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Family planning practices and opinions on population growth of family planning healthcare providers in Turkey

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Abstract

The purpose of this study was to investigate the opinions of health professionals (HPs) who provide family planning counselling (FPC) within the scope of primary health care services since they are perceived as role models by the society. The number of HPs providing family planning counselling in primary health services in Turkey was 43,000 and 40,000 of these individuals were invited to participate in this observational, cross-sectional study via e-mail and social media. There were 740 responders and all were included in the study. Physicians providing FPC within the scope of primary health care services consisted of 45.1% of the responders and the remaining were nurses. Among all HPs, 59.7% had insufficient awareness regarding Turkey's population growth. Most of the HPs (52.4%) believed that the ideal number of children was 2 or less. The abortion rate was 9.1% in all pregnancies of HPs. The rate of caesarean section was 56% in all live births. According to responses, 75.6% of all pregnancies experienced by HPs were planned. According to 42.1% of the HPs, abortion must be performed if there is a life-threatening situation for the mother or if the fetus has some abnormalities. The most common method of birth control used by married HPs between the ages of 18 and 49 was male condoms (39.9%), while the pull-out method ranked first in the general population (25.5%). It was found that HPs, who had different opinions and practices about family planning than the general population, had insufficient awareness regarding population growth. Increased awareness of demography and FPC among HPs will likely contribute to the quality of service and the general wellbeing of the population. *(Afr J Reprod Health 2021; 25[2]: 65-75).*

Keywords: Health professionals, family planning, primary care, population planning, abortion, caesarean section

Résumé

L'objectif de cette étude était d'examiner les opinions des professionnels de la santé (PS) qui fournissent des conseils en matière de planning familial (CPF) dans le cadre des services de soins de santé primaires puisqu'ils sont perçus comme des modèles par la société. Le nombre de PS fournissant des conseils en matière de planning familial dans les services de santé primaires en Turquie était de 43 000 et 40 000 de ces personnes ont été invitées à participer à cette étude observationnelle et transversale par le biais du courrier électronique et des médias sociaux. Il y a eu 740 répondants et tous ont été inclus dans l'étude. Les médecins fournissant des CPF dans le cadre des services de soins de santé primaires représentaient 45,1 % des répondants et le reste était constitué d'infirmières. Parmi tous les PS, 59,7% n'étaient pas suffisamment sensibilisés à la croissance démographique de la Turquie. La plupart des PS (52,4%) estimaient que le nombre idéal d'enfants était de 2 ou moins. Le taux d'avortement était de 9,1% dans toutes les grossesses de PS. Le taux de césariennes était de 56% pour l'ensemble des naissances vivantes. Selon les réponses, 75,6% de toutes les grossesses vécues par les PS ont été planifiées. Selon 42,1% des PS, l'avortement doit être pratiqué si la vie de la mère est menacée ou si le fœtus présente certaines anomalies. La méthode de contrôle des naissances la plus utilisée par les PS mariés âgés de 18 à 49 ans est le préservatif masculin (39,9%), tandis que la méthode d'extraction se classe première dans la population générale (25,5%). Il a été constaté que les PS, qui ont des opinions et des pratiques différentes de celles de la population générale en matière de planification familiale, ne sont pas suffisamment sensibilisés à la croissance démographique. Une sensibilisation accrue à la démographie et aux CPF parmi les PS contribuera probablement à la qualité du service et au bien-être général de la population. *(Afr J Reprod Health 2021; 25[2]: 65-75).*

Mots-clés: Professionnels de la santé, planning familial, soins primaires, planification de la population, avortement, césarienne

Introduction

Population is the most important building block ensuring the continuance of a nation. There is a proportional relationship between the national population and distribution of the national population by age groups and a country's development[1]. It is an indisputable fact that a young

and dynamic population contributes to sociocultural and economic development of a country. In this context, children as the source of a young and dynamic population are vital for the future of the country and the continuance of the nation[2,3].

According to the data from the Turkish Statistical Institute (TurkStat), the total fertility rate of Turkey was 2.07 in 2013. This data shows that although the population grows in Turkey, the rate is below the replacement threshold of 2.1[4]. According to the latest childbirth data from TurkStat for 2017, the fertility rate is now 2.1[4]. However, the fundamental scenario in TurkStat's 2013 data suggests that the fertility rate will be 1.65 by 2050 and the median age of the population in Turkey, which was 30.1 in 2012, is estimated to reach 42.9 by 2050[5]. These results indicate that Turkey has an aging population, which is the case throughout the world [3,6].

In the current health care system of Turkey, family planning counselling (FPC) services are mostly provided by health professionals (HPs) as a part of primary health care services. The family planning counselling services provided by HPs are believed to have the potential to guide the society and have significant effects on population[7]. The opinions, attitudes, and practices of HPs, who are perceived as role models by the society, related to family planning are predicted to be factors affecting this hypothesis.

Therefore, the purpose of this study was to investigate the opinions of HPs providing FPC within the scope of primary health care services regarding population growth, ideal number of children, and abortion. The present study also aimed to reveal pregnancy planning practices, pregnancy result, pregnancy age, and family planning methods used by HPs, who guide the society.

Methods

The study was planned as an observational and cross-sectional survey. Survey questions for HPs providing FPC were prepared after the necessary literature review. The questions were discussed in academic meetings on family practice. In addition to those in family practice, opinions of specialists from other branches were received as well. Once the survey preparation stage was completed, the pilot study was initiated. Three questions were found to cause confusions in the pilot study. These questions were corrected and the pilot study was repeated. After the comprehensibility of the questions was established, necessary approvals were obtained from the local ethics board and relevant institutions for the suitability of the research protocol.

The survey was prepared on a website (www.surveey.com), and HPs were asked to fill the form online. The purpose of using an online platform to fill the survey was to ensure that HPs could answers the survey questions freely without any pressure, since the survey included controversial and sensitive topics. Before filling the survey, the participants were sent an informative text about the survey and the study, and their informed consent was obtained. The participants were asked questions about their sociodemographic information, population planning, ideal number of children, abortion, population growth in Turkey, what family planning methods they use, how they or their spouses plan their pregnancies, pregnancy result, and pregnancy termination ages.

The population of the study consisted of all HPs providing FPC as part of primary health care services throughout Turkey. The survey response rate was 1.9%. HPs providing FPC were invited to participate in the study via e-mail and social media. The invitation link for the survey was sent twice to personal e-mail addresses of HP and three times to their e-mail group with intervals of one month. Also, social media was actively used and the link for the survey was shared in professional social media groups at different times. Social media channels included Facebook, Twitter, and LinkedIn. The majority of HPs in Turkey are using these social media platforms. The surveys were assessed on a daily basis. Multiple submissions by a single participant were prevented by checking IP (Internet Protocol) addresses.

HPs who participated in the study on a voluntary basis and answered the questions in a consistent and conscious manner were included in the study. Surveys where a majority of the questions were answered were accepted, while surveys with conflicting answers to cross questions were eliminated. The cross questions included "true-false" questions which were answered based on a table, contained information about family planning,

and could easily be answered by a careful reader. Surveys in which all cross questions were answered as "true" or all cross questions were answered as "false" were considered conflicting surveys and excluded to improve the reliability of the survey.

The study was performed between 22 April 2013 and 30 July 2013. This study was performed at the same time as the latest reported Turkish Population and Health Survey (TPHS), which is conducted in five-year periods. At the time of the study, there were about 43,000 HPs providing FPC as part of primary health care services in Turkey. Of these, 21,015 were family physicians providing primary health care services, 21,015 were allied health personnel, 850 were assistant family physicians, and 160 were faculty members. According to the April 2013 data set of the Department for Monitoring and Assessment of Family Practice, 19,354 (94.84%) physicians providing primary health care services were general practitioners, 1027 (5.03%) were specialist family physicians and 26 (0.13%) were specialists in other branches of medicine. Also, the recommended sample size was calculated to be 381 participants with 5% acceptable error and 95% confidence level. Nevertheless, an attempt was made to reach and invite about 40,000 HP out of 43,000 via e-mail and social media. The number of HPs who filled out the survey form completely was 752 and their answers were recorded in the system. Based on answers to the cross questions, it was found that 12 out of 752 surveys were inconsistent or conflicting and these surveys were excluded from the study. All HPs who answered the survey questions consistently were included in the study (n: 740), which was more than the target sample size.

The data obtained from the surveys were exported from the online system in a format compatible with SPSS. Graphs and the Shapiro-Wilk test were used to determine whether the continuous variables (such as age and pregnancy age) showed normal distribution. Descriptive statistics were presented as mean ± standard deviation or median (Interquartile Range [IQR]) depending on normal distribution for continuous variables. Categorical and classified variables were presented as number and percentage as well as tables. Student's t-test or the Mann-Whitney test was used depending on normal distribution when comparing continuous variables between experimental groups. Intragroup differences between categorical variables were assessed by creating cross tables and using chi-square, likelihood ratio chi-square, or Fisher's exact chi-square. SPSS Statistics Ver. 17.0 (SPSS Inc., Chicago, IL, USA) was used for statistical analysis and calculation. Graphic representations were prepared using MS Excel 2007. $p<0.05$ was considered statistically significant when assessing the results of statistical analyses.

Results

Table 1 shows the sociodemographic characteristics of the participants by gender. The median age among the participants was 34 years (IQR 13). The distribution of the participants by gender was 29.3% male and 69.7% female.

Number of pregnancies

It was found that 38.9% (n: 288) of the participants (or their spouses) did not experience any pregnancies, 18.6% (n: 138) experienced one pregnancy, 8.5% (n: 63) experienced four or more pregnancies. Accordingly, it was seen that 452 (61.1%) out of 740 participants (or their spouses) experienced at least 1 pregnancy, while the total number of pregnancies among HP was 972 (those who experienced 4 or more pregnancies were grouped together and the number of pregnancies in this group was considered to be 4). The median number of pregnancies experienced by the HP was 1 (IQR 2). Table 2 shows the distribution of number of pregnancies experienced by the participants (or their spouses) by marital status.

Number of children

It was found that 43% (n: 318) of the participants did not have children, 22.6% (n=167) had one child, 27.6% (n: 204) had two children, and 6.9% (n=51) had three or more children. Accordingly, it was determined that 740 participants had 728 children in total and the median number of children of the HP was 1 (IQR 2) as well. Also, HP in different geographic regions were compared in terms of number of children. It was found that the difference between HP in different geographic region in terms of number children was statistically significant ($\chi 2=58.119$; $p<0.001$).

Table 1: Sociodemographic characteristics of health professionals in Turkey by gender

	Male (n: 217) %(n)	**Female (n: 523) %(n)**	**Total (n: 740) %(n)**
Age Groups			
18-29	22% (55)	78% (195)	**33.8**% **(250)**
30-39	27.6% (81)	72.4% (212)	**39.6**% **(293)**
40-49	38.5% (65)	61.5% (104)	**22.8**% **(169)**
50 and above	57.1% (16)	42.9% (12)	**3.8**% **(28)**
Marital Status			
Married	32.6% (167)	67.4% (346)	**69.3**% **(513)**
Single	23.3% (45)	76.7% (148)	**26.1**% **(193)**
Divorced	13.8% (4)	86.2% (25)	**3.9**% **(29)**
Widowed	20% (1)	80% (4)	**0.7**% **(5)**
Academic Title			
Family Physician (Specialist)	53.2% (25)	46.8% (22)	**6.4**% **(47)**
Family Physician	66.5% (146)	34.5% (77)	**30.1**% **(223)**
Assistant Family Physician	32.8% (21)	67.2% (43)	**8.6**% **(64)**
Midwife	0% (0)	100% (262)	**35.4**% **(262)**
Nurse-Medical Assistant	12.5% (16)	87.5% (112)	**17.3**% **(128)**
Other HP	56.3% (9)	43.8% (7)	**2.2**% **(16)**

Percentages in the total column reflect the percentage distribution of each variable.
HP, Health professionals

Table 2: Number of pregnancies experienced by health professionals (or spouse) by marital status

Marital Status	**The Distribution of Number of Pregnancies**					
	0 (n: 288) %(n)	**1 (n: 138) %(n)**	**2 (n: 171) %(n)**	**3 (n: 80) %(n)**	**≥4 (n: 63) %(n)**	**Total(n: 740) %(n)**
Single	99% (191)	0.5% (1)	0% (0)	0.5% (1)	0% (0)	100% (193)
Married	16.6% (85)	25.9% (133)	31.8% (163)	14.8%(76)	10.9% (56)	100% (513)
Divorced	31% (9)	13.8% (4)	24.1% (7)	10.3% (3)	20.7% (6)	100% (29)
Widowed	60% (3)	0% (0)	20% (1)	0% (0)	20% (1)	100% (5)
Total	38.9% (288)	61.1% (452)				100% (740)

Table 3: The distribution of health professionals' opinions on abortion by gender

Opinion	**Male (n: 217) %(n)**	**Female (n: 523) %(n)**	**Total (n: 740) %(n)**
Abortion should be illegal regardless of circumstances.	5.1% (11)	3.1% (16)	3.6% (27)
Abortion should be legal until a certain point in pregnancy based on the decision of spouses.	20.7% (45)	25.8% (135)	24.3% (180)
Abortion should be legal only if the mother's life or physical and psychological health is at risk.	19.4% (42)	16.3% (85)	17.2% (127)
Abortion should be legal if the mother's life or physical and psychological health is at risk or the baby has anomalies.	45.2% (98)	40.7% (213)	42% (311)
The decision to have an abortion should be left to spouses.	9.7% (21)	14.1% (74)	12.8% (95)

Percentages in the total column reflect the percentage distribution of each variable.

FPC training status of HP

The participants were asked whether or not they had received training regarding FPC, and it was found that 41.8% (n: 309) did not receive any training on FPC. 54.4% (n: 234) of those who received training on FPC stated that they participated in 3-4 week trainings of the provincial directorate of health. There was a statistically significant relationship between gender and training status ($\chi 2=17.280$; $p<0.001$). The percentage of female participants who received FPC training was 63.1% (n: 330) and the percentage of male participants was 46.5% (n: 101). Having received training on FPC was more common among the female participants.

Opinions of HP on population growth

The participants were asked, "*Which of the following is true based on the average number of children per woman in Turkey?(According to the 2013 data of TurkStat, the number of children per woman is 2.07)"* 40.3% of the participants answered with "*The population grows; however, population replacement does not occur"*, 40% answered with "*The population grows and population replacement occurs",* 11.4% answered with "*The population does not grow and population replacement does not occur"*, and 8.4% answered with "*The population does not grow; however, population replacement occurs"* (N:740).

Opinions of HP on the fertility rate interval required for population replacement

When asked, *"What is the minimum fertility rate interval (number of children per woman) necessary for population replacement in a country?"*; 56.6% of the participants answered with "2.1-3", 20.1% with "1.1-2", 19.6% with "3.1-4", 2.6% with "4.1-5", and 1.1% with "0.1-1".

Opinions of HP on the ideal number of children

When asked, *"What do you think is the ideal number of children in a family?"*; 50.8% of the participants answered with "two", 30.7% with "three", 11.9% with "four or more", 5% with "depends/as many as the family can look after", and 1.6% with "one". Accordingly, the average ideal number of children was 2.56 for the entire sample, 2.86 for men, 2.83 for married men, 2.43 for women and 2.49 for married women. There was a statistically significant difference between genders in terms of the ideal number of children ($\chi 2=35.438$; $p<0.001$).

Opinions of HP on abortion

Table 3 shows the answers of the participants to the question regarding abortion policies around the world: "*In your opinion, in what cases should abortion be legal?* ($\chi 2=7.289$; $p=0.121$).

Importance level of factors affecting FPC services according to HP

The participants were asked about factors which might affect family planning services: *"Please rank the following factors which might affect family planning counselling services in order of importance."* The answers of HP to this question can be seen in Table 4.

Result of pregnancy among HP

The participants experienced a total of 958 pregnancies, 33.6% of which resulted in normal birth, 42.7% in caesarean section, 9.1% in abortion, 12.9% in miscarriage, and 1.7% in ectopic pregnancy.

Pregnancy planning among HP

The participants who answered this optional question experienced a total of 712 pregnancies; 75.6% of these pregnancies were planned, whereas 24.4% were unplanned. Considering first pregnancies only, 79.6% were planned, whereas 20.4% were unplanned (n: 338). In second pregnancies of the participants, 75.9% were planned and 24.1% were unplanned (n: 228). It was determined that the most common reason for unplanned pregnancies in both pregnancy periods was the failure to use family planning. The most common unsuccessful family planning method used by HP and resulted in unplanned pregnancy was the pull-out method in the first pregnancy and the condom/preservative use in the second pregnancy.

Table 4: The distribution of importance level of factors affecting family planning counselling services according to health professionals in Turkey (n: 740)

Factors Affecting FPC Services	The Importance Level		
	Very important % (n)	Important %(n)	Unimportant %(n)
Age	**63.1**% **(467)**	35.1% (260)	1.8% (13)
Educational Level	43% (318)	**51.9**% **(384)**	5.1% (38)
Cultural Factors	39.5% (292)	**55.3**% **(409)**	5.3% (39)
Economic Factors	33% (244)	**55.4**% **(410)**	11.6% (86)
Place of Residence	21.5% (159)	**60**% **(444)**	18.5% (137)
Religious Beliefs	31.4% (232)	**55.3**% **(409)**	13.4% (99)
Health Problems	**91.2**% **(675)**	8.4% (62)	0.4% (3)
Number of Children	**64.2**% **(475)**	32.2% (238)	3.6% (27)

FPC, Family Planning Counselling

Age interval in the first pregnancy

This optional question was answered by 339 of the 452 participants who had at least one pregnancy (for the participant or spouse). It was found that 36% of the participants experienced their first pregnancy between the ages of 18-24, 53% between the ages of 25-30, 10% between the ages of 31-35, and 1% between the ages of 36-40. Also, the median age of first pregnancy was 26 among HPs (or their spouses).

Family planning methods used by HP

When asked, *"What family planning method do you or your spouse use?"*; 31.6% of the participants stated that they did not use any family planning method, 31.6% answered with condom/preservative, 14.5% with intrauterine device (IUD), 9.6% with oral contraceptive (ORC), 1.8% with injectable contraceptives, 7% with the pull-out method, 5.3% with surgical sterilization, and 1.1% with schedule, cervical mucus, and body temperature methods (n: 740).

Of the participants, 13.4% of those married between the ages of 18 and 49 did not use any family planning method, 39.9% used condoms/preservatives, 19.8% used IUD, 11.4% used ORC, 1.8% used injectable contraceptives, 5.9% used the pull-out method, 6.9% used surgical sterilization, and 0.8% used scheduling, cervical mucus, and body temperature methods (n: 491).

Discussion

Family planning is defined as *"the freedom of all couples and individuals to have as many children as they wish and when they wish, to freely decide on the time period between pregnancies, and to have access to knowledge, training, and other tools to this end"*[8]. Based on this definition, it is believed that decisions regarding family planning should be left to families alone; however, there are differences between countries in terms of practices adopted[9].

Population planning and family planning have similar definitions in both the literature and law. The Turkish Law No. 2827 on Population Planning defines population planning as *"the freedom of individuals to have the number of children that they wish, when they wish"*. Each country has different practices in terms of family planning, develops different family planning strategies depending on their religious and cultural setting, and adopts different approaches to abortion[9]. These practices show that there should be different definitions for population planning and family planning. In this context, we believe that population planning can be defined as "measures and incentives aimed at ensuring population growth, preventing population drop, or improving the

quality of the population as well as policies related to these measures and incentives". From a different perspective, population planning relates to government policies, while family planning relates to individuals' own decisions.

The question regarding the minimum fertility rate interval necessary for population replacement, *"2.1-3"*, was answered correctly by 56.6% participants and although the fertility rate as of 2013, 2.07, was given, only 40.3% answered the question regarding the population growth and replacement in Turkey correctly as *"The population grows; however, population replacement does not occur"*, which indicates the HP who participated in the study had insufficient knowledge and awareness regarding concepts related to population.

The question regarding the number of ideal children was addressed to all participants as an open-ended question. The purpose of this question was to reveal the fertility preferences of HP. According to the Turkish Population and Health Survey (TPHS) of 2013, there is a close relationship between the number of children and the idea number of children. The ideal number of children also indicates whether or not the child-less individual considers having children. The percentage of those participating in the study who stated that the ideal number of children was two or less was 52.4%. The ratio was 59.2% in TPHS of 2008 and 46.2% in TPHS of 2013. Considering the fertility rate threshold for population replacement, 2.1, it is important that the Turkish society is close to the threshold in terms of opinion; however, it is thought-provoking that there are such differences between health professional and the rest of the society according to TPHS 2013. As mentioned above, the average number of children among HP might be effective in their opinions about the ideal number of children. Indeed, it was observed in our study that 74% of all married participants had 2 or less children in our study and this rate rises to 80.7% in all HP.

According to TPHS 2013, the ideal number of children drops as the income level increases in the society[10]. It may be suggested that the ideal number of children is similarly decreased among physicians and health care providers, who have a relatively higher income level. The ideal number of children was significantly different according to participants' genders. It was two or less (58.5%) for female participants and 3 or more (57.2%) for male participants. The female participants of TPHS 2008 and our study had similar opinions regarding the ideal number of children. However, society's opinion seems to have changed in TPHS 2013. The ratio of those who stated that the ideal number of children was two or less decreased from 2008 to 2013, possibly due to political discourses.

In our study, the average ideal number of children was 2.43 among all women and 2.49 among married women. In TPHS 2013, this number was 2.7 among all women and 2.9 among married women. The average ideal number of children was lower among HP compared to the society[10].

Abortion is still a controversial topic in Turkey, as in the world. According to the Turkish Law No. 2827 on Population Planning of 1983, which is still in force, it is legal to get an abortion until 10th week of pregnancy based on the decision of spouses without the prerequisite of a medical necessity. Abortion is not a solely medical decision; it can also be affected by sociocultural and religious factors[11,12].

The most common answer (42.1%) to the question asked to reveal the opinions of HP regarding abortion was "*Abortion should be legal if the mother's life or physical and psychological health is at risk or the baby has anomalies."* The ratio of those who stated that abortion should be legal only if the mother's life is at risk was 17.2%. Combining these two, it seems that the majority (59.3%) of HP in Turkey believe that abortion should be performed only as a necessity. The rate of the opinion that reflects the government policy (*"Abortion should be legal until a certain point in pregnancy based on the decision of spouses."*) was found to be 24.3%. These results indicate that the abortion policy in force in Turkey is not embraced by HPs. In a study conducted by Öztürk *et al*. with women in the Marmara Region, 33.7% of the participants stated that abortion should be illegal without any exceptions, 38.8% stated that it should be legal in case of a medical necessity, and 18.2% stated that it should be legal[13]. In our study, the ratio of those who believe that abortion should be illegal

without exceptions was 3.6% in the entire sample and 3.1% among women. In the study conducted by Öztürk *et al*., about one third of the participants advocated that abortion should be legal in case of a medical necessity, while this rate was 59.3% in the entire sample and 57% among women in our study. The opinions of the Turkish society and HP seem to differ when it comes to abortion.

In a study performed with young physicians in Romania, the rate of those who think abortion should be illegal was reported to be 5.63%. This study used a scale rating opinions about abortion from 0 (Strongly Disagree) to 10 (Strongly Agree) and the average values were presented. The score of "abortion should be completely illegal" was 4.8, the score of "abortion should be legal" was 3.34, while the score of "abortion should be legal in case of various necessities" varied from 5.92 to 9.86. Opinions of young Romanian physicians and Turkish HP on abortion are quite similar[14].

The rate of abortion among HP was 4% in the first pregnancy and 9.1% in all pregnancies. According to TPHS 2013, 5 out of every 100 pregnancies are terminated with abortion in Turkey[10]. Considering all pregnancies, the rate of abortion is higher among HP compared to the society. The abortion rate for pregnancies in the world is 20%. This rate is reported to be 28% in developed countries and 19% in developing countries and in terms of geographical distribution, Eastern Europe has the highest rate with 45%, Central Africa has the lowest rate with 9%, while Western Asia, where Turkey is located, is reported to have an abortion rate of 15%[15]. In Turkey, the abortion rate was reported to be 18% in 1990s, which dropped to 4.7% in 2013[10]. The abortion rate is relatively lower in Turkey compared to the world. This relatively low rate is believed to be a result of widespread family planning services and cultural factors.

The miscarriage rate was found to be 10% in the first pregnancy. The rate of miscarriage in the first pregnancy for each age group was 4.3% in the age group of 50 and over and 25.6% in the 18-29 age group. This indicates an increase in miscarriage cases over the past 20-30 years. In Turkey, the miscarriage rate was reported to be 8.7% in TPHS 1998, 10% in TPHS 2003, 10.5% in TPHS 2008, and 14% in TPHS 2013[10]. There seems to be an increase in miscarriages both in HP and the society. Reasons behind this increase should be investigated and risk factors should be revealed with more detailed and comprehensive studies.

The rate of caesarean section among the participants was 52% in the first live birth. The rate of caesarean section in all pregnancies resulting in live birth was 56%. According to TPHS 2013, the rate of caesarean section was 52% in the first pregnancy resulting in live birth and 48% in all pregnancies in Turkey[10]. The rate of caesarean section in the first pregnancy resulting in live birth found in our study is consistent with TPHS 2013. According to TPHS 2013, the rate of caesarean section increases with increased income and cultural level. In Turkey, the rate of caesarean section was reported to be 55.8% in the population with a high level of income and 66.9% in the population with a very high level of income. The rate of caesarean section in live births among HP is consistent with the population with a high level of income.

In a 2010 study from Turkey comparing two groups consisting of HP and non-HP participants, it was found that the rate of caesarean section in the first pregnancy was 61% in the HP group and 38% in the non-HP group[16]. In our study, the rate of caesarean section in the first pregnancy was found to be 44%, which is a lower figure. Akyol *et al*. conducted their study in the Marmara Region[16]. In our study, the rate of caesarean section in the first pregnancy was found to be 59.6% in the Marmara Region, which has a relatively higher income level compared to other regions of Turkey. This figure is similar to that of Akyol *et al.*

While the caesarean section rate in the general population was 45% according to TPHS 2008, it increased to 52% with the 2013 TPHS, and the rate of caesarean section increases with increasing income and culture levels[10,17]. The increase in the rate of caesarean section in Turkey should be researched. The rate of caesarean section has been increasing around the world in general[18]. The International Federation of Gynaecology and Obstetrics (FIGO) recommends caesarean section in only cases with serious medical indications[19]. The American College of Obstetricians and Gynaecologists refuses arbitrary caesarean section requests from couples. Considering international recommendations, normal birth should be preferred

unless there are serious medical indications[19]. Caesarean section may pose heavy threats to the mother's and baby's health[19]. Increased awareness regarding normal birth among both HP and the society will contribute to community health. Encouraging normal birth and raising public awareness about the benefits of vaginal birth may help decrease the caesarean section rate.

The rate of planned pregnancies in all pregnancies experienced by HPs was 75.6% and 74.1% of all pregnancies were reported to be planned in TPHS 2013[10]. The general population and HP show similar characteristic in terms of planning all pregnancies. The planned pregnancy rate was 79.6% in the first pregnancies experienced by HPs and 90.6% of first pregnancies were planned according to TPHS 2013[10]. This high rate in the general population is attributed to under-representation of unwanted pregnancies and postpartum rationalization. It is believed that the answers in our study were more reliable with lower rationalization since the survey was filled out online. Akyol *et al*. reported that 86% of first pregnancy cases were planned, which is higher than our finding as well[16].

The percentage of HPs who were pregnant between the ages of 25 and 30 was 53%. In TPHS 2013, the importance of mother's age in the first pregnancy was associated with being able to have more children as a significant indicator of higher fertility. Increased age in the first pregnancy negatively affects fertility and leads to a decrease in the total number of children. The median pregnancy age in TPHS 2013 was 22.9 compared to 26 in our study. In the study conducted by Akyol *et al*., the majority of HP were found to experience their first pregnancy at age 30 and above. In TPHS 2013, women with higher income were found to experience their first pregnancy 1.7 years later than women with lower income. The higher the income level, the higher the first pregnancy age in the general population[10,16]. The higher first pregnancy age among HP may be attributed to delayed first pregnancy, long education time, or higher income level.

The proportion of married participants in the age group of 18-49 who did not use any family planning method was 13.4%, while 78.9% were found to use contemporary methods and 7.7% reported using traditional methods. In TPHS 2013, 26.5% of married women did not use any family planning methods, 47.4% used contemporary methods, and 26% used traditional methods[10]. There seems to be a difference between HP and the general population regarding use of and awareness about family planning methods. HP were found to have a higher awareness level compared to the rest of the society. According to the data of the United Nations, the rate of contemporary method use is 57% around the world, the rate of traditional method use is 6.1%; the country with the highest contemporary method use is China with 84%, while South Sudan is in the last place with 1%. The country with the highest traditional method use is Albania with 59.1%[20]. The use of contemporary methods among HP is higher than the world average, while the use of traditional methods is higher in the rest of the society compared to the world average.

It was observed that 86.6% of those married between the ages of 18 and 49 who participated in our study used a family planning method. According to TPHS 2013, 73.5% of the population use a family planning method in Turkey, which is 63.2% in the world. The country with the highest family planning method use is Norway with 88.4%, while South Sudan is in the last place with 3.5%[10,20]. The rate of family planning method use both among HP and in the general population in Turkey is higher than the world average. The rate of family planning method use among HP is close to Norway, which is at the top place. So, we think the socioeconomic level might be responsible for family planning and access to family planning services, but not because of the religious beliefs as some studies say[21].

The most commonly used method among the married participants between the ages of 18-49 was found to be condom with 39.9%. It was reported in TPHS 2013 that the pull-out method was in the first in the general population with 25.5%. In Turkey, HP and the general population have different preferences in terms of family planning methods. Female surgical sterilization is the most common method in the world (18.9%) and in developing countries (20.6%), while condom is the most common method in developed countries (18.4%)[20]. The most common method is ORC in Europe (20.5%) and Oceania (14.3%); surgical sterilization in Asia (23.4%), North America

(20.8%), Latin America and the Caribbean (26.2%); and injectable contraceptives in Africa (8.3%). Condom use among HP is higher than the average of developed countries and the world. The rate of ORC use, the most common method in the world, was found to be 6.9% among HP and 9.4% in the general population, while the rate of female surgical sterilization, the most common method in Europe, was found to be 11.4% among HP and 4.6% in the general population[10,20]. Both in the general population and among HP, the use of female surgical sterilization is less common than the world and the use of ORC is less common than Europe.

Conclusion

In conclusion, it was found that HPs had insufficient awareness regarding population and the characteristics of the population; it is important to give training on population to HPs in order to inform the service receivers. Regarding abortion, HPs in Turkey had similar opinions with HPs around the world; however, there seems to be some difference with the society. That being said, studies with larger samples are required to reach conclusive results. Also, HPs in Turkey seem to not embrace the government's opinions and regulations related to abortion. There are differences between genders in this sense as well. The abortion rate is higher among HPs compared to the general society, but it was found to be lower when we compared it to world statistics. Also, the increase in the rate of caesarean section and the common use of this method among HP are topics that need to be addressed. Qualitative and mixed studies are required to investigate reasons behind the preference of HP for caesarean section and encourage HP to have normal birth. HP were found to have a higher use of contemporary family planning methods compared to the general population, which is a significant finding for HP to serve as role models for the society.

In addition to TPHS, which investigates the population- and health-related status of the Turkish society, our study is important in that it evaluates opinions, attitudes, and behaviours of HP providing FPC within the scope of primary health care services related to family and population planning. We hope that this determination of the opinions of HP, who have significant effects on the society, will shed light on regulations of this subject.

Conflict of interest

The authors declare no conflict of interest.

Contribution of Authors

AB, TEY, İB, İK, İŞ and AÖ designed the study, AB, İŞ, İB and İK collected and analysed data, interpreted and discussed the findings under the supervision of AB, TY, AÖ and İŞ. TY and TEY prepared and revised the manuscript and TY, TEY and İŞ provided inputs in finalising the manuscripts. All authors read and approved the manuscript.

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