Journal of Midwifery & Reproductive Health

JMRH.mums.ac.ir

The Relationship of Demographic and Socio-economic Factors with Fertility Attitudes in the Married Couples

Soheila Pourmasumi (PhD)[1,2*], Fatemeh Ayoobi (PhD)[3], Parvin Khalili (PhD)[1,4], Marjan Karimi Davarani (BSc)[5], Zahra Jamali (PhD)[6,7], Shahla Kazemipour (PhD)[8], Mahboubeh Vatanparast (PhD)[1,9]

[1] Assistant Professor, Social Determinants of Health Research Center, Rafsanjan University of Medical Sciences, Rafsanjan, Iran
[2] Clinical Research Development Unit, Ali-Ibn Abi-Talib Hospital, Rafsanjan University of Medical Sciences, Rafsanjan, Iran
[3] Assistant Professor, Occupational Safety and Health Research Center, NICICO, World Safety Organization and Rafsanjan University of Medical Sciences, Rafsanjan, Iran
[4] Department of Epidemiology, School of Public Health, Rafsanjan University of Medical Sciences, Rafsanjan, Iran
[5] BSc of Midwifery, Department of Health, Rafsanjan University of Medical Sciences, Rafsanjan, Iran
[6] Assistant Professor, Non-Communicable Diseases Research Center, Rafsanjan University of Medical Sciences, Rafsanjan, Iran
[7] Clinical Research Development Unit (CRDU), Niknafs Hospital, Rafsanjan University of Medical Sciences, Rafsanjan, Iran
[8] Assistant Professor, Faculty of Humanities l, North Tehran Branch, Islamic Azad University, Tehran, Iran
[9] Molecular Medicine Research Center, Research Institute of Basic Medical Sciences, Rafsanjan University of Medical Sciences, Rafsanjan, Iran

ARTICLE INFO

Article type:
Original article

Article History:
Received: 20-Oct-2022
Accepted: 29-Jul-2023

Key words:
Attitude
Reproductive Behaviour
Population Growth
Birth Rates
Population Surveillance

ABSTRACT

Background & aim: The rapid decline in fertility rates and the disruption of the age pyramid balance could cause irreparable economic and social damage. This study aimed to determine the relationship between some important demographic and socio-economic factors and couples' fertility attitudes.

Methods: This cross-sectional study was conducted on the married men and women (512 participants), who visited healthcare centers in urban and rural areas of Rafsanjan, Iran from March to July 2022. The study population was selected via cluster sampling. A self-structured questionnaire was used to assess participants' attitudes towards childbearing, which was completed on a self-report basis. The attitude score were compared using the Independent Sample T-test and one-way ANOVA test.

Results: More than 50% of participants agreed that having children is very important in their lives, and 10% preferred not to have children. The results showed that the score of attitude towards childbearing was higher in rural areas (P = 0.028). The score of attitude was also higher among women and individuals with lower living costs. Having more daughters as well as lower marital age (r = 0.024) was accompanied by a higher score of attitude towards childbearing (r = 0.014).

Conclusion: Based on our results, the total childbearing attitude score gets nearly 75% of the total number, it can be concluded that the Rafsanjan population has a positive attitude toward childbearing. The results will help policy-makers for planning and intervention in line with the new demographic policies, through encouraging couples toward childbearing.at the community level.

► *Please cite this paper as*:
Pourmasumi S, Ayoobi F, Khalili P, Karimi Davarani M, Jamali Z, Kazemipour Sh, Vatanparast M. The Relationship of Demographic and Socio-economic Factors with Fertility Attitudes in the Married couples. 2024; 12(4): 4442-4452. DOI: 10.22038/JMRH.2024.68548.2009

Introduction

Population size in each country is one of the most important determinants of economic, social, and political planning (1). The three known factors affecting the population size are fertility, mortality, and migration. Among these components, the fertility rate is the most important component affecting population growth, which with multiplier power compared to migration and mortality, can increase the population (2). The total fertility rate (TFR) is the average number of live births a woman would have throughout her life. The population of

* *Corresponding author*: Soheila Pourmasumi, Assistant Professor, Social Determinants of Health Research Center, Rafsanjan University of Medical Sciences, Rafsanjan, Iran. Tel: 00989130454072, Email: mahboob_vatan@yahoo.com

countries could decrease if TFR<2.1(3). In recent years, declining fertility rates have created global economic and social challenges for most developing countries, including Iran. According to official statistics, the total fertility rate, which was 7 children per woman in the late 1970s, declined to 1.8 in 2011 (4). Thus, the rate of the aging population is increasing and is expected to reach approximately 24% by 2050 (3).

The family planning program by the government in recent years is one of the most important factors in reducing the population rate in Iran. Economic problems, urbanization, unemployment, decreased marriage rate, increased marriage age, changes in family values, and increased level of education are the most important factors that changed the attitudes of families towards fertility and affected the fertility rate (5-7). To deal with the challenging reduction of childbearing and to create a positive attitude towards fertility, policymakers should pay special attention to these factors in their plans and strategies (6).

Attitude is an internal state that affects behaviour and selected values (8). According to the theory of planned behaviour, behaviour is the result of an intended action, and the intended action is also determined by a person's attitude towards the behaviour. According to this theory, attitude is one of the most important factors in the formation of reproductive intention (9). A negative attitude toward childbearing is the most important cause of the reduced fertility rate (10). A positive attitude towards child and childbearing not only leads to early childbearing but also leads to more fertility (11). Several studies have found a positive relationship between attitudes toward childbearing and fertility rates (6, 12-14). A study conducted by Mousavi found that economic factors have a bigger share in young families' negative attitudes towards fertility than other factors, such as beliefs, culture, and physical-cognitive identity (6). According to the results obtained by previous studies, women's higher level of education, the desire for professional promotion and sexual equality, childbearing costs, personal well-being (7, 15), lifestyle changes, a high degree of individualism and poor accountability led to changes in the attitude toward childbearing (6).

Given that the attitude toward childbearing can be influenced by economic, social, and cultural factors, understanding these factors is essential. Although some studies have addressed this topic, there is no consensus on what would be the most effective way to change the attitude toward childbearing and increase fertility. So, this study aimed to find the relationship of some important demographic and socio-economic factors with fertility attitudes in married couples in Rafsanjan, Iran.

Materials and Methods

In this cross-sectional study, the statistical population was urban and rural populations covered by the comprehensive health service centers of Rafsanjan University of Medical Sciences. Inclusion Criteria was as follows: Participants must be married men aged 18 to 70 years or married women aged 15 to 45 years. They must reside in Rafsanjan, either urban or rural, for at least nine months per year. Participants must be Iranian citizens, possessing a national or identity card. Individuals with infertility issues or specific medical conditions that have been advised by a doctor to prevent pregnancy were excluded.

Sampling was done using a multi-stage stratified, cluster, and random sampling method. Stratified sampling was done according to the sections, the place of residence of people (city or village), in a proportional to size manner. This means that the number of samples in the city and village was proportional to the number of urban and rural residents in each section.

Desired sample selection was done using cluster sampling at the level of health centers and with equal cluster sizes. There should be 15 statistical units (including residents) in each cluster. To select people in each cluster at random, a list of people covered by healthcare centers was prepared. The variance of the relevant dependent variable (number of children) was 1.23, which was chosen based on a similar study that provided a suitable estimation of the investigated factors (16). The sample size for this study was calculated at 508 people (at final 512 cases filled out the questionnaire), via this formula:

$$n = \left(\frac{Z_{1-\alpha/2} \times \delta}{d} \right)^2$$

To determine the accuracy (d) in quantitative variables, the rule of 5 to 10 percent standard deviation (10 percent in this study) was used. To calculate the effect of the plan, it is better to use a pilot study, but based on guesses, for such outcomes, the intra-cluster correlation is not very high and is considered 1.2.

The data was collected using a self-structured questionnaire to find the factors affecting the childbearing attitude, in the Iranian family. Independent variables in this study were gender, educational level, income, gender preference, housing, internet usage, age at marriage, optimal age distance between children, distance from marriage to the birth of the first child, and socio-economic status.

The reliability of the questionnaire was calculated previously by Alidousti et al. (2021) using Cronbach's alpha coefficient, and α was reported 67.9. Also, construct validity and factor analysis have been used to measure the validity of the research tool. The Bartlett test value reported 735.575, which was significant at the p <0.001, and the coefficient KMO for this analysis was 0.741, which showed the data was appropriate for factor analysis (17).

The first part contained demographic information including age, education, employment, economic status, residence status and age at marriage, home ownership, owning a personal car, etc. The second part was the questions on attitude, which surveyed the participant's attitudes toward childbearing. This section consisted of 25 questions with a five-point Likert scale, which were answered from strongly agree to strongly disagree. Also, the questionnaire considered the attitude toward childbearing, throughout a set of 25 items in the five-point Likert scale, each person had a mean attitude number. For this purpose, there was two types of questions: questions focused on positive and negative attitudes. For each positive questions, the scoring was started from 1, and for the negative ones, from 5.

To collect data a workshop was held in order to explain and familiarize the staff involved in the program, and the related details of the plan, including the sampling method, and completing the questionnaires were given. After identifying the proper sample, the necessary explanations were given to the participants (the couples who were referred to the health center for any reason) regarding the purpose of the study. Then they were asked to complete a short questionnaire.

After collecting data from the target population, quantitative variables were described as either the mean ± standard deviation or mode, and categorical variables as the frequency and percentage. The mean of the attitudes numbers was compared across the baseline characteristics of individuals, using the Independent Sample T-test or one-way ANOVA test. All of the analyses were performed using State V.12. All p-values were two-sided, and when they were < 0.05, considered statistically significan

Results

In this study, 512 participants (men and women) completed the questionnaire. The number of women who completed the questionnaire was three times higher than the number of men. The mean age of all participants was 37.92 ± 8.00 years. Approximately 65% of the participants lived in urban areas and 43.1% were government employees (). Most had academic education between 6-12 years and more than 50% of the study population had an income of fewer than 5 million Tomans, in 2022 (The super unit of the official Iranian currency), which was in balance with their living expenses. More than 80% of cases were home-owners. The overall mean score for childbearing attitude (male and female) was 80.30± 10.32, which shows a moderate attitude toward childbearing, among the population. From it, that's a third of the total score, which can be interpreted as a positive overall view. Nearly half of the study population had 2 children (47.5%) and also the highest percentage of cases had a girl and a boy (45.8% and 43.4% respectively). Most people wanted to have 2 children (39.1%) and the lowest percentage of people wanted to have 6 children or no children at all (0.3%). Participant felt that the optimal age for marriage was 22.83 ± 3.13 for women and 27.13 ± 3.29 for men (Table 1).

Table 1. Frequency Distribution of Demographic Characteristics of participants in Rafsanjan, Iran

Variables	Total (n=512) N (%)	Variables	Total (n=512) N (%)
Age		**Number of children (missing=3)**	
Mean ±S D	37.92±8.00	No	37 (7.3)
Sex (missing=18)		One	134 (26.3)
Male	110 (22.3)	Two	242 (47.5)
Female	384 (77.7)	Three	80 (15.7)
Residence (missing=3)		Four	15 (2.9)
Urban	333 (65.4)	Five	1 (0.2)
Rural	176 (34.6)	Mean±SD	1.81±0.90
Job (missing=9)		**Number of girls (missing=6)**	
Government's employee	217 (43.1)	No	162 (32)
Private employee	60 (11.9)	One	232 (45.8)
Self-employed	57 (11.3)	Two	96 (19.3)
Homemaker/ Unemployed	169 (33.6)	Three	15 (3)
Spouse Job		Four	0 (0)
Government's employee	136 (26.6)	Five	1 (0.2)
Private employee	84 (16.4)	Mean±SD	0.94±0.81
Self-employed	214 (41.8)	**Number of boys (missing=5)**	
Homemaker/ Unemployed	78(15.2)	No	181 (35.7)
Educational level. Year (missing=25)		One	220 (43.4)
<6	23 (4.5)	Two	92 (18.1)
6-12	205 (40.2)	Three	12 (2.4)
13-16	198 (38.8)	Four	2 (0.4)
>16	84 (16.5)	Five	0 (0)
Spouse educational level. Year (missing=15)		Mean±SD	0.88±0.81
<6	42 (8.5)	**Appropriate number of children (missing=116)**	
6-12	230 (46.3)	No	1 (0.3)
13-16	171 (34.4)	One	14 (3.5)
>16	54 (10.9)	Two	155 (39.1)
Income. Million Rial (missing=9)		Three	129 (32.6)
<50	289 (59.2)	Four	90 (22.7)
50-100	150 (30.7)	Five	6 (1.5)
>100	49 (10)	Six	1 (0.3)
Expenses. Million Rial (missing=70)		**Suitable age for marriage (for women)**	
<50	244 (55.2)	Mean±SD	22.83±3.13
50-100	144 (32.6)	**Suitable age for marriage(for men)**	
>100	54 (12.2)	Mean±SD	27.13±3.29
Housing situation (missing=9)		**Number of siblings**	
Rental house	66 (13.1)	Mean±SD	4.77±2.18
Private house	411 (81.7)	**Number of Spouse's siblings**	
Father's house	26 (5.2)	Mean±SD	4.97±2.28

Table 2 presents responses to 25 questions regarding attitudes toward childbearing in Rafsanjan population. More than 50% of people answered totally agree with the first question, which shows that having children is very important in life (Q1). About 83% of the study's population totally agreed and agreed with the third question, (Having children strengthens the power of responsibility of people). Ten percent of the study population preferred to live without children. About 60% of cases verified, "Life without children is cold and soulless" (Q8). Near 78% of the study`s population answered totally agree, and agree that the presence of a child strengthens the family unit (Q11). About 78 % of the study`s population believed the high cost of living was a preventing factor for childbearing (Q19). Of the participant, 52% totally agreed with this "I am worried about my child's career future" (Q26).

Table 2. Frequency Distribution of answers to Attitude toward Fertility and Childbearing Scale (AFCS)

	Questions	Strongly agree N (%)	Agree N (%)	In-between N (%)	Disagree N (%)	Strongly disagree N (%)	Mode
1	Families with children feel happier than families without children	299(59.1)	107(21.1)	57(11.3)	16(3.2)	27(5.3)	1
2	Many people now prefer to have children later due to mistrust in their spouse	53(10.5)	144(28.4)	138(27.2)	110(21.7)	62(12.2)	2
3	Having children strengthens the power of responsibility of people	229(45.7)	188(37.5)	39(7.8)	35(7)	10(2)	1
4	These days, if you bring more than 2 children, people will blame you	49(9.7)	99(19.6)	126(24.9)	142(28.1)	90(17.8)	4
5	Having a baby is hard and it takes away the comfort	68(13.5)	133(26.4)	124(24.7)	123(24.5)	55(10.9)	2
6	Children will be parents' helpers in old age	179(36)	191(38.4)	88(17.7)	28(5.6)	11(2.2)	2
7	The high cost of raising a child prevents them from having children	203(40.7)	181(36.3)	59(11.8)	41(8.2)	15(3)	1
8	Life without children is cold and soulless	287(56.9)	157(31.2)	39(7.7)	15(3)	6(1.2)	1
9	A good child is a blessing, and God will provide for it	203(40.4)	153(30.4)	94(18.7)	31(6.2)	22(4.4)	1
10	Having children can disrupt a mother's fitness	86(17.1)	129(25.6)	123(24.5)	105(20.9)	60(11.9)	2
11	The presence of a child strengthens the family unit	237(47.4)	153(30.6)	59(11.8)	36(7.2)	15(3)	1
12	Women's academic and career advancement is more important than having children	33(6.7)	45(9.1)	123(24.8)	203(40.9)	92(18.5)	4
13	These days, people blame you if you do not have children	77(15.6)	139(28.1)	147(29.7)	92(18.6)	40(8.1)	3
14	Anxiety and uncertainty about the future cause reluctance to have children	141(29.1)	175(36.1)	93(19.2)	58(12)	18(3.7)	2
15	People will have more children if the government supports families, especially housewives	220(44.2)	178(35.7)	67(13.5)	20(4)	13(2.6)	1
16	It is better to spend money on things you love than to spend money on children	44(8.8)	45(9)	61(12.2)	205(41)	145(29)	4
17	Age over 35 is not a good time for pregnancy	73(14.7)	150(30.2)	131(26.4)	113(22.8)	29(5.8)	2
18	If contraceptives are not readily available, families will be more likely to have children	49(9.8)	94(18.8)	112(22.4)	143(28.7)	101(20.2)	4
19	The high cost of living prevents couples from having children	188(37.8)	203(40.8)	50(10)	43(8.6)	14(2.8)	2
20	In our city or village, good educational facilities are provided for children	79(16)	161(32.5)	124(25.1)	99(20)	32(6.5)	2
21	Worrying about the future of the children makes the couple have fewer children	187(37.9)	210(42.5)	53(10.7)	38(7.7)	6(1.2)	2
22	I am optimistic about the future	128(25.7)	174(34.9)	127(25.5)	50(10)	20(4)	2
23	I want my children to have the best facilities	333(66.6)	132(26.4)	17(3.4)	10(2)	8(1.6)	1
24	To achieve a prosperous life, I try to delay my childbearing	85(17.1)	110(22.1)	132(26.5)	129(25.9)	42(8.4)	3
25	Children's high demands prevent more parents from having children	124(24.8)	189(37.8)	104(20.8)	70(14)	13(2.6)	2

Table 3 compares attitudes toward childbearing based on demographic factors. The results showed that the attitude towards childbearing is higher in rural than in urban areas and this difference was significant (p = 0.028). It was also significant in women compared with men. Attitudes toward childbearing were higher in people with lower living costs. Signifying, the lower cost of living was accompanied by a greater tendency toward childbearing (p = 0.009). People with more daughters showed a positive attitude toward childbearing (r=0.120, p=0.014). Women had a greater positive attitude toward childbearing in comparison to men (r=0.118, p=0.037). In general, the lower marital age for men (r = 0.224, p<0.001) and women (r = 0.227, p<0.001) was related to a higher attitude toward childbearing (Table 3).

Table 3. Relationship between Socio-demographic Characteristics and Total Attitude toward Fertility in Rafsanjan, Iran

Variables	Attitude toward Fertility					
	Total (Mean±SD)	P-value	Male (Mean±SD)	P-value	Female(Mean±SD)	P-value
Residence		0.028		0.424		0.052
Urban	79.59±10.62		79.61±10.35		79.59±10.80	
Rural	81.97±9.50		81.59±9.30		80.02±9.69	
Job		0.222		0.529		0.260
Government's employee	80.28±10.65		80.72±10.17		80.17±11.12	
Private employee	80.10±10.55		79.30±9.67		80.29±10.85	
Self-employed	77.64±9.85		77.55±10.30		77.46±9.92	
Homemaker/ Unemployed	81.30±9.98		69.00±0.00		81.39±9.96	
Spouse Job		0.511		0.553		0.428
Government's employee	79.48±10.56		81.47±10.42		78.82±10.68	
Private employee	80.89±10.17		77.67±9.95		81.49±10.17	
Self-employed	80.95±10.45		81.04±10.19		**80.83**±10.67	
Homemaker/ Unemployed	79.22±9.63		78.39±9.84		80.64±9.55	
Educational level (Year)		0.328		0.831		0.264
<6	78.76±11.10		77.83±9.50		79.27±12.31	
6-12	81.46±9.99		80.48±8.27		81.67±10.51	
13-16	79.78±10.38		79.36±11.96		80.04±10.07	
>16	79.41±10.67		81.35±10.24		78.37±10.96	
Spouse education level (Year)		0.504		0.102		0.084
<6	81.35±10.03		82.00±13.00		82.15±9.54	
6-12	80.87±10.15		77.70±8.15		81.55±10.58	
13-16	79.80±9.87		82.90±9.13		78.38±10.01	
>16	78.74±11.61		78.14±12.85		79.28±11.31	
Income (Million Rial)		0.388		0.662		0.613
<50	80.90±9.89		81.12±9.75		80.87±10.04	
50-100	79.50±11.05		79.12±10.63		79.78±11.36	
>100	79.45±10.47		79.63±10.43		79.41±10.64	
Expenses (Million Rial)		0.009		0.401		0.026
<50	81.44±9.32		81.73±10.08		81.38±9.29	
50-100	78.89±11.58		78.87±10.99		78.79±11.88	
>100	77.09±8.69		78.27±7.40		76.85±9.24	
Housing status		0.280		0.841		0.209
Rental house	78.60±9.74		79.58±12.49		78.20±9.03	
Private house	80.60±10.48		**79.87±9.90**		**80.81±10.77**	
Father's house	78.15±9.65		82.33±9.03		77.46±9.09	

Variables	Total Correlation (r)	P-value	Male Correlation (r)	P-value	Female Correlation (r)	P-value
Number of children	0.092	0.058	-0.044	0.672	0.118	0.037
Number of girls	0.120	0.014	0.063	0.548	0.141	0.013
Number of boys	-0.005	0.926	-0.100	0.336	0.008	0.882

Suitable age for marriage (for women),	-0.227	<0.001	-0.126	0.229	-0.257	<0.001
Suitable age for marriage(for men)	-0224	<0.001	-0.234	0.024	-0.232	<0.001
Number of siblings	0.046	0.345	-0.091	0.385	0.091	0.092
Number of spouse's siblings	0.027	0.586	0.134	0.198	-0.007	0.899

Discussion

Based on our results, the total childbearing attitude score, in the population under study was 80.30± 10.32, and since it gets nearly 75% of the total number, it can be concluded that the Rafsanjan population has a positive attitude toward childbearing. On the other hand, the TFR (of 1.74) in Rafsanjan, a small city in Iran (electronic health record (EHR)) compared to 1.59 (in 2010–2015) in Iran, according to official statistics (18), can also confirm this positive attitude, in this city.

A high proportion (83%) agreed that having children strengthens the power of responsibility of people, showed in couples with family responsibility; childbearing was an important parameter to elevate their responsibility (Q3). One reason may be that Rafsanjan is a less industrialized city, and in a research study, it was approved that industrialization influences fertility attitude, because of women`s social status, in their work and at home. The emergence of new conceptions of women`s role in society and egalitarian attitudes in the family was created through work opportunities. Such attitudes and patterns of husband and wife interaction are associated with smaller family sizes and lower fertility (19).

The attitudes toward childbearing were significantly higher in rural than in urban areas. Urbanization and industrial life have negative effects on childbearing tendencies (20). In developing countries, regional context (urban/rural) is an effective factor in childbearing (21). The result by Araban and her colleagues (2020) was similar to our findings which reported higher childbearing intention in rural than in urban areas (21). Unfortunately, migration of the rural population to industrial cities increased since in rural regions agriculture is the main job, and recently agriculture cannot be responsible for the basic requirements of a new generation in a rural region. Despite migration from the rural region to cities, rural residents have a higher fertility rate and tend to childbearing (22). This can be justified in several ways, firs the urban population spends time elevating education and does not have free time to tend to childbearing (23). The second housing market and high costs of homes in cities changed family behaviors. When couples must live in a small apartment, tend to have a child significantly will be decreased (24). Third, in the rural population, religious status is higher than urban population, and studies showed higher fertility rates among the religious population (25, 26).

Based on the results of the present study, families with lower living costs tended to have more children. According to the research reports, several factors such as rising costs, economic pressure on families, and poor welfare facilities are responsible for decreasing childbearing (6, 27). In a study by Abbasi Shavazi et al. (2006) the main parameters connected to fertility reduction and demographic changes in Iran were related to socioeconomic factors and political changes (28).

Numerous studies indicated that education, especially in woman, have an important role in the fertility pattern (29). According to the present study results, the empowerment of women in socio-economic parameters, especially increasing the education level, can decrease fertility rates but in the present study, there was no correlation between education level and attitude toward childbearing. In other words, on average all cases in our study (low to high education level) had the same attitude relative to childbearing. Education is one of the main factors in the development of all aspects of life. Now education is linked to fertility planning (30). Recently in 2021, Utomo et al. reported high-level educated women have later pregnancies and often have fewer children than non-educated or low-educated women. Some highly educated women continue childless life (31). Acharya (2010) in a study evaluated the main demographic factors on fertility behaviour in Nepal and concluded that different variables affected the fertility rate, but education was the

most important variable. He also reported job status and income ratio were negatively correlated with the fertility rate (32). One of the reasons for this controversy, between our finding and previous studies, may be the fact that highly educated people constituted a small population of the participants (16.5%), besides the overall attitude in the study`s population was positive, while about 78% of this population believed that the presence of a child strengthens the family unit, therefore, this positive attitude might have influenced less by the education level. The results of the present study showed participants were concerned regarding the high cost of living (78%). It shows economic factors were the important preventing factor for childbearing (Q19). As well, they were worried about the child's career future (Q26). Various studies have been conducted on the impact of economic status on the fertility rate and family planning. Good economic status is another parameter that plays an important role in the fertility rate (33). According to scientific reports, there was a positive correlation between economic status in families and the trend of childbearing (34, 35).

In addition, the results of the present study showed a positive correlation between low living costs and the trend of childbearing. In other words, in families with lower living costs, there was a greater tendency to childbearing, so if the economic pressure reduces, the childbearing tendency will increase. Kim et al. (2005) evaluated the effective parameters for rapidly declining fertility in Korea. They marked key factors for population decline including socioeconomic change, globalization, fluctuations in childbirth costs (income problems), family formation, and the orientation toward gender equality (36). In another study, Weeden (2006) reported higher income in men had a positive relation with fertility. The results of the present study are close to the mentioned studies (37).

Different from our results, Sabermahani et al. 2017 evaluated several factors that affected the fertility rate in Iran, from 1966 to 2013. They reported a decrease in total income and economic status of families not having any relationship with fertility rate. They concluded their reports are different from society's acceptance, that economic factors and income status are important parameters for fertility rate. In addition, they evaluated the effects of the cash subsidy policy on the fertility rate and showed cash subsidy does not have a significant effect on the fertility rate. They suggested that cash subsidy may be the payment for the costs of current children and not for childbearing planning (5). The difference between the results of the Sabermahani study and the present study regarding the role of economic status in childbearing planning can be explained in two ways: First, a person with good economic status can have more children and provide welfare and quality of life for all of them (38). Second, with high economic status, especially in families with highly educated women, the views on life and special cultural conditions will be changed, and the tendency toward childbearing significantly will be decreased (39).

Our findings showed that attitude to suitable marital age in men and women was significantly and negatively associated with childbearing intention. In recent decades in developed and developing countries, people got married later and the main factor for this delay is the need for education and employment in women (40). The results of several demographic studies recommend that life changes such as an increase in marital age, a decrease in favourable intentions to have a child, and starting increase in the need for a job spatially in women are associated with decreased levels of fertility rate (41, 42). For example, in a study researchers suggested that women's educational and occupational status may be the main parameter for the delay in marital status and childbearing (43). Regarding gender, women had a more positive attitude toward fertility. This is in line with the other studies which found that having children is of great importance for women, rather than men (44, 45). This was interpreted as the traditional differences in concepts between men and women (45). The positive attitude toward childbearing in the present study participants with more daughters indicates the study population wished to have a son. This finding also can be considered as a cultural category; have more tendency for childbearing among families with more daughters. However, the reason was not asked, but from the cultural characteristics of the studied population, it could

easily be interpreted that a wish to have a son was the reason. There was a historical tendency to the child`s sex-determining with the economic, cultural-social, religious, and medical background (46).

The rapid decline in fertility rates and the disruption of the age pyramid balance could cause irreparable economic and social damage to the country. The population policy perspective should focus on the direct and indirect factors of increasing fertility. This approach will not be achieved except by increasing studies on population axes and determining the components affecting fertility. Couples and their attitudes are the most important factor, which must be considered as the target of intervention, to increase the fertility rate. This aim will not be achieved unless focusing on planning, policy-making, and demographic-economic interventions related to these basic determining factors, which are assessed in this study. It is suggested that in future studies, social factors (more broadly) and the quality-of-life parameters get to be evaluated in relation to couples' attitudes toward childbearing.

The strength of the current study was that several factors related to fertility rate as well as the attitude of the participants were investigated. Another positive point was the large number of participants, which increases the validity of findings and could increase the generalizability of the findings to the society.

One of our limitations was data collection from couples attended public health centers, which may not be representative of the general population.

Conclusion

From this study, it can be concluded that the majority of respondents wanted to have children, but other conditions also must be provided, such as higher economy and income, and future job opportunities for children. Therefore, obliterating documents related to contraceptive methods or advertising alone cannot help to achieve an increase in the fertility rate. In addition, government intervention alone cannot get away from the current problem (fertility rate decline), but public acceptance and couples' and families' cooperation can play an important role, as those are the main determinants.

Since more details regarding couples' attitude toward childbearing have been discussed, the results may help to take steps in line with the new demographic policies, with encouraging couples toward childbearing.

Declarations:

Acknowledgments

The Authors would like to thank the Health Department and health centers' staff, at Rafsanjan University of Medical Sciences, Rafsanjan, Iran, for their collaboration. We express our deepest appreciation to the couples who participated in our study.

Conflicts of interest

The authors declared no conflicts of interest.

Funding

There is no funding.

Ethical considerations

This study was done after obtaining the ethical approval of the ethics committee of Rafsanjan University. Also, informed consent was obtained from all participants.The participants' data was kept confidential.

Authors' contribution

SP designing the study, writing the manuscript. FA analysis of data, drawing the tables, writing the manuscript. PKh designing the study, analysis of data. MKD and ZJ data collection. Shk questionnaire preparation. MV designing the study, writing the manuscript. All authors reviewed the results and approved the final version of the manuscript and agreed to be accountable for all aspects of the work.

References

1. Mahmoudi M-J, Kazemi-pour S, Ahrari M, Nikoo-nesbati A. Iran\'s Population Projection considering Socio-Economic Factors based on a Multidisciplinary Approach (in Persian). The Journal of Planning and Budgeting. 2012; 17(2): 97-126.
2. Ghaem H, Zare M, Hemmati A, Moghadami M, Moradi F, Semati A. Pattern of Changes in Age-Specific Fertility Rates, Total Fertility Rate, and Cohort Fertility Rate in Rural Areas of Fars Province, Southern Iran (1988-2012). Journal of Family & Reproductive Health. 2019; 13(1): 1.
3. Jafari H, Jaafaripooyan E, Vedadhir AA, Foroushani AR, Ahadinejad B, Pourreza A. Socio-economic factors influencing on total fertility rate

in Iran: A panel data analysis for the period of 2002–2012. Electronic Physician. 2016; 8(6): 2551.
4. Haghdoost AA, Safari-Faramani R, Baneshi MR, Dehnavieh R, Dehghan M. Exploring perceptions of policymakers about main strategies to enhance fertility rate: A qualitative study in Iran. Electronic Physician. 2017; 9(10): 5568.
5. Sabermahani A, Goudarzi R, Nasiri S. Factors affecting fertility rate in Iran (Panel Data 1966-2013): A survey study. Journal of Family & Reproductive Health. 2017; 11(3): 138.
6. Baki-Hashemi S, Kariman N, Ghanbari S, Pourhoseingholi M-A, Moradi M. Factors affecting the decline in childbearing in Iran: a systematic review. Advances in Nursing and Midwifery. 2018; 27(4): 11-19.
7. Kaboudi M, Ramezakhani A, Manouchehri H, Hajizadeh E. Relationship between age of marriage, women's education and fertility 1954-93: A study in the west of Iran. Biosciences Biotechnology Research Asia. 2013; 10(2): 855-860.
8. Bohner G, Wänke M. The psychology of attitudes and persuasion. 2th ed. Public Opinion and Criminal Justice: Willan; 2013.
9. Lucas A. Are attitudes predictive of non-marital childbearing? Teenagers' attitudes toward motherhood before marriage and their relationship to non-marital childbearing. 1th ed. The University of North Carolina at Chapel Hill; 2007.
10. Rostami S. The Research of Relation between Social-Economic Status of Women in Tehran with the Manifestation of Second Demographic Transition. Вісник Національної академії керівних кадрів культури і мистецтв. 2018; 3: 1625-1633.
11. Mitchell D, Gray E. Declining fertility: Intentions, attitudes and aspirations. Journal of Sociology. 2007; 43(1): 23-44.
12. Aslangir N, Shaygan F. Study of Relationship between Lifestyle and Attitude to Number of Children.(Case Study, Women Working in the Education Zone 1 of Tehran). International Journal of Humanities and Cultural Studies. 2016; 1(1): 834-856.
13. Khadivzade T, Arghavani E. Religious beliefs and fertility preferences among engaged couples, referring to premarital counseling centers of Mashhad, Iran. Journal of Midwifery and Reproductive Health. 2014; 2(4): 238-245.
14. Ahmadian M, Mehrbani V. Women's education and fertility in Tehran: An economic approach. Journal of Economic Research (Tahghighat-E-Eghtesadi). 2013; 48(1): 1-20.
15. van Balen F, Verdurmen JE, Ketting E. Age, the desire to have a child and cumulative pregnancy rate. Human Reproduction. 1997; 12(3): 623-627.
16. Rad F, Savabi H. Investigation on tendency to fertility and its related social factors (a case study of married women aged 15 to 50 in Tabriz). Journal of woman and family studies. 2015; 3(1): 127-155.
17. Adhami AR, Kazemipour S. Socio-economic factors affecting attitudes towards childbearing: A study of ever married couples in Kermanshah, Iran. Payesh (Health Monitor). 2021; 20(4): 471-485.
18. McDonald P, Hosseini-Chavoshi M, Abbasi-Shavazi MJ, Rashidian A. An assessment of recent Iranian fertility trends using parity progression ratios. Demographic Research. 2015; 32: 1581-1602.
19. Rosen BC, Simmons AB. Industrialization, family and fertility: A structural-psychological analysis of the Brazilian case. Demography. 1971; 8(1): 49-69.
20. Gries T, Grundmann R. Fertility and modernization: The role of urbanization in developing countries. Journal of International Development. 2018; 30(3): 493-506.
21. Akokuwebe ME, Idemudia ES. Multilevel Analysis of Urban–Rural Variations of Body Weights and Individual-Level Factors among Women of Childbearing Age in Nigeria and South Africa: A Cross-Sectional Survey. International Journal of Environmental Research and Public Health. 2021; 19(1): 125.
22. Chinsinga B, Chasukwa M. Agricultural policy, employment opportunities and social mobility in rural Malawi. Journal of Political Economy. 2018; 7(1): 28-50.
23. Nasution SK, Mahendradhata Y, Trisnantoro L. Can a national health insurance policy increase equity in the utilization of skilled birth attendants in Indonesia? A secondary analysis of the 2012 to 2016 national socio-economic survey of Indonesia. Asia Pacific Journal of Public Health. 2020; 32(1): 19-26.
24. DeLuca S, Wood H, Rosenblatt P. Why poor families move (and where they go): Reactive mobility and residential decisions. City & Community. 2019; 18(2): 556-593.
25. Adedini SA, Babalola S, Ibeawuchi C, Omotoso O, Akiode A, Odeku M. Role of religious leaders in promoting contraceptive use in Nigeria: evidence from the Nigerian urban reproductive health initiative. Global Health: Science and Practice. 2018; 6(3): 500-514.
26. Atake E-H, Gnakou Ali P. Women's empowerment and fertility preferences in high

fertility countries in Sub-Saharan Africa. BMC Women's Health. 2019; 19(1): 1-14.
27. Peng Y. Should we have a second child? Reproductive decisions and family negotiation under China's two-child policy. Journal of Contemporary China. 2020; 29(125): 792-807.
28. Jalal Abbasi-Shavazi M, McDonald P. Fertility decline in the Islamic Republic of Iran: 1972–2000. Asian Population Studies. 2006; 2(3): 217-237.
29. Lima EE, Zeman K, Sobotka T, Nathan M, Castro R. The emergence of bimodal fertility profiles in Latin America. Population and Development Review. 2018: 723-743.
30. Kotásková SK, Procházka P, Smutka L, Maitah M, Kuzmenko E, Kopecká M, et al. The impact of education on economic growth: The case of India. Acta Universitatis Agriculturae Et Silviculturae Mendelianae Brunensis. 2018; 66(1): 253-261.
31. Utomo A, McDonald P, Utomo I, Hull T. Do individuals with higher education prefer smaller families? Education, fertility preference and the value of children in greater Jakarta. Child Indicators Research. 2021; 14(1): 139-161.
32. Acharya RC. The effect of demographic factors on fertility behaviour in Western Terai of Nepal. Economic Journal of Development Issues. 2010: 99-111.
33. Suchithra M, Pai ML. Improving the prediction accuracy of soil nutrient classification by optimizing extreme learning machine parameters. Information Processing in Agriculture. 2020; 7(1): 72-82.
34. Comolli CL, Neyer G, Andersson G, Dommermuth L, Fallesen P, Jalovaara M, et al. Beyond the economic gaze: Childbearing during and after recessions in the Nordic countries. European Journal of Population. 2021; 37(2): 473-520.
35. Guzzo KB, Hayford SR. Pathways to parenthood in social and family contexts: Decade in review, 2020. Journal of Marriage and Family. 2020; 82(1): 117-144.
36. Kim D-S. Theoretical explanations of rapid fertility decline in Korea. The Japanese Journal of Population. 2005; 3(1): 2-25.
37. Weeden J, Abrams MJ, Green MC, Sabini J. Do high-status people really have fewer children?. Human Nature. 2006; 17(4): 377-392.
38. Bywaters P, Scourfield J, Jones C, Sparks T, Elliott M, Hooper J, et al. Child welfare inequalities in the four nations of the UK. Journal of Social Work. 2020; 20(2): 193-215.
39. Nomaguchi K, Milkie MA. Parenthood and well-being: A decade in review. Journal of Marriage and Family. 2020; 82(1): 198-223.
40. Abbasi MJ, Mehryar A, Jones G, McDonald P. Revolution, war and modernization: Population policy and fertility change in Iran. Journal of Population Research. 2002; 19(1): 25-46.
41. Wang T, Wang C, Zhou Y, Zhou W, Luo Y. Fertility intentions for a second child among urban working women with one child in Hunan Province, China: a cross-sectional study. Public Health. 2019; 173: 21-28.
42. Mussino E, Gabrielli G, Ortensi LE, Strozza S. Fertility intentions within a 3-Year time frame: A comparison between migrant and native Italian women. Journal of International Migration and Integration. 2023; 24(Suppl 1): 233-260.
43. Virtala A, Vilska S, Huttunen T, Kunttu K. Childbearing, the desire to have children, and awareness about the impact of age on female fertility among Finnish university students. European Journal of Contraception & Reproductive Health Care. 2011; 16(2): 108-115.
44. Sørensen NO, Marcussen S, Backhausen MG, Juhl M, Schmidt L, Tydén T, et al. Fertility awareness and attitudes towards parenthood among Danish university college students. Reproductive Health. 2016; 13(1): 146.
45. Humphrey M. Sex Differences in Attitude to Parenthood. Human Relations. 1977; 30(8): 737-749.
46. Ahmadi SF, Shirzad M, Kamali K, Ranjbar F, Behjati-Ardakani Z, Akhondi MM. Attitudes about Sex Selection and Sex Preference in Iranian Couples Referred for Sex Selection Technology. Journal of Reproduction & Infertility. 2015; 16(1): 36-42.