



Do Social Determinants of Health Affect Discretionary Abortion? A Hospital Focused Cross-sectional Study

Sağlığın Sosyal Belirleyicileri İsteğe Bağlı Düşüğü Etkiliyor mu? Hastane Odaklı Kesitsel Bir Çalışma

Ulku Ayse Turker Aras¹, Burcu Dincgez², Binali Catak³

¹Department of Obstetrics and Gynecology, Faculty of Medicine, Kafkas University, Kars; ²Bursa High Specialization Training and Research Hospital, Bursa; ³Department of Public Health, Faculty of Medicine, Kafkas University, Kars, Türkiye

ABSTRACT

Aim: It was aimed to determine the level of voluntary abortions and related factors in women over the age of 49 who applied to the obstetrics and gynecology outpatient clinic in a secondary public hospital and were examined.

Material and Method: Patients who applied to the secondary care state hospital between January 15 and March 15, 2021, were asked whether they had an optional abortion. In addition, the patients' socio-demographic, bio-demographic, and socio-economic characteristics were recorded by face-to-face interview technique.

Results: When women living in villages are taken as reference, optional abortions are 7,954 (CI: 3,625–17,449) times for women living in the city center, 2,990 times for those living in a nuclear family when living in an extended family is taken as reference, 7,719 times for those who have social health insurance as a reference (CI: 3,614–16,487) times, when the total income level of people entering the house is taken as reference, it is 6,637 (CI: 3,059–14,401) times more for those who are inadequate.

Conclusion: Social service policies should be arranged to increase access to health services and prevention methods in the eastern regions of Turkey.

Key words: voluntary abortion; abortion; sociocultural factors

ÖZET

Amaç: İkinci basamak kamu hastanesinde kadın doğum polikliniğine müracaat edip muayene olan 49 yaş üzerindeki kadınlarda isteğe bağlı düşüklüğün düzeyi ve ilişkili faktörleri belirlemek amaçlanmıştır.

Materyal ve Metot: İkinci basamak devlet hastanesinde 15 Ocak-15 Mart 2021 tarihleri arasında başvuran hastalara isteğe bağlı düşük yapıp yapmadıkları sorulmuştur. Ayrıca bu hastaların sosyo-demografik, biyo-demografik ve sosyo-ekonomik özellikleri yüz yüze görüşme tekniği ile kayıt edilmiştir.

Bulgular: Köyde yaşayan kadınlar referans alındığında şehir merkezinde yaşayan kadınlarda isteğe bağlı kürtaj 7.954 (CI: 3.625–17.449) kat, geniş ailede yaşamak referans alındığında çekirdek ailede yaşayanlarda 2.990 (CI: 1.270–7.038) kat, sosyal sağlık güvencesi olanlar referans alındığında olmayanlarda 7.719 (CI: 3.614–16.487) kat, eve giren toplam gelir düzeyi yeterli olanlar referans alındığında yetersiz olanlarda 6.637 (CI: 3.059–14.401) kat daha fazladır.

Sonuç: Türkiye'nin doğu bölgelerinde sağlık hizmetleri ve korunma yöntemlerine ulaşımı artıracak sosyal hizmet politikaları düzenlenmelidir.

Anahtar kelimeler: isteğe bağlı düşük; kürtaj; sosyokültürel faktörler

Introduction

On-demand abortion (miscarriage) is the process of terminating a pregnancy that has settled in the uterus of the woman's own will, without gaining the ability to live outside the uterus¹. It is estimated that 25 million unsafe optional abortions are performed every year in the world. When maternal deaths occurring within a year are examined, it is estimated that between 4.7% and 13.2% of these deaths are due to optional abortions that are not performed safely².

Worldwide, there are more than 80 million unwanted pregnancies, and 42 million of these pregnancies end with abortion³. In Turkey, the level of optional abortion in married women is 15.0%⁴.

İletişim/Contact: Ülkü Ayşe Türker Aras, Kars Hırakani Hastanesi İsmail Aytemiz caddesi No:55, Kars, Türkiye • **Tel:** 0554 979 49 07 • **E-mail:** ulku1ayse@gmail.com • **Geliş/Received:** 19.02.2022 • **Kabul/Accepted:** 04.06.2022

ORCID: Ülkü Ayşe Türker Aras, 0000-0002-3393-6310 • Burcu Dincgez, 0000-0002-2697-7501 • Binali Çatak, 0000-0003-2769-990X

While voluntary abortions were used as a family planning method in previous years, they are not used for this purpose today².

It was aimed to determine the level and related factors of voluntary abortions in women over the age of 49 who applied to the obstetrics and gynecology outpatient clinic in a secondary level public hospital.

Material Methods

The research was carried out in the 2nd Stage public hospital of Kars province, which is located in the 30th health region, whose main source of livelihood is agriculture and animal husbandry, and which is below the average of Turkey in terms of socio-economic development. When the sociodemographic characteristics of the region are examined, illiterate people constitute 11.7% of the total population of the region, and those who have never received any education constitute 13.5%⁵. The region is below Turkey's average in terms of health personnel per thousand people. Respectively, infant mortality rates are 11.2 per thousand, and maternal deaths are above Turkey's average with 24.5 per hundred thousand (Turkey averages are 6.8 per thousand infant deaths and 14.6 maternal deaths per hundred thousand, respectively)⁶.

Type of study: It is a hospital-focused cross-sectional study.

The universe of the study: The number of women who completed their reproductive period, who applied to the obstetrics and gynecology outpatient clinic in 2019, was used to determine the population. Accordingly, 2763 women applied to the polyclinic.

The sample of the study: sample: since the universe of the study is known, the number of women to be sampled was calculated with the formula $n = Nt \frac{2pq}{d^2(N-1) + t^2PQ}$ (N, number of individuals in the population; n, number of individuals to be sampled; p, examined incidence (probability) of the event; q, the frequency (probability) of the event under investigation; t, the theoretical value found in the t table at a certain degree of freedom and the detected error level; d, the desired \pm deviation according to the incidence of the event. 9 Accordingly, $p=0.15$ When; $q=0.85$, $t=1.96$, $d=0.01$, the sample size was determined as 1766 women.

Creating the data collection form: The data collection form was prepared by the researchers by scanning the literature^{4,7,8}.

Definitions of the research variables and variables:

Dependent variable: whether they had induced abortion before or not was considered as the dependent variable.

Independent variables: Sociodemographic, biodemographic, and socioeconomic characteristics of the women included in the study were taken as independent variables.

Ethics committee approval and verbal consent of the study: Ethics committee approval of the study was obtained from the local committee with the number 818295502.9037/98. In addition, written and verbal consent was obtained from the participants in the study.

Data collection: The data of the study were collected by the researcher using the face-to-face interview technique in the obstetrics and gynecology outpatient clinic between 15 January and 15 March 2021, after obtaining written and verbal consent from the women.

A preliminary trial of the study: It was conducted with 13 women aged 50 and over who applied to the outpatient clinic. The missing parts in the data collection form were determined and necessary corrections were made.

There is no conflict of interest between the authors in the study. In addition, ethical consent was obtained and research and publication ethics were complied with.

Statistical Analysis

SPSS 21 package was used to analyze the data. Chi-square analysis was performed in pairwise comparisons. Variables that were significant in chi-square analyzes were included in the Backward LR logistic regression analysis and risk factors for voluntary abortion were determined.

Results

In our study, the rate of optional abortion was determined as 9.3%. In the study, 6% of women who had voluntary abortions were under the age of 19 and 66.5% were over the age of 35.

When the factors affecting voluntary abortion were examined in the study with binary analysis, the place of residence ($p<0.001$), family type ($p<0.001$), social security status ($p=0.05$), completion of formal education ($p=0.028$), It was found statistically significant that the total income entering the house was sufficient

($p < 0.001$), the number of children in the house being 4 or more ($p < 0.001$), and having a boy living at home ($p < 0.001$) (Table 1). However, when these variables are examined by logistic regression analysis when women living in villages are taken as reference, optional abortions are 7,954 (CI: 3,625–17,449) times for women living in the city center, and 2,990 (CI:

1,270–7,038) times for those living in a nuclear family when living in an extended family is taken as reference. When those who have security are taken as reference, it is 7,719 (CI: 3,614–16,487) times higher for those who do not, and 6,637 (CI: 3,059–14,401) times for those who have insufficient income when the total income level is taken as reference (Table 2).

Table 1. Factors affecting having an optional abortion

Independent variables		Dependent variables		Total (%)	P
		Women with an optional abortion (%)	Women without an optional abortion (%)		
Place of residence	Village/town	61 (%5,8)	995 (%94,2)	1056 (%59,8)	<0,001
	City/district center	103 (%14,5)	607 (%85,5)	710 (%40,2)	
Family type	Large	29 (%6,3)	428 (%93,7)	457 (%25,9)	0,006
	Nuclear	135 (%1,3)	1174 (%89,7)	1309 (%74,1)	
Marital status	Married	150 (%9,5)	1433 (%90,5)	1583 (%89,6)	0,256
	Not married	14 (%7,7)	169 (%92,3)	183 (%10,4)	
Health insurance	No	66 (%7,5)	818 (%92,5)	884 (% 50,1)	0,005
	Yes	98 (%11,1)	784 (%88,9)	882 (%49,9)	
Education	≥9 years	86 (%9,7)	792 (%90,3)	878 (%49,7)	0,283
	≤8 years	79 (%8,9)	810 (%91,1)	888 (%50,3)	
Partner education	≥9 years	94 (%8,3)	1045 (%91,7)	1139 (%64,5)	0,028
	≤8 years	70 (%11,2)	557 (%88,8)	628 (%35,5)	
Household income	Sufficient	80 (%7,1)	1052 (%92,9)	1132 (%64,1)	<0,001
	Insufficient	84 (%13,2)	550 (%86,8)	634 (%35,9)	
Total number of pregnancies	≤4	145 (%10,6)	1226 (%89,4)	1371 (%77,6)	<0,001
	≥5	19 (%4,8)	376 (%95,2)	395 (%22,4)	
Boy at home	Yes	120 (%15,6)	650 (%84,4)	770 (%43,6)	<0,001
	No	44 (%4,4)	952 (%95,6)	996 (%56,4)	
Woman employment	Yes	39 (%7,7)	465 (%92,3)	504 (%28,5)	0,084
	No	125 (%9,9)	1137 (%99,1)	1262 (%71,5)	
Man employment	Yes	36 (%8)	414 (%92)	450 (%25,5)	0,194
	No	128 (%9,7)	1188 (%90,3)	1316 (%74,5)	

Table 2. Logistic regression analysis of socio-cultural factors affecting having a voluntary

Dependent variable: availability of optional abortion			
Independent variables		OR	%95 Confidence interval (minimum value-maximum value)
Place of residence	Village/town	7,954	3,625-17,449
	City/district center		1(reference)
Family type	Large	2,990	1,270-7,038
	Nuclear		1(reference)
Health insurance	No	7,719	3,614-16,487
	Yes		1(reference)
Household income	Insufficient	6,637	3,059-14,401
	Sufficient		1(reference)

When the women who had a voluntary abortion were evaluated within themselves, it was seen that 28.7% of these women used contraception before the abortion, while 71.3% did not use any contraception method. Conservation method preferences were determined as 28% withdrawal, 13.4% oral contraceptive, 11.6% intrauterine device, and 9.1% condom, respectively.

Discussion

When the TNSA 2018 data is analyzed, the rate of optional abortion in Turkey is 15%. However, this rate decreased to 10% in eastern Turkey⁴. In our study, the rate of optional abortion was found to be 9.3%, in line with the TNSA 2018 data.

In the study, 6% of women who had optional abortions were under the age of 19, 32.9% were between the ages of 20–35 and 66.5% were over the age of 35. By both TNSA 2018 and other studies in the literature, it has been shown in our study that the rate of voluntary abortion increases with the age of the woman. It is estimated that the reason for this situation is that the older woman does not want more children because she has reached a sufficient number of children⁹.

When women living in rural areas are taken as a reference, voluntary abortion increases 7,954 times (CI: 3,625–17,449) among women living in the city center. Although logistic regression analysis is not performed in the studies in the literature, it is seen that there are more voluntary abortions in urban areas than in rural areas^{7,10}. The probable reason for this situation is that women living in the city center have easier access to health services⁴.

In our study, when those who had voluntary abortion social health insurance were taken as the reference, it was 7,719 (CI: 3,614–16,487) times higher for those who did not, and 6,637 (CI: 3,059–14,401) times for those who had insufficient income when the total income level of their households was sufficient as the reference. When the previous studies were examined, it was seen that in cases where the economic level of the woman was insufficient, optional abortion was more common with the thought of not being able to have another child^{4,11}.

In our study, when the women who had a voluntary abortion were evaluated within themselves, although it was insignificant in the dual analysis, in accordance with the literature data, it was seen that 28.7% of these women used contraception before the abortion, while

71.3% did not use any contraception. Conservation method preferences were determined as 28% withdrawal, 13.4% oral contraceptive, 11.6% intrauterine device, and 9.1% condom⁴.

Due to cultural influences, voluntary abortions are less common in the region and unwanted pregnancies are increasing. As a result, in order to prevent unwanted pregnancies, all individuals in the society, health officials working in family medicine should be informed about family planning methods, and social service policies should be arranged to increase access to health services and prevention methods in the eastern regions of Turkey, where the socioeconomic level is lower.

References

1. Safe Abortion: Technical and Policy Guidance for Health Systems. 2nd ed. Geneva: World Health Organization; <https://www.ncbi.nlm.nih.gov/books/NBK138196/>; 2012 [accessed 19.01.22]
2. Clinical Practice Handbook for Safe Abortion. Geneva: World Health Organization; <https://www.ncbi.nlm.nih.gov/books/NBK190095/>; 2014 [accessed 19.01.22]
3. Askew I, Weinberger M, Dasgupta A, Darroch J, Smith E, Stover J, et al. Harmonizing Methods for Estimating the Impact of Contraceptive Use on Unintended Pregnancy, Abortion, and Maternal Health. *Glob Health Sci Pract*. 2017 Dec 28;5(4):658-667.
4. Hacettepe University Institute of Population Studies; http://www.hips.hacettepe.edu.tr/eng/tdhs2018/TDHS_2018_main_report.pdf; 2018 [accessed 17.01.22]
5. TRA1 Level 2 Regional Plan (2014–2023); Planning Process and Scope; https://jag.journalagent.com/planlama/pdfs/PLAN-18189-OPINION_LETTER-TOY.pdf. 2021 [accessed 17.01.22]
6. Hacettepe University Institute of Population Studies; http://www.hips.hacettepe.edu.tr/eng/tdhs08/TDHS-2008_Main_Report.pdf. 2008 [accessed 17.01.22]
7. Hacettepe University Institute of Population Studies; http://www.hips.hacettepe.edu.tr/eng/tdhs13/report/TDHS_2013_main.report.pdf. 2013 [accessed 17.01.22]
8. Hacettepe University Institute of Population Studies; http://www.hips.hacettepe.edu.tr/eng/tdhs08/TDHS-2008_Main_Report.pdf. 2008 [accessed 17.01.22]
9. Wang C. Induced abortion patterns and determinants among married women in China: 1979 to 2010. *Reprod Health Matters*. 2014;22(43):159-68.
10. Chae S, Desai S, Crowell M, Sedgh G, Singh S. Characteristics of women obtaining induced abortions in selected low- and middle-income countries. *PLoS One*. 2017 Mar 29;12(3):e0172976.
11. Çavlin A, Tezcan S, Ergöçmen B. Abortion from Women's Perspective, *Population Science Journal*. 2016;34:51-67.