregnancy rates were 55% in Papua New Guinea, 27% in Middle Eastern and North African countries, 33.9% in sub-Saharan African countries, and 31% in Sweden (15–18). In a study conducted in Türkiye, the unplanned pregnancy rate was 30%; of these pregnancies, 38.5% occurred in women who did not use FP methods and 47.2% occurred in women who used traditional FP methods. In our study, the rate of unplanned pregnancies was 16.4% (19). These rates indicate that unintended pregnancies are a significant public health problem in both developed and developing countries. The reason our study's results were lower than those of other studies may be the high level of education among the participants.

According to World Health Organization data, 95% of women do not want to become pregnant again in the first year after delivery; however, 70% of these women do not use any contraceptive method (20). A study conducted in England found that 71.1% used the FP method at the 8th postpartum week; a study conducted in Brazil found 87.9% at the 3rd postpartum month; and a study conducted in Ethiopia found 16% at the 6th postpartum week (21–23). In a study conducted in Türkiye among women 6–12 months postpartum, 84.8% were using the FP method, while nearly half (49.3%) were using modern methods (24). In our study, the FP method use rate at the 6-week postpartum follow-up was 95%. The high rate of FP use during the postpartum period among the women who participated in our study was associated with the provision of FP counseling during the 3rd and 4th antenatal follow-ups. These differing rates in the literature may be due to variation in the time elapsed since birth across studies and to differences in participants' sociodemographic characteristics. In a study conducted in China, the rates of knowledge and use of effective postpartum methods were higher, and the rate of unintended pregnancy was lower in the group that received postpartum FP counseling intervention within 1 year after delivery compared to the control group (25). Studies conducted in Kenya, Zambia, and Tanzania found that the intention to use postpartum contraception and the use of effective methods would increase with the integration of FP counseling into prenatal follow-up (26,27). In another study, conducted in Uganda, the plans to use postpartum modern methods during pregnancy follow-up were 87% in the intervention group and 71% in the control group (28). In a study conducted in Southern Ethiopia, 69.7% of women received FP counseling during pregnancy; the rate of postpartum FP use was 1.79 times higher in those who received counseling (29). In our study, the use of modern FP methods increased from 42% before the

training to 59.1% after the training; this difference was statistically significant $p < 0.001$. These results suggest that FP counseling during pregnancy can increase awareness of the use of modern FP methods in the postpartum period.

Study Limitations

A limitation of this study is that it was conducted at a single center, which may limit the generalizability of the findings to the national level. However, this study reveals the contribution of family medicine to women's and community health and will guide similar studies on this subject.

CONCLUSION

The protection and promotion of maternal and infant health are critical to the sustainability of public health. Correct and regular use of FP methods prevents unintended pregnancies, reduces the health risks of both mother and baby, and enables fertility control. The rate at which women use FP methods, especially in the postpartum period, is directly related to the counseling provided by healthcare providers. These counseling services, provided during the antenatal period, enable women to make informed choices in the postpartum period and contribute to protecting both their own health and that of their newborns. According to the results of our study, women who receive FP counseling are more likely to use modern FP methods appropriately and safely during the postpartum period. Family physicians should provide individualized, comprehensive, and holistic information and counseling on FP, taking into account the sociodemographic and cultural characteristics of women they serve. Community-based studies should be conducted to assess public knowledge and attitudes, and national and regional policies should be developed.

Ethics

Ethics Committee Approval: Ethical approval for the study was obtained from Kastamonu University Clinical Research Ethics Committee (approval number: 2002-KAEK92, date: 16.11.2022).

Informed Consent: It is retrospective cross-sectional study.

Footnotes

Authorship Contributions

Surgical and Medical Practices: A.S.O., İ.M., Concept: A.S.O., İ.M., Design: A.S.O., İ.M., Data Collection or Processing: A.S.O., İ.M., Analysis or Interpretation: A.S.O., İ.M., Literature Search: A.S.O., İ.M., Writing: A.S.O., İ.M.,

Conflict of Interest: No conflict of interest was declared by the authors.

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