



Knowledge and Practice Towards Family Planning Among Reproductive Age Women in Herat City - Afghanistan

Afganistan'ın Herat Şehrinde Üreme Çağındaki Kadınların Aile Planlaması Yöntemlerine Yönelik Bilgi ve Davranışları

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Abstract

Objective: Family planning, general fertility rate, and total fertility rate are the first three determinants of maternal health in Afghanistan. This study assessed knowledge, practice, and predictors of contraceptive use among women of reproductive age in Herat city of Afghanistan.

Materials and Methods: This descriptive study was conducted among 1,610 women who were selected by a convenient sampling technique. Multivariate logistic regression analyses were performed to identify factors related to the current use of any family planning methods among participants.

Results: The mean age of participants was 30.3±6.9 years, mean age of participants at first marriage was 17.6±3.6 years. The first three information sources about contraceptives were family members (35.5%), television (26.4%), and health staff (19.9%). The most common types of contraceptives (used by the participants) were combined oral contraceptives (18.1%), male condom (17.6%), and withdrawal methods (17.5%). Logistic regression analyses showed that adolescent age increased the risk by 2,159 [95% confidence interval (CI) (1,238-3,765); p=0.007], high parity (≥4) increased the risk by 1,525 [95% CI (1,162-2,002); p=0.002], husband who was unemployed increased the risk by 1.764 [95% CI (1,221-2,549); p=0.003], and lack of knowledge about family planning methods increased the risk by 11,674 [95% CI (7,067-19,285); p<0.001], in terms of not using any family planning methods.

Conclusion: We found that the use of any family planning method was low in risk groups. It is critical for health policymakers, healthcare workers, and family members to support and educate women, especially those in the risk group, about the benefit of family planning methods for their family and society.

Keywords: Family planning, reproductive health, contraceptive agents, Afghanistan

Öz

Amaç: Aile planlaması, genel doğurganlık hızı ve toplam doğurganlık hızı Afganistan'da anne sağlığının ilk üç belirleyicisidir. Bu çalışma, Afganistan'ın Herat şehrinde üreme çağındaki kadınların kontraseptif kullanımı ile ilgili bilgi, davranış ve belirleyicilerini değerlendirmiştir.

Gereç ve Yöntemler: Bu tanımlayıcı çalışma uygunluk örnekleme yöntemi ile seçilen 1.610 kadın üzerinde gerçekleştirilmiştir. Araştırmaya katılanların mevcut kullandığı aile planlaması yöntemleri ile ilişkili faktörleri belirlemek için çok değişkenli lojistik regresyon analizi yapılmıştır.

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Bulgular: Katılımcıların yaş ortalaması $30,3 \pm 6,0$ yıl, ilk evlilik yaşı ortalaması $17,6 \pm 3,6$ yıl idi. Kontraseptif yöntemlerle ilgili ilk üç bilgi kaynağı aile üyeleri (%35,5), televizyon (%26,4) ve sağlık çalışanlarıdır (%19,9). Katılımcılar tarafından en yaygın kullanılan kontraseptif yöntemler kombine oral kontraseptifler (%18,1), erkek kondomu (%17,6), geri çekme yöntemidir (%17,5). Lojistik regresyon analizi sonuçları, herhangi bir aile planlaması yöntemi kullanmama durumunu, adolesan yaş grubunda olmanın 2,159 kat [%95 güven aralığı (1.238-3.765); $p=0,007$], yüksek paritenin (≥ 4) 1,525 kat, eşin çalışmamasının 1,764 kat, aile planlaması yöntemleri hakkında bilgi sahibi olunmamasının 11,674 kat artırdığını göstermiştir.

Sonuç: Risk gruplarında herhangi bir aile planlaması yöntemi kullanımının düşük olduğunu bulduk. Sağlık politikası yapıcılarının, sağlık çalışanlarının ve aile üyelerinin, özellikle risk grubundaki kadınları, aile planlaması yöntemlerinin aileleri ve toplum için yararları konusunda desteklemesi ve eğitmesi kritik öneme sahiptir.

Anahtar Kelimeler: Aile planlaması, üreme sağlığı, kontraseptif yöntemler, Afganistan

Introduction

Despite significant achievements in health gains, especially in maternal and child health outcomes in Afghanistan since 2001, maternal deaths in the country is yet among the highest in the world (1,2). Among the five determinants of maternal health in Afghanistan, family planning, the general fertility rate, and the total fertility rate are the first three (2). Contraceptive prevalence rate (CPR) in Afghanistan is the lowest in the region (1), resulting in a high fertility rate in the country (5.2 per women), the highest in southeast Asia (3).

According to Afghanistan mortality survey 2010, about 91.6% of Afghan women aged 15-49 years understand about at least one modern family planning method, but only 20% of whom have ever used any modern contraceptive methods, exhibiting a huge gap between knowledge and practice of family planning methods in the country (4). In 2017, the national average of CPR in Afghanistan was 23.0%, with provincial level varying from 60.5% in Herat province to 0.5% in Noorestan (4). Recent studies investigating factors that influence the use of contraceptives by Afghan women recognized three contraceptive uptake predictors in the country: 1) those at the individual, couple and family level; 2) those relevant to service delivery; and 3) those relevant to the socio-cultural, religious and policy environment (1,4,5). More specifically, having more children, more number of living sons, better economic status, higher education, regular attendance to antenatal care facility, exposure to electronic media and child mortality experience were among the key factors that influenced contraceptive use in Afghan women. (1,5) Contraceptive pills were the most prevalent (39%) and intrauterine devices were the least prevalent (3%) methods used (4,6).

On the other hand, it is well known that discontinuation of contraceptives results in unwanted pregnancy and abortion (7). Most contraceptive users in Afghanistan reported switching to another method due to their unbearable side effects, and/or disagreement of husband and family (4).

This study aimed in assessing knowledge and practice of family planning methods and determine the predictors of use and non-use of contraceptives among women of reproductive age in Herat city, in west of Afghanistan.

Materials and Methods

Design and Setting

This descriptive, community-based, cross-sectional study was conducted between July and October 2018, among women aged 15-49 years, living in Herat city of Afghanistan. Herat city is the second largest city in the country, home to 574,276 people, of whom 287,919 (50.1%) are female. The age distribution of Herat population shows that 44.3% of residents are between 15 and 49 years old (8). Herat borders Iran in the west and Turkmenistan in the north and is the cultural and economic capital of the country.

Sampling and Sample Size

A sample size of 1,075 women was calculated using Raosoft Sample Size Calculator with 5% degree of precision, 99.9% confidence interval and 50% response distribution. Researchers decided to add 50% to the calculated sample size. Therefore, 1,610 samples, selected by convenient sampling technique were included in the study.

Inclusion Criteria

This study included 15-49-year-old women, who were residents of Herat city and were willing to participate in the study after an informed consent. Exclusion criteria included female residents of other provinces of Afghanistan and those who were not willing to participate in the study.

Data Collection

Participants were interviewed using a pre-tested, interview-based structured questionnaire, which included questions about participants' socio-demographic characteristics, knowledge, and practice of contraceptives, sources of information about contraceptives, history of contraceptive use in the past, history and reasons for discontinuation or switching between contraceptive methods, the most preferred and the least preferred methods ever used. Privacy of participants and confidentiality of information were maintained throughout the study. Data were collected by grade five and six students of the Herat University Faculty of Medicine. All surveyors were intensively trained for data collection and data entry both in the classroom and in the field for three weeks; after which a preliminary data collection assessment was conducted to ensure consistency

and accuracy of data collection techniques. The database was screened at the end of each week by the principal investigator for accuracy of data entry. Any questionnaire with missing data was excluded from the study.

Statistical Analysis

All statistical analyses were performed in IBM SPSS Statistics (version 25). A Kolmogorov-Smirnov test was performed to determine whether variables were normally distributed. Descriptive statistics were shown as mean (\pm standard deviation) for normally distributed variables, or medians and minimum-maximum values for the non-normally distributed variables. For non-normally distributed variables, non-parametric-tests (Mann-Whitney U test) was used to compare these parameters with the current use of family planning methods. Chi-square tests were performed for categorical variables. The univariate regression analyses were performed to examine associations between current use of any family planning methods with demographic parameters and knowledge about pregnancy prevention methods. For the multivariate regression analyses, the possible factors identified with univariate analyses were further analysed to determine factors related with current use of any family planning methods among participants. In this analysis, current use of family planning methods was taken as dichotomous variable, whereas age (≤ 18 years or above), parity (≤ 3 or above), husband's job (unemployed or employed), economic status of the family (poor or good), knowledge about pregnancy prevention methods (yes or no) and duration of marriage were taken as independent variables. The results of logistic regression analyses were showed as relative risk (odds ratio) and 95% confidence interval (CI). The Backward-Wald method was used. Association were considered statistically significant when p-value was less than 0.05.

The study protocol was reviewed and approved by the Human Ethics Committee of Herat University (approval number #180501, date: 01.05.2018). An informed consent was obtained from each participant prior to data collection.

Results

A total of 1,610 women of reproductive age were included in this study. The mean age of participants was 30.3 ± 6.9 (range 15-45 years), mean age of participants at first marriage was 17.6 ± 3.6 (range 7-34 years); duration of marriage was 12.6 ± 7.7 (range 1-35 years), and mean number of births of women was 4.1 ± 2.7 (range 0-16). Of the 1,610 participants included in this study, 57.6% had one or two sons and 56.5% had one or two daughters. Only 10.0% and 11.3% participants had four or more sons or daughters, respectively (Table 1). Women who had a history of dead children constituted 15.8%; one-third (34.1%) of participants were illiterate, while 21.9% were university students or graduate. Results show that 73.5% of participants and 12.0% of their husbands were unemployed, while 57.8% had an average economic status (Table 1).

The majority of participants (94.8%) had knowledge about family planning methods. The first three information sources were family members (35.5%), television (26.4%), health staff/doctors (19.9%), respectively. Of the 1,610 participants in this study, 92.0% ever used family planning methods in the past, while only 86.7% used contraceptives at the time of the study. The most common types of family planning methods reported by study participants were combined oral contraceptives (COC; 18.1%), male condom (17.6%) and withdrawal methods (17.5%). Participants were most satisfied from male condoms (22.2%), and least satisfied from injections (7.3%; Table 2). Among 1,210 women who discontinued or switched a family planning method, 55.7%

Table 1. Socio-demographic characteristics of women

	n	%
Education of women		
Illiterate	549	34.1
Primary	292	18.1
Secondary	193	12.0
High school	223	13.9
University	353	21.9
Job status		
Unemployed	1184	73.5
Employed	426	26.5
Husband's job status		
Unemployed	193	12.0
Employed	1417	88.0
Economic status of the family		
Bad	401	24.9
Average	930	57.8
Good	279	17.3
Family size (no of living boys)		
0	286	17.8
1	533	33.1
2	394	24.5
3	235	14.6
≥ 4	162	10.0
Family size (no of living girls)		
0	337	20.9
1	503	31.2
2	407	25.3
3	182	11.3
≥ 4	181	11.3

stated that they left the previously-used contraceptives because of their side effects.

In this study, age (≥ 19 years), parity (≥ 4), education (literate), husband's employment, good family economy, and knowledge about family planning methods were factors related with current contraceptive practice (Table 3); while women's employment was not associated with the current contraceptive practice (Table 3).

Logistic regression analyses showed that adolescent age increased the risk by 2.159 [95% CI (1.238-3.765); $p=0.007$], high parity (≥ 4) increased the risk by 1.525 [95% CI (1.162-2.002); $p=0.002$], husband's unemployment increased the risk by 1.764 [95% CI (1.221-2.549); $p=0.003$], and lack of knowledge about family planning methods increased the risk by 11.674 [95% CI (7.067-19.285); $p<0.001$] in terms of not using any family planning methods (Table 4).

Discussion

This study was conducted to evaluate the level of knowledge and practice of contraceptives among women of reproductive age in Herat city of Afghanistan. Moreover, factors related with the use and non-use of contraceptives were explored.

	n	%
Ever use of FP methods		
Yes	1481	92.0
No	129	8.0
Current use of FP methods		
Yes	1396	86.7
No	214	13.8
Type of FP methods used (the first five methods)		
COC	291	18.1
Male condom	283	17.6
Withdrawal method	281	17.5
IUD	144	8.9
Injection	130	8.1
Most satisfied methods (the first five methods)		
Male condom	357	22.2
Withdrawal method	297	18.4
COC	285	17.7
IUD	172	10.7
Injection	118	7.3

FP: Family planning, COC: Combined oral contraceptive, IUD: Intrauterine device

The current study showed that 94.8% of women stated they had knowledge about contraceptives. This finding is comparable with the results of several other studies conducted in Kandahar, Afghanistan (94.5%), Saudi Arabia (99.2%), Sikkim of India (98.0%), Dodoma of Tanzania (96%), and Nepal (92.3%) (6,9-14); but was higher than results of studies conducted in Pakistan (88%; 81%) and Maghalaya, India (87%) (10,15,16); and much higher than those from Dar-es-Salam, Tanzania (75.0%), Nigeria (67.5%) and Ethiopia (42.3%) (12,17,18). This indicates that the knowledge towards contraceptives among women of reproductive age in Herat is high and satisfactory.

The study found that 92.0% participants had ever used at least a family planning method. This is higher than the level of contraceptive ever-use reported from Kandahar, Afghanistan (54.2%), Tanzania (47.4%), Nigeria (31.1%), and India (11%) (6,11-13). Furthermore, 86.7% participants in this study were current contraceptive users. This is higher than the rate of current contraceptive use reported from Saudi Arabia (75.4%), Nepal (64.6%), Ethiopia (50.4%), Pakistan (53%), Kandahar, Afghanistan (39.1%), India (38%), Tanzania

Table 3. Factors related to current use of any family planning methods among women

	Use of FP methods		X ²	p-value
	Yes	No		
Age				
≤18 years	57.1	42.9	26.020	<0.001
≥19 years	81.8	18.2		
Parity				
≤3	77.0	23.0	13.365	<0.001
≥4	84.2	15.8		
Education status of women				
Illiterate	78.3	21.7	2.975	0.0085
Literate	81.9	18.1		
Women's employment				
Unemployed	79.9	20.1	1.767	0.187
Employed	82.9	17.1		
Husband's employment				
Unemployed	72.5	27.5	9.333	0.002
Employed	81.8	18.2		
Economic status of the family				
Poor	76.3	23.7	6.555	0.01
Good	82.1	17.9		
Knowledge about family planning methods				
Yes	83.6	16.4	154.421	<0.001
No	28.6	71.4		

Table 4. Logistic regression of study variables that impact on current non-use of contraceptive practice among participants

	B	S.E.	Sig.	OR	95% CI	
Adolescent age (≤ 18 years)	0.770	0.284	0.007	2.159	1.238	3.765
Parity (≤ 3)	0.422	0.139	0.002	1.525	1.162	2.002
Husband's job (unemployed)	0.568	0.188	0.003	1.764	1.221	2.549
Knowledge about FP methods (insufficient)	2.457	0.256	<0.001	11.674	7.067	19.285
Constant	-2.259	0.390				

FP: Family planning, Sig.: Signature, OR: Odds ratio, CI: Confidence interval, S.E.: Standard error

(34%), and nation-wide Afghanistan (21.8%) (5,6,9,10,13,16-18). The differences between the rate of ever and current contraceptive use observed in this study and studies cited herewith may be due to cultural differences of study participants, access to family planning methods, and the study design. The current study was conducted in Herat city center, the residence of which have an easy access and may probably be more open to the use of family planning methods than participants in other studies. In fact, several studies indicated that feeling embarrassed to buy or ask for contraceptive was the most important barrier to buy or ask for family planning methods (11,12). Also, a positive association was reported between contraceptive use and distance from the nearest health center (14). Other studies demonstrated that rural residence is a predictor of lower contraceptive use in the country (5,14,18). Moreover, a positive correlation between the level of contraceptive knowledge and practice has been reported previously (1,5,6,13). In this study, we also found a significant association between the economic status and the use of family planning method. Therefore, the good knowledge on family planning method among women in Herat and their better economic status may have been translated to the increase use of contraceptives in this study.

In the current study, no significant gap was observed between the level of knowledge and the rate of contraceptive ever-use (94.8% knowledge vs 92.0% contraceptive ever-use). However, an 8.1% gap was seen between the level of knowledge and current CPR among participants (94.8% vs 86.7%). This indicates that a variety of perceived barriers prevented participants from using contraceptives continuously.

In this study, 55.7% participants who discontinued a specific contraceptive, left it due to its side effects. In fact, studies indicate that side effects impact on many daily activities leading to discontinuation or switching of the contraceptive (19); For example, 16.8% of study participants of a study in Kandahar city of Afghanistan, and 10.8% of participants in a study in Iran stopped using contraceptives because of their side effects (6,7). However, a study from Saudi Arabia revealed that desire of more children was the major reason for discontinuation of a specific contraceptive (9).

The most-commonly used family planning methods practiced in this study were COC (18.1%), male condom (17.6%), and female condom (17.5%). This is in accordance with the results of a study conducted in Kandahar city of Afghanistan, in which the most common contraceptive used by study participants was COC (24.8%) (6). Another study conducted in India revealed that most-commonly-used contraceptives were condoms (38.2%) and COCs (27.6%) (16). A study in Pakistan demonstrated that the most common contraceptives used by study participants were condoms (33.9%), tubal ligations (22.6%) and injections (18.8%) (10). Another study in Saudi Arabia indicated that 32.2% of participants used COC as their most common contraceptives (9). This highlights differences in tendency towards various types of contraceptives in different geographical and/or socio-cultural regions. A substantial finding of this study was the significantly-rare use of female condom among participants. This indicates that despite its accessibility in healthcare centers, female condom is not as favorable as male condom in Herat.

In the current study, the most abundant source of information about family planning methods were family members (35.5%), television (26.4%), and healthcare workers (19.9%). This is in contradiction with the findings of study from Kandahar, Afghanistan, in which the main source of information were health facilities (61.2%), parents (14.7%), and media (6.2%) (6). However, other studies emphasized the role of media as a major source of contraceptive information (10,15); on the other hand, this study more strongly highlights the role of family members in disseminating information about family planning in Herat. While it displays stronger family ties between family and the women of reproductive age in Herat, this also indicates that the source of information about family planning is not much scientific and reliable, and is based on personal experiences. It is advised that media and healthcare personnel make more effective efforts in providing counseling about the use of family planning methods to women in Herat.

The current study showed that the age of study participants was strongly related with the practice of family planning methods. Participants aged 19 years or above used contraceptives 2.159 times more than those aged 18 years or less. Previously, the role of age on contraceptive use was

also emphasized in Nepal (14). This may be due to the fact that when age increases, the level of women's knowledge about contraceptive increases and families have more children. Since pregnancy in women ageing 18 years or less is much riskier than those who age 19 years and above, it is advisable to educate and encourage younger women to use contraceptives to avoid risky pregnancies.

The current study also revealed that education level is significantly associated with contraceptive use among study participants. This is similar to findings of studies from Nepal, India and Afghanistan (5,14,20). It shows that with higher education levels, more women utilize family planning methods. This highlights that a higher education is correlated with a higher level of knowledge about effects and advantages of family planning methods.

Another related factor of contraceptive practice in this study was economic status of the family. Those with good economic status used contraceptives over four times more than those with lower economic status. Previously, the positive impact of family monthly income on the rate of contraceptive practice was reported (1,5,20). This may be because people with good income can afford buying contraceptives more easily and continually. However, the study conducted in Kandahar city of Afghanistan found no association between family income and the modern contraceptive use (6).

We also found that knowledge about family planning methods were significantly associated with current contraceptive practice. Those with better knowledge about family planning methods used contraceptives 11.674 times more than others. This is in accordance with results of similar studies conducted elsewhere (14,18). This indicates that having more knowledge about family planning methods is associated with initiating and maintaining the use of contraceptives among women.

The participants of this study were selected by convenient sampling, due to logistics and cultural reasons. Moreover, one-third of study participants were illiterate. Although this is in line with literacy statistics in the country, it may impact on obtaining thorough and methodical information in the study.

Conclusion

This study adds to body of current literature about the CPR and factors related with the use and non-use of family methods in developing countries. We found that the level of knowledge about family planning methods among women of reproductive age in Herat city of Afghanistan is satisfactorily high. There is no big gap between the level of knowledge and rate of contraceptive ever-practice; however, an 8.1% gap exists between the level of knowledge and current contraceptive use, mainly due to side effects. The most significant factors associated with contraceptive use were age, parity, family economic status and knowledge about contraceptives.

It is very important for policymakers, healthcare workers, family elders and spouses to support women of reproductive age and educate them about the benefits and advantages of family planning methods for their family and society.

Ethics

Ethics Committee Approval: The study protocol was reviewed and approved by the Human Ethics Committee of Herat University (approval number #180501, date: 01.05.2018)

Informed Consent: An informed consent was obtained from each participant prior to data collection.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Concept: N.A.S., A-u-RN., K.O., F.A., Design: N.A.S., A-u-RN., F.A., Data Collection or Processing: N.A.S., K.O., F.A., Analysis or Interpretation: N.A.S., A-u-RN., F.A., Literature Search: N.A.S., K.O., F.A., Writing: N.A.S., A-u-RN., K.O., F.A.

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