Research in Health & Medical Sciences *Research Article*

2025 January; 4(1)

Social factors influencing fertility tendency among women aged 15–45 in Torbat Heydariyeh County, Iran, 2022

Samaneh Sahih[*1], Ali Pezhhan[2], Zahra Yazdansetad[3]

[1] Central Tehran Branch, Islamic Azad University, Tehran, Iran
[2] Department of Social Sciences, Central Tehran Branch, Islamic Azad University, Tehran, Iran
[3] Student Research Committee, Shiraz University of Medical Sciences, Shiraz, Iran

***Corresponding Author Email: samanesahih@gmail.com**
Received: 2026/1; Revised: 2026/5; Accepted: 2026/5

Abstract

Childbearing behaviors among individuals and families, particularly women, have changed significantly in Iran. Fertility began to decline in the late 1980s. Today, Iran is among countries with low fertility levels. In 1986, the average number of children per mother was six. Currently, this rate has fallen to below replacement level (1.2 children per mother). Demographers note that fertility is influenced by social, economic, political, cultural, and biological factors. In the past, most studies emphasized economic and biological factors while neglecting cultural factors. Given this gap, this survey study investigated sociological factors affecting fertility behavior among women in Torbat Heydariyeh County. The main research question asked which social and cultural factors Iranian researchers have emphasized in explaining fertility decline over the past two decades. The study included married women aged 15–54 years in the county. The sample size was 242, selected via multi-stage random sampling. Data were collected using a questionnaire and analyzed with SPSS. The mean and standard deviation of the belief variable were 20.74 and 2.85, respectively. These results show that religious beliefs positively affect fertility tendency. Women's education level, age at marriage, employment, husband's employment type, marriage duration, income level, and insurance coverage had no effect on fertility tendency. However, residence in lower-income areas of Torbat Heydariyeh County and poor economic status had a significant effect. Overall, high costs and economic issues are not, as commonly perceived, a reason for not having children. Instead, culture and beliefs influence fertility tendency.

Keywords: Fertility tendency, Social determinants, Religious beliefs, Fertility rate

Introduction

Most countries in transition, particularly Iran, are currently undergoing profound changes across cultural, economic, social, and demographic dimensions. These changes reflect a shift from traditional to modern patterns. In demographic terms, fertility has declined to below replacement level. From both individual and social perspectives, no institution is as universal or as stable in its ultimate purpose as the family. Consequently, no other institution is as affected by social transformations as the family (1).

When structural changes—such as industrialization and urbanization—occur at the macro level, ideological changes also emerge at that level. At the micro level, families adapt to macro-level changes (2). According to statistical data, the average annual population growth rate, which stood at 3.9% between 1976 and 1986, fell to 1.29% in the most recent census (2011). Household size has also decreased as a result of declining fertility in recent decades. The family institution has transformed alongside societal changes. Thus, changes in the kinship system and fertility patterns are inevitable consequences of structural and ideological transformations. These changes reduce the ideal number of children and affect the overall social system and population structure.

Studies show that fertility changes over recent decades are associated with social, economic, and demographic characteristics (3). What has particularly attracted researchers' attention regarding recent fertility changes is the shift in couples' thoughts and tendencies toward childbearing. This shift is related to a wide range of social factors that need to be identified.

According to Durkheim, the family is not a natural group formed by parents but rather a social institution created by social factors. Durkheim's principle holds that every social action is explained by other social factors. Therefore, the family—underlying marriage and childbearing—is influenced by these social factors (4).

Giddens argues that the family has undergone transformations that first advanced in Western and industrialized countries and are gradually becoming globalized. In his view, having children today is more of an emotional decision than in the past. He suggests that we live in an era that can be called the golden age of the child or the age of the cherished child (5). According to Parsons, industrialization is the single most important cause of the reduction in family size. Others attribute the tendency to limit the number of children to economic reasoning, hedonism, and the pursuit of a comfortable life (6).

The results of Hosseini's research (2009) indicate that social changes and family transformations are accompanied by changes in attitudes toward marriage and childbearing, ultimately affecting fertility behaviors and ideals (7).

This study aimed to investigate the social factors affecting fertility tendencies among women aged 15–54 in Torbat Heydariyeh County (2022). According to statistics from the Youth Population, Family Health, and Schools Group of the Health Deputy of Torbat Heydariyeh University of Medical Sciences, the fertility rate in this county was 1.87 in 2022. The national fertility rate is 1.66 (Ministry of Health and Medical Education website). Although this local rate appears higher than the national average, it has in fact decreased compared to previous years. If this downward trend continues, population aging will occur in this county in the coming years.

Accordingly, this study examined the influential reasons for the tendency toward pregnancy, as well as the reasons for tendency or non-tendency toward pregnancy. Social factors form one set of such reasons, some of which are addressed in this study. The overall objective of this study is to determine the social factors influencing fertility tendencies among women in Torbat Heydariyeh County.

Methods

This study was conducted in two separate parts. The first part addresses theoretical and conceptual discussions, for which documentary and library research methods were used. The

second part consists of an empirical investigation examining the social, cultural, and demographic factors affecting the fertility rate of married women aged 15–54 in Torbat Heydariyeh County. A survey method was employed in this study. In addition to a systematic description of the issues, the study tested research hypotheses and determined correlations between variables. The survey method is an approach for collecting data obtained from a limited number of individuals within a statistical population, often consisting of very large populations, using standardized questionnaires. The results can then be generalized to the entire population.

In this study, the statistical population consisted of all married women aged 15–54 in Torbat Heydariyeh County, totaling 2,500 individuals. The sample size was 242 participants, determined based on Cochran's formula. Inclusion criteria for the study were: being aged 15 to 54 years, having at least one child, having no history of infertility, and being married at the time of the study. The technique used in this research was prediction. The instrument used was a questionnaire. After completing the questionnaires, direct individual interviews were conducted using simple random sampling to test the contexts, answer difficult questions, and ultimately achieve the research objectives. Also, two standardized questionnaires were used: the "Fertility Tendency Questionnaire" by Dr. Firoozrad and a researcher-made questionnaire on social factors. With the assistance of supervisors and advisors, the researcher-made questionnaire was developed. After approval by the faculty council of the Department of Social Sciences, the questionnaire was used. Subsequently, 242 questionnaires were distributed among married women. Finally, the collected data were described and analyzed using SPSS software.

Results

A larger number of social variables were examined in this study; however, due to space constraints, only the key descriptive findings are reported here.

Regarding age distribution, 30.2% of women were under 30 years, 41.3% were between 30 and 40 years, and 28.5% were 40 years or older. Among men, 60.7% were under 40 years, and 39.3% were 40 years or older. Concerning age at marriage, 47.1% of women married before age 20, while 52.9% married at age 20 or above. In terms of marriage duration, 49.6% of women had been married for less than 10 years, 37.6% for 10 to 20 years, and 12.8% for more than 20 years.

Regarding employment, 62.4% of women were employed, while 37.6% were housewives or engaged in home-based work. Among men, 59.1% were employed or retired, 5.4% were students, and 35.5% were self-employed or worked in the marketplace. In terms of education, 6.2% of women had no formal education, 14.0% had less than a high school diploma, 24.8% held a high school diploma, 8.3% held an associate degree, 36.6% held a bachelor's degree, and 9.9% held a master's degree or higher. Among men, 41.7% had a high school diploma or less, 40.5% held an associate or bachelor's degree, and 17.8% held a master's degree or higher.

Regarding the number of children, 33.2% of women had one child, 52.2% had two children, 14.0% had three children, and 0.8% had four or more children. Additionally, 88.8% of women had health insurance coverage, while 11.2% did not. Regarding age at first birth, 17.8% of women were under 20 years, 73.1% were between 20 and 30 years, and 9.1% were over 30 years. Concerning the interval between marriage and first birth, 37.2% of women had their first child one year after marriage, 33.1% two years after, 16.5% three years after, and 13.2% four or more years after marriage.

Concerning fertility desires, 48.3% of women expressed no desire to have another child. Among those who desired more children, 24.8% wanted one additional child, 19.4% wanted two more, 5.8% wanted three more, and 0.8% wanted four or more children. Regarding ideal age spacing between children, 1.2% of women considered one year the best interval, 21.1% considered 2–3 years, 33.9% considered 3–4 years, 32.2% considered 4–5 years, and 11.3% considered 5–6 years. With respect to the ideal number of children, 8.7% of women considered one child ideal, 33.1% considered

two children ideal, 37.9% considered three children ideal, 18.6% considered four children ideal, and 1.7% considered five or more children ideal.

In terms of residential distribution, 19.8% of women lived in District 1 (affluent), 8.1% in District 2, 13.6% in District 3, 21.1% in District 4, and 17.4% in District 5. Regarding household income, 14.9% of families had an income below 5 million tomans, 45.0% had between 5 and 10 million tomans, and 40.0% had 10 million tomans or above. Regarding self-perceived economic status, 19.0% of families rated their economic status as good, 66.9% as average, and 14.0% as poor. Concerning housing, 39.3% lived in rented accommodation, while 60.7% owned their home. Regarding car ownership, 17.8% had no car, 74.4% had one car, and 7.9% had two or more cars.

Table 1. Descriptive statistics of fertility tendency and belief scores among women under study

Variable (Score Range)	Mean	Standard Deviation	Minimum Score	Maximum Score
Women's beliefs (5–25)	20.74	2.85	10	24
Fertility tendency (0–80)	46.64	6.66	26	68

Hypothesis 1

There is a significant relationship between social factors and fertility tendency.

Table 2. Comparison of mean social factor variables across variable levels among women under study

variables	Variable Levels	Frequency (N)	Mean	Standard Deviation (SD)	F-value	Degrees of Freedom (df)	P-value
Women's age	Under 20 years	73	46.5	6.4	0.370	2	0.964
	20–30 years	100	46.5	6.4			
	30 years and above	69	46.8	7.3			
Husband's age	Under 40 years	147	46.46	6.65	-0.557	240	0.580
	40 years and above	95	46.95	6.75			
Age at marriage	Under 20 years	114	46.84	6.73	0.397	240	0.692
	20 years and above	128	46.50	6.65			
Marriage duration	Less than 10 years	120	46.36	6.82	0.680	2	0.508

	10–20 years	91	46.61	6.39			
	More than 20 years	31	47.93	7.04			
Women's employment status	Employed	151	46.33	6.98	0.939	240	0.333
	Housewife / home-based work	91	47.19	6.15			
Husband's employment type	Employed	143	46.57	6.56	0.300	2	0.971
	Student	13	46.76	2.10			
	Self-employed	86	46.79	0.73			
Women's education level	High school diploma or less	109	46.5505	6.65344	0.981	2	0.376
	Associate or bachelor's degree	109	46.3761	6.68163			
	Master's degree or higher	24	48.4583	6.85869			
Husband's education level	High school diploma or less	101	46.3663	6.86254	0.170	2	0.844
	Associate or bachelor's degree	98	46.8980	6.50850			
	Master's degree or higher	43	46.8140	6.79375			
Number of children	One child	80	46.23	6.05	0.324	2	0.724
	Two children	126	46.75	7.03			
	Three children or more	36	47.27	6.89			
Insurance coverage	Has insurance	215	46.59	6.59	-0.462	240	0.654
	No insurance	27	47.22	6.50			
Place of residence	Upper-class area	149	45.94	7.05	-2.120	240	0.035
	Lower-class area	93	47.80	5.90			
Income level	Below 5 million Tomans	36	47.80	5.98	0.648	2	0.524

	5–10 million Tomans	109	46.56	7.01			
	10 million Tomans or above	97	46.34	6.57			
Housing type	Rented	95	46.87	6.54	0.397	240	0.692
	Owned	147	46.52	6.79			
Economic status	Good	46	45.36	7.16	6.244	2	0.002
	Average	162	45.27	6.52			
	Poor	34	50.23	5.69			

A one-way ANOVA revealed no significant relationship between women's age and fertility tendency (p = 0.96), and an independent-samples t-test showed no significant difference by husband's age (p = 0.58); thus, both hypotheses were rejected. Similarly, age at marriage (t-test, p = 0.69), marriage duration (one-way ANOVA, p = 0.50), women's employment status (t-test, p = 0.33), husband's employment type (one-way ANOVA, p = 0.97), women's education level (one-way ANOVA, p = 0.37), husband's education level (one-way ANOVA, p = 0.84), number of existing children (one-way ANOVA, p = 0.72), insurance coverage (t-test, p = 0.65), income level (t-test, p = 0.52), and housing status (t-test, p = 0.69) yielded no significant associations with fertility tendency, leading to rejection of the respective hypotheses. However, a significant difference emerged by residential area (upper-class vs. lower-class neighborhoods), with women in lower-class areas reporting higher fertility tendency scores than those in upper-class areas (t-test, p = 0.03). Finally, household economic status was significantly associated with fertility tendency (one-way ANOVA, p = 0.002), such that women from households with poor economic status exhibited higher fertility tendency compared to those from households with good or average economic status.

Hypothesis 2

There is a significant relationship between mean belief scores and fertility tendency.

Table 3. Correlation between beliefs and fertility tendency among women under study

	Beliefs	**Fertility tendency**
Correlation coefficient	0.131*	-
Significance level	0.042	-
Sample size	242	-
Correlation coefficient	-	0.131*
Significance level	-	0.042
Sample size	-	242

A Pearson correlation coefficient test revealed a statistically significant relationship between mean belief scores and fertility tendency (p = 0.04). As mean belief scores

increased, women's fertility tendency also increased; however, the strength of this association was weak (r = 0.13).

Discussion

No significant relationship was observed between women's age and fertility tendency. This finding does not align with the research by Mibashari and colleagues (2013) (8). Although age is important in pregnancy, no relationship with fertility tendency was observed in the present study. While increasing age affects women's reproductive power, the results suggest that age does not greatly influence the desire to have children. Stronger reasons for having or not having children exist among women.

Similarly, no significant difference was found between men's age and fertility tendency. In the past, it was expected that men would have a higher tendency toward childbearing for procreation and for using children as labor. However, the present results show that men and women do not differ in their fertility tendency and both hold a similar approach to this issue. Consequently, men and women have manifested an equal tendency toward childbearing.

Regarding women's age at marriage, an independent samples t-test showed no significant difference in mean fertility tendency across different age-at-marriage groups. Furthermore, no significant relationship was observed between marriage duration and fertility tendency. This may be because many couples today delay childbearing for years after forming a family, and their desire for childbearing is minimal.

Concerning women's employment status, no difference in fertility tendency was found between employed and non-employed women. Although it was expected that employed women might have less desire for childbearing due to work demands and time constraints, the results do not support this. Possibly, factors such as the proximity of the workplace to home, lack of traffic in the city, the availability of daycare centers near offices, and the closeness of schools to workplaces—given the small size of the city compared to metropolitan areas—may explain why employment had no effect on childbearing.

No difference was found between men's employment type and fertility tendency. It was expected that having a suitable job would be at least an important factor in the desire for childbearing. However, no difference was observed in men's employment type, and whether one worked in the marketplace or as an office employee had no effect on childbearing.

Regarding education, no difference was observed between respondents' education level and fertility tendency. That is, having high or low education was not significant in increasing or decreasing childbearing. Furthermore, no significant difference was found between husband's education level and fertility tendency. Currently, education level is expected to be important in reducing or increasing childbearing, but this expectation was not confirmed here.

No significant relationship was observed between the number of existing children and fertility tendency. Additionally, the mean fertility tendency did not differ significantly across different insurance coverage statuses of women. In the present study, having or not having insurance showed no effect on fertility tendency. This result may be due to the limited coverage of childbearing services or infertility treatments by insurance, or because insurance does not significantly reduce the costs of childbearing, including tests and screenings. Thus, insurance coverage does not influence individuals' tendency toward childbearing.

A significant difference in mean fertility tendency was found based on women's place of residence, specifically between upper-class and lower-class areas (p = 0.03). The mean fertility tendency score was higher in lower-class areas of the county than in upper-class areas. This finding is confirmed by statistics from the vital registration records at the Statistics Office of Torbat Heydariyeh University of Medical Sciences, showing that the number of births at the end of 2022 was higher in lower-class, less privileged areas than in upper-class areas. Additionally, according to data from the Sina system, household size in these areas is often five persons or more. This higher birth rate in

these areas may be due to a simpler lifestyle, less access to health services, or families viewing children as a source of income (e.g., through begging, child labor, or receiving more subsidies). In lower-class areas of Torbat Heydariyeh, people are mostly engaged in manual labor, begging, or, in some cases, drug sales. Consequently, the number of children and the fertility rate in these areas have consistently been high, even though the quality of life and income level remain low.

No significant relationship was found between income and fertility tendency. It was expected that income would play a determining role in the desire for childbearing, especially given the current economic conditions in society. However, no difference was observed between those with stable and regular income and those without adequate income in terms of fertility tendency. It is likely that cultural factors are more important to people in this regard.

Similarly, no difference was found between housing status and fertility tendency. This result may be consistent with the findings of Eckert and Steve, who view fertility tendency as a function of cultural rather than economic factors (9). This result may also be explained by the moderate rental costs in Torbat Heydariyeh. The common belief heard from individuals—that they delay childbearing until buying a personal home—was not observed in this study.

However, a significant relationship was observed between economic status and fertility tendency. The mean fertility tendency differed significantly based on household economic status. Households with poor economic status showed higher fertility tendency compared to those with good or average economic status. This finding is completely consistent and aligned with the results obtained for place of residence (upper-class vs. lower-class areas). In those areas as well, income level is low, economic status is poor, and quality of life is low, yet fertility tendency is high. Statistics from the vital registration records of the Statistics Office also confirm this point.

Finally, based on the results of a Pearson correlation coefficient test, a statistically significant relationship was found between mean belief scores and fertility tendency. As mean belief scores increased, women's fertility tendency also increased; however, the strength of this relationship was weak.

Limitations

Several limitations were encountered in this study. First, some women were unwilling to cooperate in completing the questionnaire due to the perception that recording their information might lead to the discontinuation of certain benefits, such as subsidies. Second, the researcher was required to distribute questionnaires across the entire city, using health centers and residential homes as distribution points, which necessitated coordination and official correspondence. Third, due to the sensitive and private nature of some questions, the researcher faced unfavorable reactions from citizens. Fourth, many questionnaires were not returned, forcing the researcher to redistribute them to neighboring households. Fifth, access to necessary resources was limited due to a scarcity of relevant research, particularly because most existing studies had focused on fertility reduction. Sixth, the preparation and completion of questionnaires across five geographical districts of Torbat Heydariyeh was costly. Seventh, one of the most fundamental limitations of any social research, especially the present study, is time constraints. Since this study was conducted as a scientific study and as part of academic coursework for a master's degree, time limitations were particularly notable.

Suggestions

Based on the findings, the following suggestions are offered. First, it is recommended that working women be granted longer maternity leave beyond six or nine months. This would enable them to navigate the most challenging days of child-rearing with peace of mind regarding their employment and income. Second, given the importance of information dissemination and public awareness, non-governmental and community-based organizations should be encouraged to actively engage in matters related to population

growth and fertility. Third, future studies should investigate the role of political, cultural, and religious factors on women's fertility. Fourth, children today impose significant financial burdens on families due to unemployment and lack of job opportunities. This situation leads many individuals to decide to reduce childbearing despite their personal desires. Therefore, alleviating the economic difficulties faced by the community could help restore fertility tendencies among the study population. Fifth, given that strong religious beliefs can be an important factor in young people's tendency toward childbearing, and considering that religious teachings encourage having many righteous children as a means of improving society, enhancing spiritual and religious values among the youth may further strengthen their resolve toward childbearing.

Ethical Considerations

Prior to conducting the research, informed consent was obtained from all participants. All participants took part in the study voluntarily and completed the questionnaires with full consent. The questionnaires did not include names or identifying information. The researchers assured participants that the information provided in the questionnaires would remain confidential.

Financial Support

All financial resources and expenses related to the research and article publication were borne solely by the corresponding author. No financial support was received.

Authors' Contributions

This article is derived from a master's thesis. The first author is the student, and the second author is the supervisor.

Conflict of Interest

This article is derived from a master's thesis entitled "Investigating Social Factors Affecting Fertility Tendency among Women Aged 15–54 in Torbat Heydariyeh County in 2022" and does not conflict with any personal or organizational interests.

References

1. Michel, Andre (1354). Sociology of family and marriage, translated by Ardalan, Ferangis, Tehran, Faculty of Social Sciences and Partnership Publications.
2. Azazi, Shahla (1387). Sociology of the family: with an emphasis on the role, structure and function of the family in contemporary times, Tehran, Roshangan Publications and Women's Studies.
3. Hajar Jaribi, Jafar; Sohailsaro, Mohammad; Kerami, Mohammad Taghi and Integri, Ardeshir. (2019). The ratio of higher education development policies and social use published in the Quarterly Journal of Welfare Planning and Social Development
4. Michel, Andre (1354). Sociology of family and marriage, translated by Ardalan, Ferangis, Tehran, Faculty of Social Sciences and Partnership Publications.
5. ENAYAT H., PARNIAN L.. THE STUDY OF CULTURAL GLOBALIZATION AND TENDENCY TO FERTILITY. SOCIOLOGY OF WOMEN (JOURNAL OF WOMAN AND SOCIETY) [Internet]. 2013;4(2 (14)):109-136. Available from: https://sid.ir/paper/169062/en
6. SADEGHI FASAEI SOHEILA, ISARI MARYAM. POST-DIVORCE SELF-REDEFINING AND IDENTITY BUILDING IN WOMEN. PAZHUHESHNAME-YE ZANAN (WOMEN'S STUDIES) [Internet]. 2013;4(1):111-138. Available from: https://sid.ir/paper/235770/en
7. HOSSEINI HATAM, ABBASI SHAVAZI M.J.. IDEATIONAL CHANGES AND ITS IMPACT ON FERTILITY BEHAVIOR AND ATTITUDES OF KURD AND TURK WOMEN. WOMAN IN DEVELOPMENT AND POLITICS (WOMEN'S RESEARCH) [Internet]. 2009;7(2 (25)):55-84. Available from: https://sid.ir/paper/55436/en
8. MOBASHERI M.. DETERMINATION OF THE MOST IMPORTANT FACTORS INFLUENCING THE FERTILITY PATTERNS OF SINGLE CHILD AND WITHOUT CHILD FAMILIES IN SHAHR-E-KORD CITY IN 2013. JOURNAL OF ILAM UNIVERSITY OF MEDICAL SCIENCES [Internet]. 2013;21(6):0-0. Available from: https://sid.ir/paper/90156/en
9. ENAYAT H., PARNIAN L.. THE STUDY OF CULTURAL GLOBALIZATION AND TENDENCY TO FERTILITY. SOCIOLOGY OF WOMEN (JOURNAL OF WOMAN AND SOCIETY)[Internet]. 2013;4(2 (14)):109-136. Available from: https://sid.ir/paper/169062/en