Desire to have a child during the COVID-19 pandemic: A case of Southeastern Anatolia Region

COVID-19 pandemisi sırasında çocuk sahibi olma isteği: Güneydoğu Anadolu Bölgesi örneği

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ABSTRACT

Aim: The aim of this study was to determine the desire of married couples have children during the COVID-19 pandemic and identify the factors affecting this desire.

Methods: A descriptive cross-sectional survey study design was used. Married men and women aged 18 to 49 in a province located in the Southeastern Anatolia Region participated this study. Data were collected using a Personal Information Form and the COVID-19 Fear Scale via online.

Results: Of the participants 44.1% wanted to have children before the pandemic, 50.2% of these participants postponed this desire during the pandemic. 40.7% of these participants were not using any contraceptive method, and partner's refusal (51.6%) was the most reason on this topic. The factors that influenced decisions to limit the number of children were advanced age, being unemployed, the sole decision-maker status of family elders regarding fertility-related preferences, less frequent sexual activity during the pandemic period, and fear of COVID-19.

Conclusion: The results showed that the negative effects of the pandemic, and sociodemographic disadvantages significantly affected the desire to have a child.

Keywords: birth; contraception; COVID-19 pandemic; fertility

ÖZ

Amaç: Bu çalışmanın amacı, COVID-19 pandemisi sürecinde evli çiftlerin çocuk sahibi olma isteklerini ve bu isteği etkileyen faktörleri belirlemektir.

Yöntem: Tanımlayıcı kesitsel tarama çalışması tasarımı kullanıldı. Çalışmaya Güneydoğu Anadolu Bölgesi'nde yer alan bir ilde 18-49 yaş arası evli erkekler ve kadınlar katıldı. Veriler Kişisel Bilgi Formu ve COVID-19 Korku Ölçeği kullanılarak online olarak toplandı.

Bulgular: Katılımcıların %44.1'i pandemi öncesi çocuk sahibi olmak isterken, bu katılımcıların %50.2'si bu isteğini pandemi sırasında erteledi. Bu katılımcıların %40.7'si herhangi bir kontraseptif yöntem kullanmamakta olup, bu konudaki en önemli sebep partnerinin reddetmesi (%51.6) idi. Çocuk sayısının sınırlandırılması kararlarında etkili olan faktörler, ileri yaş, işsiz olma, doğurganlıkla ilgili tercihlerde aile büyüklerinin tek karar verici olması, pandemi döneminde daha az cinsel aktivite ve COVID-19 korkusuydu.

Sonuçlar: Sonuçlar, pandeminin olumsuz etkilerinin ve sosyodemografik dezavantajların çocuk sahibi olma isteğini önemli ölçüde etkilediğini göstermiştir.

Anahtar kelimeler: COVID-19 pandemisi; doğum; doğum kontrolü; doğurganlık

Introduction

The coronavirus 2019 (COVID-19) pandemic process continues to affect the lives of all people worldwide (Chu et al., 2020). Just like those in any other epidemic or pandemic period, the precautions taken due to the increase in the mortality rate bring about fear, panic, and anxiety (Ahorsu et al., 2022). However, it is necessary to allow to explore the impact of the epidemic from the source of childbirth, rather than focusing only on the impact of the epidemic on mortality. In the post-epidemic era, it is important to describe and explore this phenomenon. Furthermore, this is because in the scope of reproductive health/sexual health (RH/SH), when partners, especially women, decide to have children, they should receive prenatal care regularly and have a healthy state during the pregnancy, childbirth, and postpartum periods. During the pandemic period, factors such as financial problems, the difficulty of taking on the responsibility of providing care for a baby, lack of social support due to isolation, and the negative effect of COVID-19 on pregnancy have led partners to postpone their decisions to have children (Ahorsu et al., 2022; Lindberg et al., 2020). For implementing this choice, partners

have to use contraceptive methods. This way, untimely and unwanted pregnancies can be prevented. However, unfortunately, family planning services have been interrupted due to the pandemic (Astratie, 2021; Malicka Mynarska & Świderska, 2021).

Today, some of the important factors that affect the desire to have children are regional differences. In socioeconomically underdeveloped eastern and rural regions around the world, a high fertility rate is expected (United Nations Population Fund, 2018; Şimal & Gürsoy, 2020). This study focuses on a region known for high fertility that makes the results even more exciting. Because the physical, mental, and economic outcomes of the pandemic process have different effects on the desire to become parents and the expectations of fertility among individuals living in such regions where ethno-cultural diversity is intense. Identifying the factors that affect the desire to have children during the pandemic period is an important issue in terms of determining current and potential problems. Knowing these problems will allow the organization of more qualified and comprehensive activities for RH/SH services. Moreover, investigating the effects of the COVID-19 pandemic

as a global issue regarding the use of contraceptive methods will shed light on precautions to be taken against future epidemics or pandemics (Şimal & Gürsoy, 2020). For this purpose, it is needed to examine not only the effects of COVID-19 on mortalities but also its fertility-related outcomes (Ahorsu et al., 2022).

In this context, the purpose of current study was to determine the desire of married couples in the age group of 18-49 to have children during the COVID-19 pandemic period and identify the factors affecting this desire. This study addresses the following research questions: Does the COVID-19 pandemic affect people's intention to have children? What are the factors that affect the intention to have a child during the COVID-19 pandemic process?

Methods

This descriptive study was conducted between 01 July 2021 and 01 February 2022 in the province of Siirt which is located in the "Southeastern Anatolia Region of Türkiye".

Participants

According to the current data obtained from local governments, there are 139,168 people between the ages of 18-49 residing in the province where the research was conducted. The participant for the study sample was calculated as 660 (with a margin of error of 5%, an unknown prevalence of 50% and within a 99% confidence interval) (Lenth, 2006). Considering 10% data loss due to any obvious errors or inconsistencies in the forms, the size was rounded off to 720 for the study. Snowball sampling was used as the sampling method in present study. A data collection form prepared via the Google Docs platform was sent online (e-mail, WhatsApp) to participants, and the participants were asked to fill in the form and share it with other participants who satisfied the criteria for being included in the study and lived within the borders of the province where the study took place. The criteria for being included in the study were specified as being married, being between 18 and 49 years of age, being literate, having internet access for filling in the survey form, and voluntarily agreeing to participate in the study. The exclusion criteria were having a diagnosis of infertility or being pregnant (for women participants). A total of 660 participants took part in the study.

Measures

Data were collected using a Personal Information Form and the COVID-19 Fear Scale (FCV-19S).

Personal information form

Personal Information Form was consisted of 22 items covering the participants' sociodemographic characteristics (age, gender, educational level, employment status, perceived income level, etc.), pandemic-related characteristics (history of COVID-19 diagnosis, history of being in quarantine with the partner, etc.), and desire and behaviors of parenthood (decision-maker in the family about having children, sexual activity status, etc.). In order to evaluate the clarity and usefulness of the questions, a pre-test was conducted among 20 participants and the necessary corrections were made.

COVID-19 Fear Scale (FCV-19S)

FCV-19S was developed by Ahorsu et al. (2022) and adapted into Turkish by Ladikli et al. (2020) was used. There are no reverse scored items in the FCV-19S, which consists of 7 questions and one dimension. The scale was designed as a five-point likert-type scale ('1' strongly agree, '2' agree, '3' undecided, '4' disagree, and '5' strongly disagree). The minimum and maximum scores that can be obtained from the scale are 7 and 35 points. Receiving a high score on the scale indicates that the Covid-19 fear level is 'high'. In the Turkish reliability and validity test of the scale, the Cronbach's alpha coefficient was determined as 0.86 (Ladikli et al., 2020). In this study, the Cronbach's alpha coefficient of the scale was calculated as 0.92.

Data collection

Since the snowball sampling method was adopted in the formation of the sample group in this study, first of all, a few participants who met the inclusion criteria were contacted. Through the selected participants, other participants were contacted and a sample was created. After the participants agreed to participate, they were allowed to fill out the data collection form on the online platform. By sending information about the purpose of the study to each participants, the consent to participate in the study was obtained online from each participant. Each participant who agreed to participate in the research filled out data collection forms on the "Google Forms" platform created online. Google Forms is an application where only the participants in the study can fill out the data collection form and researchers can access the data. In this way, the principle of confidentiality of the collected data is preserved. Besides, the survey form that was designed to not allow any respondent to submit the form before answering all questions prevented the respondents from submitting a survey form with missing data. However, after quality control, 60 forms were excluded from the study due to any obvious errors or inconsistencies in the forms. The average time for filling out data collection forms is 15 minutes.

Data analysis

The analysis of the data was carried out in the SPSS 25.0 (Statistical Package for the Social Sciences) statistical package software (IBM, Armonk, NY, USA). The normality of the distribution of the data was evaluated with Shapiro Wilk test and Q-Q charts. In the results, descriptive statistics were presented as numbers, percentages, means and standard deviations (SD). The chi-square test was used to compare the desire to have a child according to the descriptive characteristics of the participants. The differences in the mean FCV-19S scores of the participants based on their desire to have a child were evaluated by an independent-sample t-test. Univariate and multivariate logistic regression analyses were performed on significant factors that could contribute negatively to the desire to have a child during the COVID-19 pandemic. Among the independent variables included in the logistic regression model, the mean FCV-19S score was a continuous variable, while gender, age, education level, working status, the decision-maker in the family about having children, actively work outside during quarantine, reduction of monthly profits during quarantine, and sexual activity status were categorical variables. Variables that were significant in univariate analyzes were included in the multivariate analysis. In the multivariate logistic regression analysis, the Hosmer-Lemeshow goodness-of-fit test and the Nagelkerke R^2 value were taken into account to test the model's fit and the explanatory power of the model. According to the Hosmer-Lemeshow test results, the model had a good fit (p=0.210), and based on the Nagelkerke R^2 value (0.404), it had a variance explanation rate of approximately 41%. The results were evaluated with 95% confidence intervals 'and the significance level was set at p<0.05.

Ethical principles

Ethics committee approval from Siirt University Non-Interventional Clinical Research Ethics Committee (Date: 30/06/2021 and Number: 11924). A voluntary informed consent form containing information about the study was sent to the participants, and an electronic informed consent form was obtained for each person who agreed to participate in the study.

Results

The mean age of the participants (SD) was 33.2±5.8 years, 60.3% were female, 12.6% had no formal education, 40.9% were unemployed, 63.2% rated their income level as poor, 46.1% lived in the provincial center, 40.2% had extended families, 37.1% spoke Kurdish at home, and 66.7% decided to have a child with their partner.

Table 1. Comparison of the descriptive characteristics of the participants according to their desire to have children

| Characteristics | Total n (%) | Desire to Have a Child | | Test value[a] | p |
		Yes n (%)[b]	No n (%)[b]		
Gender					
Male	262 (39.7)	80 (30.5)	182 (69.5)	25.247	<0.001[c]
Female	398 (60.3)	57 (14.3)	341 (85.7)		
Age range (years)					
18-27	96 (14.5)	47 (48.9)	49 (51.1)		
28-30	153 (23.2)	39 (25.4)	114 (74.6)		
31-34	133 (20.2)	20 (15.0)	113 (85.0)	67.389	<0.001[c]
35-38	146 (22.1)	19 (13.0)	127 (87.0)		
39-48	132 (20.0)	12 (9.0)	120 (91.0)		
Level of education					
Literate	83 (12.6)	48 (57.8)	35 (42.2)		
Primary school	277 (42.0)	37 (13.3)	240 (86.7)	80.407	0.007
High school	159 (24.1)	28 (17.8)	129 (82.2)		
Bachelor	141 (21.4)	24 (17.1)	117 (82.9)		
Working status					
Working	390 (59.1)	48 (12.3)	342 (87.7)	41.382	<0.001[c]
Not working	270 (40.9)	89 (32.9)	181 (67.1)		
Income level					
Low	417 (63.2)	75 (17.9)	342 (82.1)		
Mid	194 (29.4)	50 (25.7)	144 (74.2)	5.329	0.06
High	49 (7.4)	12 (24.4)	37 (75.6)		
Place of residence					
Provincial center	304 (46.1)	34 (11.1)	270 (88.9)		
District	229 (34.7)	37 (16.1)	192 (83.9)	95.095	0.120
Village-town	127 (19.2)	66 (51.9)	61 (48.1)		
Family type					
Nuclear family	395 (59.8)	69 (17.4)	326 (82.6)	6.470	0.210
Extended family	265 (40.2)	68 (25.6)	197 (74.4)		
Most spoken language					
Turkish	247 (37.4)	45 (18.2)	202 (81.8)		
Kurdish	245 (37.1)	59 (24.1)	186 (75.9)	2.740	0.254
Arabic	168 (25.5)	33 (19.6)	135 (80.4)		
Decision-maker of having a child					
With my partner	440 (66.7)	67 (15.2)	373 (84.3)		
Only man	137 (20.8)	55 (40.1)	82 (59.9)	40.506	<0.001[c]
Only woman	11 (1.7)	3 (27.3)	8 (72.7)		
Family elders	72 (10.9)	12 (16.6)	60 (83.4)		
Actively work outside during quarantine					
Yes	352 (53.3)	65 (18.4)	287 (81.6)	2.408	0.045
No	308 (46.7)	72 (23.3)	236 (76.7)		
Reduction of monthly profits during quarantine					
Very much	246 (37.3)	34 (13.8)	212 (86.2)		
Much	294 (44.5)	45 (15.3)	249 (84.7)	67.98	<0.001[c]
Unchanged	120 (18.2)	58 (48.3)	62 (51.7)		
History of COVID-19 diagnosis					
Yes	422 (63.9)	59 (13.9)	363 (86.1)	5.848	0.324
No	238 (36.1)	78 (32.7)	160 (67.3)		
Quarantine at home with the partner					
Yes	467 (70.8)	63 (13.4)	404 (86.6)	3.149	0.125
No	193 (29.2)	75 (38.8)	118 (61.2)		
Sexual activity during the pandemic					
Decreased	181 (27.4)	24 (13.2)	157 (86.8)		
Increased	275 (41.7)	66 (24.0)	209 (76.0)	8.589	0.013
Not changed	204 (30.9)	47 (23.1)	157 (76.9)		

[a] Qhi-square test was used; [b] Row percentage; [c] Significant difference

In the COVID-19 pandemic period, 53.3% of the participants worked actively outside, 44.5% reported more reduction in their monthly income, 63.9% had been diagnosed with COVID-19, 70.8% had remained in quarantine at home with their partner, and 41.7% had increased frequency of sexual activity during the pandemic (Table 1).

The effects of different variables on wanting to have children during the pandemic were examined. Gender, age, educational status, employment status, decision maker to have children, actively working outside during quarantine, change in monthly income in quarantine, and frequency of sexual activity during the pandemic were significant variables in the desire to have children (p<0.05) (Table 1).

Table 2. Participants' desire of parenthood

Characteristics	n (%)
Planning have a child before the pandemic	
Yes	291 (44.1)
No	369 (55.9)
Postponing the plan to have a child during the pandemic (*n* = 291)	
Yes	146 (50.2)
No	145 (49.8)
Planning have a child during the pandemic	
Yes	137 (20.8)
No	523 (79.2)
Attempt to have a child (*n* = 137)	
Yes	98 (71.5)
No	39 (28.5)
Using a contraceptive method during the pandemic (*n* = 523)	
Yes	310 (59.3)
No	213 (40.7)
Type of method (*n* = 310)	
Condom	82 (26.5)
Coitus interruptus	80 (25.8)
Intrauterine device	49 (15.8)
Calendar method	40 (12.9)
Oral contraceptives	33 (10.6)
Injection	16 (5.2)
Tubal ligation	10 (3.2)
Reason for not using contraceptive method* (*n* = 213)	
Partner's refusal	110 (51.6)
Religious concern	78 (36.6)
Believing that pregnancy was not possible	69 (32.4)
View of harm to health	12 (5.6)

*More than one answer was given.

While 44.1% of the participants wanted to have children before the COVID-19 pandemic, 50.2% of these participants postponed this desire. The most frequently reasons for postponing this desire were concerns about having financial difficulties (91.8%), the potential difficulties in pregnancy (66.4%), and having to go to a hospital (32.2%). 20.8% of the participants wanted to have children during the COVID-19 pandemic. The participants desired to have children frequently as that they needed something good to happen (51.8%), and they wanted to have a change in their lives (42.3%). %71.5 of the participants who wanted to have children attempted to have a child, and the most frequently mentioned behavior was "regulating sexual activity" (78.1%). Among the participants who did not want to have children, 40.7% were not using any contraceptive method, and partner's refusal was the most frequently stated reason for not using contraceptive method did not want to have children (51.6%). For the participants who used any contraceptive method, the most frequently used

methods were condom use (26.5%) and coitus interruptus (25.8%) (Table 2).

The mean FCV-19S total scores of the participants were 22.86±4.28. The mean FCV-19S scores in present study were 25.17±6.45 among the participants who did not want to have children during the pandemic period and 20.53±5.72 among those who wanted to have children during the pandemic period, and the difference between the two groups was statistically significant (p<0.05) (Figure 1).
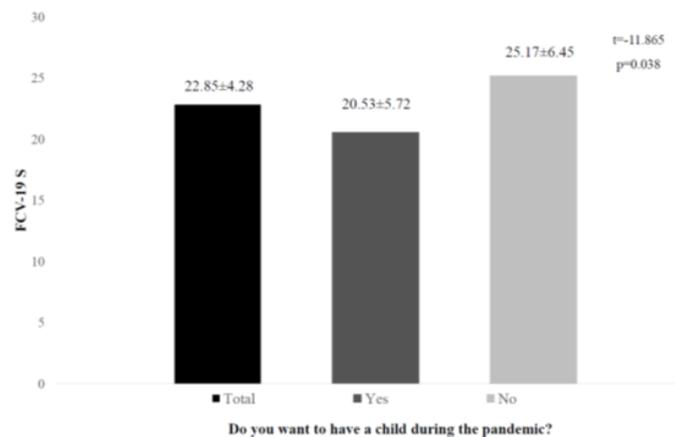

Figure 1. The mean FCV-19S scores of the participants

A logistic regression model was created in this study using the variables that showed significant differences in the analyses, which included gender, age, educational status, employment status, decision maker to have children, actively work outside during quarantine, change in monthly income in quarantine, frequency of sexual activity during the pandemic, and fear of COVID-19. According to the univariate analysis results, the state of not wanting to have children during the COVID-19 pandemic period were 1.7 times higher among the female participants, 2.5 times higher among the participants in the 39-48 age group, 1.6 times higher in participants with primary school and 1.7 times higher in participants with high school degrees, 2.3 times higher among participants who were not working, 1.7 times higher among the participants who did not work outside during the pandemic period, 2.0 times higher among the participants whose income decreased a lot during the pandemic period, 3.1 times higher among the participants in whose families the decision for them to have children belongs only family elders and 3.5 times higher the group where this decision belongs only to man, 3.9 times higher among the participants whose sexual activity frequency decreased during the pandemic period, and 1.0 time higher among the participants who had a fear of COVID-19 (p<0.05). According to the multivariate logistic regression analysis results, the state of not wanting to have children during the COVID-19 pandemic period were higher 2.4 times among the participants in the age groups of 35-38 and 3.5 times higher among the participants in the age groups of 39-48, 2.7 times higher among the participants who were not working, 7.2 times higher among the participants in whose families the decision for them to have children belongs only family elders, 3.7 times higher among the participants whose sexual activity frequency decreased during the pandemic period, and 1.1 times higher among the participants who had a fear of COVID-19 (p<0.05) (Table 3).

Table 3. Univariate and multivariate logistic regression model of variables predicting participants' unwillingness to have children

Characteristics	Univariate Model			Multivariate Model		
	p	OR	95% CI	p	aOR	95% CI
Gender						
Male	1	-	-	1	-	-
Female	0.004[a]	1.735	1.188-2.535	0.351	1.315	0.354-1.635
Age range (years)						
18-27	1	-	-	1	-	-
28-30	0.120	0.610	0.327-1.138	0.792	1.111	0.508-2.427
31-34	0.182	0.646	0.340-1.227	0.451	1.380	0.598-3.186
35-38	0.638	0.856	0.448-1.637	0.046[a]	2.453	1.016-5.927
39-48	0.023[a]	2.538	1.138-5.662	0.010[a]	3.567	1.354-9.396
Level of education						
Literate	0.232	1.484	0.776-2.839	0.084	0.362	0.114-1.148
Primary school	0.048[a]	1.616	1.005-2.599	0.753	0.880	0.396-1.955
High school	0.038[a]	1.789	1.032-3.101	0.857	0.936	0.456-1.921
Bachelor	1	-	-	1	-	-
Working status						
Working	1	-	-	1	-	-
Not working	<0.001[a]	2.378	1.561-3.622	0.013[a]	2.712	1.230-5.978
Decision-maker of having child						
With my partner	0.060	3.196	0.954-10.707	0.066	7.138	0.739-44.727
Only man	0.049[a]	3.558	1.008-12.559	0.111	4.737	0.701-32.016
Family elders	0.046[a]	3.167	1.849-11.808	0.043[a]	7.267	1.061-49.788
Only woman	1	-	-	1	-	-
Actively work outside during quarantine						
Yes	1	-	-	1	-	-
No	0.004[a]	1.762	1.194-2.600	0.484	0.761	0.354-1.635
Reduction of monthly profits during quarantine						
Very much	0.009[a]	2.013	1.189-3.410	0.193	1.706	0.764-3.810
Much	0.243	1.336	0.822-2.173	0.915	1.038	0.524-2.057
Unchanged	1	-	-	1	-	-
Sexual activity during the pandemic						
Decreased	<0.001[a]	3.902	2.145-7.098	<0.001[a]	3.705	1.750-7.845
Increased	0.342	1.222	0.808-1.851	0.060	1.665	0.978-2.833
Not changed	1	-	-	1	-	-
FVC-19S	<0.001[a]	1.099	1.068-1.131	<0.001[a]	1.191	1.143-1.242

[a] Significant difference; CI: confidence interval; OR: odds ratio; aOR: adjusted odds ratio

Discussion

While epidemic and pandemic periods affect almost all aspects of people's lives, the reproductive choices of individuals in such times are highly important (Malicka et al., 2021). In present study, half of the participants who wanted to have children before the pandemic postponed these plans. This result was compatible with the results of other studies that have suggested that more than a third of women in the US and various European countries postpone their plans to have children or plan to have fewer children due to the pandemic (Lindberg et al., 2020; Luppi et al., 2020). In Türkiye, while the average fertility rate was 1.88 in 2019, it dropped to 1.76 in 2020, when the COVID-19 pandemic was in place (Turkish Statistical Institute, 2021). It was also reported that fertility rates decreased in recent history during the Severe Acute Respiratory Syndrome epidemic (2003) and the Ebola epidemic (2015–16) (Mcbain et al., 2016). In this study, the most determined reasons for the postponement of having children were concerns about potential financial difficulties, difficult pregnancy, and having to go to a hospital. Micelle et al. determined that their participants postponed their plans to have children during the COVID-19 pandemic period because they were afraid of getting infected, pregnancy complications, and financial difficulties (Micelli et al., 2020). These results are important in terms of showing that people tend to postpone their desires to have children in periods where mortality rates are high such as pandemics.

The finding in present study that one in every four participants who did not want to have children were not using any contraceptive method was noteworthy. Considering that this situation was frequently caused by the unwillingness of the partner, we may state that the participants had negative attitudes towards contraceptive methods due to sociocultural reasons. Similarly, researchers have concluded that cultural factors affect the acceptance and use of birth control in different ways and are one of the reasons for increasing fertility rates in the COVID-19 pandemic (Ait-Addi et al., 2020; Astratie, 2021). Hence, it is inevitable for unplanned and unwanted pregnancies to increase in pandemic periods.

In present study, approximately one-fifth of the participants wanted to have children during the COVID-19 pandemic period. As the reasons for this, they most frequently stated that they needed something good to happen in their lives, and they wanted to have a change. Micelle et al. (2020) reported that one in every 10 participants wanted to have children, and the most frequently stated reasons were better communication with their partners and increased emotional intimacy due to more free time. Isolation measures and uncertainties during the COVID-19 pandemic have influenced the psychosocial health of individuals in many families negatively. To cope with the negative emotions that they experience, partners may choose to plan pregnancy, as pregnancy is a special period that involves excitement and expectations for family members (Hakiki & Widiyastuti, 2021). In present study, the majority of

the participants regulated their sexual activity to have children. Other researchers have also reported an increase in the frequency of sexual intercourse among individuals who get the chance to spend more time with their partners at home (Ait-Addi et al., 2020; Döring, 2020).

Because of the COVID-19 pandemic, individuals experience fear about both their own health and the health of their families. This fear affects the postponement of the desire to have children and fertility plans. In present study, the COVID-19 fear levels of the participants who did not want to have children during the pandemic period were higher compared to those who did. Likewise, Minello, Martucci & Manzo (2021) determined that participants who wanted to stay childless during the pandemic period were afraid of COVID-19 more.

In present study, significant factors that influenced these preferences were sociodemographic disadvantages identified such as poor economic status, advanced age, and not being in a decision-maker position regarding the number of children one would have. Similarly, other researchers have determined that individuals who experience financial difficulties due to the pandemic limit the number of children they plan to have have (Ait-Addi et al., 2020; Omar et al., 2021; Ullah et al., 2020). People who are older are more likely to already have children. Considering that advanced age carries more risk in terms of pregnancy complications and COVID-19, not wanting to get pregnant is expected (Micelli et al., 2020). When different studies conducted before the pandemic were examined in the region where the study was conducted, the decision of family elders was effective in determining the fertility characteristics of their children (Eroğlu et al., 2021; Şimal & Gursoy, 2020). In this study, it is well documented that even during the pandemic, the influence of family elders' views on children's fertility behaviors. This finding; showed that parents have a strong influence on determining their own fertility choices for their children. The fact that the study is conducted in a region with high ethno-cultural diversity may have an impact on the dynamic of fertility decision.

This study provides important implications for nursing. It is essential that nurses recognize that an individual's fertility intention and consequences after pandemic are due to their demographics and the ethno-cultural conditions of their place of residence. To improve the disadvantageous conditions associated with using contraception in emergencies such as the pandemic, nurses should focus on the needs of individuals, create programs to prevent unwanted pregnancies and adverse health outcomes, acquire funding, involve community organizations and leaders in their work to provide policy changes. contraception services should be included in the programs to be created to combat potential epidemics and pandemics in the future (Asratie, 2020; Sundiam et al., 2023). At the individual and family level, nurses can participate in patient, and family-centered conversations, and health visits to identify, and asses the social determinants of health that may adversely affect the maternal and infant outcomes of unwanted pregnancies and the healthy maintenance of desired pregnancies. This will allow the public to adhere to reproductive health and sexual health promoting behaviors in the post-pandemic period, and to gain sufficient knowledge. To shed light on the permanent and long-term interactions between the COVID-19 pandemic and fertility-related decisions, it will be beneficial to conduct mixed-method studies that will also include family elders.

Limitations

This study had some limitations. First, this study was only quantitative, and the data were obtained on the internet. Due to the mode of data collection, the sample is affected by selectivity dealing to digital skills and access to internet access. The findings of present study are limited to the sample group included in the study and are not representative to the entire population of the region.

Conclusion

The results of present study revealed that higher fear of COVID-19, aging, financial difficulties, and ethno-cultural factors are associated with postponing desire to have child during the pandemic.

Nurses have an important role in encouraging the society to comply with the protocols established for the protection and development of health during the pandemic process.

In order to improve disadvantaged conditions, individuals should also evaluate their existing coping strategies and social support systems. Organizing activities to increase social support and strengthen couple harmony during pregnancy can help reduce health-related complications. As disadvantaged conditions improve and people's access to health systems increases, it is expected that there will be an increase in the rate of fertility due to postponed pregnancies.

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