

Correlation Between Number and Gender Composition of Children and Marital Satisfaction in Women Presenting to Health Centers in Tehran-Iran, 2015

Fereshte Ghahremani,¹ Mahbobeh Ahmadi Doulabi,^{1*} Mohammad Eslami,² and Reza

Shekarriz-Foumani³

¹Department of Midwifery and Reproductive Health, School of Nursing and Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, Iran

²Department of Population and Family Health, Ministry of Health and Medical Education, Tehran, IR Iran

³Department of Community Medicine, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran

*Corresponding author: Mahbobeh Ahmadi Doulabi, Department of Midwifery and Reproductive Health, School of Nursing and Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran. Tel: +98-2188202512, Fax: +98-2188202521, E-mail: mah1372@yahoo.com

Received 2016 November 04; Revised 2016 December 28; Accepted 2017 February 13.

Abstract

Background: Marital satisfaction is defined as a mental state reflecting the pressures and benefits perceived by the couple in their life. Several factors seem to contribute to marital satisfaction and success including having children.

Objectives: The present study aimed at evaluating the effect of the number and gender composition of children (having only sons, only daughters, and children of both genders) on marital satisfaction in women of childbearing age in Tehran.

Methods: This descriptive correlational study was conducted on 213 married females aged 15 to 45 years presenting to health centers in Tehran, Iran, in 2015. The demographic questionnaire, the ENRICH marital satisfaction scale, and a researcher-made childbearing questionnaire were used for data collection. Data were analyzed using descriptive statistics (mean and standard deviation) and ANOVA in SPSS version 17. The level of statistical significance was set at $P < 0.05$.

Results: The results of the present study revealed a significant correlation between the mean score of marital satisfaction and the number of children ($P = 0.005$); for instance, women's marital satisfaction reduced with an increase in the number of children. The results also revealed a greater marital satisfaction in women with children of the same gender than in those with children of both genders. Moreover, the mean score of marital satisfaction was significantly higher in women with only sons than in those with either only daughters or with children of both genders ($P = 0.013$).

Conclusions: Women's marital satisfaction decreased with an increase in the number of children. Children's gender affected marital satisfaction. Women with only sons had a greater marital satisfaction than those women with only daughters, or with children of both genders.

Keywords: Children's Sex Composition, Marital Satisfaction, Number of Children

1. Background

Marital satisfaction is an important aspect of family life that is necessary for building a family and raising children (1) and plays an important role in family health and welfare (2). When couples are satisfied with their marital life, their family becomes more stable and they can properly deal with problems and protect themselves against pathologies (3). Marital satisfaction affects mental and physical health, life satisfaction, occupational success, social relationships, children's health, and quality of the bond between the mother and child, moreover, it is one of the main indices of life satisfaction (4-6). Marital dissatisfaction has adverse effects on the couple's psychosocial interactions and increases divorce rates and negatively affects the children's psychological status as well (4, 7-9). Marital satisfaction is defined as a mental state reflecting the pressures and ben-

efits perceived by the couple in their life. The greater the pressure each couple imposes on the other, the less satisfaction they feel with their marital life and spouse. However, the greater the benefits they receive from their marital life, the greater their satisfaction with their marital life and spouse (10). Several factors seem to contribute to marital satisfaction and success including having children (11). In addition to creating a biological and emotional bond between the husband and wife, children increase marital stability, reduce divorce rates, improve the emotional bond between the couple (12), and make them feel secure in old age (13). Many studies have examined the impact of having children on marital satisfaction; this relationship is rather complex (12) because children can have both positive and negative effects on marital satisfaction (11, 12). Children's gender can also have different effects on marital satisfac-

tion and stability (12, 14, 15). Some studies have shown that having children is a source of joy and excitement for the parents by itself (16). Parents enjoy witnessing their children grow up day by day (17), and this joy creates a psychological connection between the couple (18) and can help them resolve their disputes and improve their relationship (19-21). Some studies, however, have reported negative effects for childbearing on the quality of marital relationship (11, 22). Twenge et al. (2003) conducted a review study to assess the parental role and marital satisfaction and found a negative relationship between the number of children and marital satisfaction. Marital dissatisfaction was evident in the mothers who had small children, and couples with small children had a lower marital satisfaction. The negative impact of parenthood on marital satisfaction was higher in higher social classes and in younger couples with small children (11). Rijken (2009) also reported that women who are satisfied with their marital relationship and perceive it as very good tend to more commonly avoid childbearing and do not consider it a factor for strengthening their marriage because they are often more aware of the negative consequences of childbearing. Women may even be more realistic about the need to divide their time and energy between the children and their spouse (21).

Several studies have also shown that children's gender affects marital satisfaction (12, 14, 15). A common preference has been reported for boys over girls in many societies, especially in developing countries (23). Boys may be preferred for their economic advantages because they can care for their parents in old age and perform similar duties (24). Having a son can reduce conflicts and chances of divorce and increase marital satisfaction because fathers have a prominent role in raising their sons and participate more in family affairs, which makes their wives happier (25, 26). Doss et al. (2010) also reported a relationship between marital satisfaction in primiparous women and their children's gender. It appears that men who had daughters were less active in caring for their child and thus their wives' perceived marital satisfaction was lower. Nevertheless, this finding was not corroborated in studies in developed countries (27) because some studies even reported that having daughters (28) or children of both genders (29) contributed to marital satisfaction. Given the importance of marital satisfaction, which ultimately affects the health of the family and the entire community, identifying the factors that contribute to marital satisfaction is of prime importance.

2. Objectives

Due to the inconsistencies between the studies on the subject (as some reported increased and some decreased

marital satisfaction with an increase in the number of children), and because some studies have reported different results on the impact of children's gender on marital satisfaction, and given the lack of adequate studies on the impact of these factors on marital satisfaction, the present study aimed at investigating the correlation between the number and gender composition of children and marital satisfaction in women.

3. Materials and Methods

The present descriptive correlational study was conducted on 213 married women aged 15 to 45 years presenting to the family health units of healthcare centers in Tehran during 2015 to 2016. The study population consisted of only women because women are the main caregivers of children and endure a greater parental pressure and stress than men (30). The study inclusion criteria consisted of 15 to 45 years of age, Iranian nationality, being married, having at least 1 child and at most 3 children, having reading and writing literacy, and having had wanted pregnancies only. The study exclusion criterion was leaving any questions unanswered. Multistage sampling method was used to select the study participants. After obtaining the approval of the authorities at Shahid Beheshti University of Medical Sciences, we divided the municipal areas covered by Shahid Beheshti University of Medical Sciences and Health Services into North, East, and Shemiranat sections. Two healthcare centers were then randomly selected from each area using cluster sampling. A quota was assigned to each healthcare center based on the study sample size of 230 and in proportion to the number of patients admitted to each center. The selected centers were then visited and the admitted women who met the inclusion criteria were selected through convenience sampling and invited to participate in the study. Ethical approval was obtained from the ethics committee of Shahid Beheshti University of Medical Sciences (code SBMU2.REC.1394.152). An informed consent was obtained from all the participants.

Finally, the demographic questionnaire, the ENRICH marital satisfaction scale, and a researcher-made childbearing questionnaire were distributed among the participants. The researcher-made childbearing questionnaire was designed based on different studies and theses (24, 31-37) and examined factors affecting women's childbearing including the age of the woman and her spouse, age at marriage, duration of marriage, the woman and her spouse's level of education, the woman and her spouse's birth place, the couple's ethnicity, the woman's and her spouse's occupation, the number of children, children's gender and

age, the age gap between the children, the number of pregnancies and time since marriage, and the birth of the first child.

In the present study, the content validity method was used to evaluate the validity of the demographic and childbearing questionnaires. The childbearing questionnaire was developed based on the set research objectives. After obtaining the approval of the research supervisor and advisor, we distributed the questionnaire to 10 faculty members of the department of reproductive health, school of nursing and midwifery, Shahid Beheshti University of Medical Sciences and to 10 experts of the field (experts in demography, psychology, and health). After making the necessary modifications, the content validity of the questionnaire was qualitatively assessed, and the content validity index (CVI) and content validity reliability (CVR) were measured for its quantitative assessment. Based on Lawshe's table, items with scores above 0.62 were considered acceptable (38). To assess the face validity of the questionnaire for item difficulty, relevance, and ambiguity, the questionnaire was distributed to the target group (15 women aged 15 - 45 years) who met the inclusion criteria. The quantitative assessment of the face validity of the items was conducted using the impact score. The reliability of the questionnaire was assessed using the test-retest method. Thus, 20 eligible women completed the questionnaire on 2 occasions with an interval of 14 days, moreover, a correlation coefficient of 0.85 was obtained between the scores, which was acceptable because it was greater than 0.7 (39). The ENRICH Marital Satisfaction Scale was used to evaluate marital satisfaction. This scale has been used in numerous reliable studies as a valid tool for determining marital satisfaction (31, 40, 41). The ENRICH marital satisfaction scale was designed by Fowers and Olson in 1989 (42). The original version is very long and may wear out the respondents. In a study entitled "Factors of Successful Marriage: Accounts from self-described Happy Couples", Asoodeh (2010) prepared a short 35-item version of this scale and translated it (43). This scale has 4 subscales including idealistic distortion (Items 4, 8, 12, 16, and 20), marital satisfaction (Items 1, 5, 9, 13, 17, 21, 24, 27, 30, and 35), communication (Items 2, 6, 10, 14, 22, 25, 28, 31, and 34), and conflict resolution (Items 3, 7, 11, 15, 19, 23, 26, 29, 32, and 33). The scale items are designed to be scored based on a 5-point Likert-type scale and their responses include strongly agree, agree, neither agree nor disagree, and disagree and strongly disagree, which are given scores from 1 to 5. Items 3, 5, 6, 7, 10, 13, 14, 18, 19, 21, 22, 23, 26, 27, 28, 29, 32, 33, and 34 are reverse-scored; ie, 1 point is given to a response of 'strongly agree' and 5 points to a response of 'strongly disagree'. Each subscale has a separate total score, which is then converted to percentage. The alpha coefficients obtained were 0.80, 0.86, 0.84, and 0.83

and the test-retest reliability coefficients were 0.86, 0.81, 0.90, and 0.92, respectively, for the marital satisfaction, communication, conflict resolution, and idealistic distortion subscales. In Asoodeh's study of 365 couples (730 individuals), alpha coefficients were calculated as 0.78, 0.78, 0.62, and 0.77 for the marital satisfaction, communication, conflict resolution, and idealistic distortion subscales (43).

The data obtained were analyzed in SPSS-17. Descriptive statistics (frequency, percentage, mean, and standard deviation) were used to describe participants' demographic and childbearing details and their marital satisfaction. ANOVA was used to determine the relationship between the number and gender composition of the children (having only sons, having only daughters, and having children of both genders) and marital satisfaction. The level of statistical significance was set at $P < 0.05$.

4. Results

The mean age of the participating women, their mean age at marriage, and their mean duration of marriage were 33.13 ± 7.005 , 20.24 ± 4.94 , and 12.19 ± 7.97 years, respectively. A total of 45.5% of the women were born in Tehran and 32.4% had only sons, 35.2% only daughters, and 32.4% children of both genders (sons and daughters). The mean number of children in each family was approximately 2 (1.85 ± 0.77), and the most frequent number of children was 2 (39%). Table 1 presents some of the demographic and childbearing details of the participating women. The scores and mean scores of marital satisfaction dimensions revealed that the mean total score of marital satisfaction was 113.47 ± 22.78 and that most of the participating women (34.7%) had a moderate marital satisfaction, 6.6% were completely unsatisfied with their marriage, and 8.9% were completely satisfied.

Table 2 demonstrates the scores and mean scores of marital satisfaction dimensions in the participating women.

As displayed in Table 3, the results of ANOVA revealed a significant correlation between the mean score of marital satisfaction and number of children ($P = 0.005$). According to Tukey's test, the mean scores of marital satisfaction differed significantly between the women with 1 child and those with 3 children ($P = 0.004$); the mean score of marital satisfaction was 13 units higher in women with 1 child than in those with 3 children. Moreover, the mean score of marital satisfaction differed significantly in the participants depending on their children's gender ($P = 0.013$). According to the results of the Tukey's test, the mean score of marital satisfaction was higher in women with only sons than in those who had only daughters or those with children of both genders. The results of ANOVA also revealed that

Table 1. The Demographic and Childbearing Details of the Participants

Variable	Category	No. (%)
The number of years of residence in Tehran	> 5	24 (11.3)
	< 5	189 (88.7)
Education level	Primary School	25 (11.8)
	Junior High School	34 (16)
	High School	76 (35.7)
	University education	78 (36.5)
Occupation	Housewife	181 (85)
	Employed	32 (15)
Helping woman in providing childcare	Yes	87 (40.8)
	No	126 (59.2)
Access to methods of contraception	Yes	160 (75.1)
	No	53 (24.9)
Number of children	1	80 (37.5)
	2	83 (39)
	3	50 (23.5)

Table 2. The Mean and Standard Deviation and Ranges of Marital Satisfaction Dimension Scores

Variable	Mean \pm SD	Range
Marital Satisfaction	35.44 (6.63)	10 - 50
Communication	31.35 (8.29)	10 - 50
Conflict resolution	29.44 (6.21)	10 - 50
Idealistic distortion	17.23 (4.14)	5 - 25
Marital satisfaction (total score)	113.47 (22.78)	35 - 175

women with children of the same gender had a greater marital satisfaction compared to women with children of different genders, and this mean score was 11 units higher in women with only sons than in those who had children of both genders, indicating a significant difference ($P = 0.01$).

5. Discussion

The present study was conducted to investigate the correlation between marital satisfaction and the number and gender of children in women of childbearing age. The mean total score of marital satisfaction was 113.47 ± 22.78 in the study, suggesting a higher-than-average satisfaction. The results of ANOVA indicated that the mean score of marital satisfaction in participating women differed significantly depending on the number of their children ($P = 0.005$). Thus, it was found that marital satisfaction decreased with an increase in the number of the children.

Table 3. Relationship Between Number and Gender Composition of Children and Marital Satisfaction

Variable	Mean \pm SD	P Value ^a	CI (95%)
Women with 1 child	118.93 (22.4)	0.005	3/64 - 22/64
Women with 2 children	112.84 (23.57)		
Women with 3 children	105.8 (19.89)		
Women with only sons	118.59 (22.7)	0.013	2/21 - 20/23
Women with only daughters	114.38 (23.14)		
Women with both sons and daughters	107.37 (21.31)		

Abbreviation: CI, confidence interval.

^aThe ANOVA.

These results are consistent with the findings of several other studies (11, 44, 45). It seems that the problems faced in pregnancy, labor, childbirth, and childcare have adverse effects on women's life and reduce marital satisfaction; women's problems and physical weakness exacerbate and childcare problems multiply with an increase in the number of children. In other words, children demand time and money, and these demands increase parental stress and thus negatively affect marital satisfaction. Pregnancy and childbirth also weaken the relationship between the wife and husband (especially in sexual relations) and end in the mother paying more attention to her children, resulting in a further marital dissatisfaction (45). According to a study conducted by Kohler et al. (2005) in Denmark on the effect of children on marital satisfaction, the birth of the first child was an important source of joy and excitement for women aged 25 to 45 years as well as their husbands. However, the birth of the next children did not have such effect on women (44). It seems that women want their first child just to prove their feminine identity and strengthen their marriage; however, with the birth of the next children, they feel a greater dissatisfaction because they are the main caregivers of the children, and therefore, experience greater amounts of pressure and stress than their husbands. Twenge et al. (2003) proposed factors including role conflict, restrictions on personal freedom for women, convenience, costs, and sexual dissatisfaction as some of the negative effects of the number of children on marital satisfaction (11). According to studies conducted by Onishi et al. (2012), Dillon, and Bechler (2010) in rural areas of Algeria, a direct relationship was found between marital satisfaction and number of children, but this finding is inconsistent with the present findings. The disparity of the find-

ings may be attributed to differences in the socioeconomic status and culture of the examined countries. A positive relationship has been observed between the number of children and marital satisfaction in countries with a weak social welfare, in which older children and adolescents are considered the main financial supporters of their family, especially in old age. In these countries, most families live with their extended members, and other family members help the mother raise their children (13, 46). In the modern age, however, such arrangements are almost nonexistent in most communities, especially in urban ones. In underdeveloped countries, children are considered a part of the workforce, bring social reputation, and can support their parents in old age. However, in developed countries, because of public education, presence of women outside the family arena, the rising costs of children's education and upbringing, the increasing importance of investing in children's quality of life, the reduced value of children (Nowadays, parents are profitable for their children.), and especially the reduced dependence of the parents on their children in old age (due to an established social security and pension system), childbearing is declining (47). Thus, the notion that children are their parents' supporters in old age and gender preferences has become less prominent (48).

A significant difference was also found in the mean scores of marital satisfaction in participating women depending on their children's gender ($P = 0.013$). According to the results of the Tukey test, the mean score of marital satisfaction was higher in women with only sons than in those with only daughters or with children of both genders. The results of ANOVA also indicated that women with children of the same gender had a greater marital satisfaction compared to women with children of different genders, and this mean score was 11 units higher in women with only sons than in those with children of both genders, suggesting a significant difference ($P = 0.01$). The results of the present study were consistent with the results of some other studies (14, 15, 25, 44). As reported by Mizell and Steelman (2000), having children of the same gender contributes positively to marital satisfaction compared to having children of both genders. When children are of different genders, the parents may be divided into 2 groups by their gender and this division reduces the interactions between them as a couple. Furthermore, boys may be simpler to raise than girls for a number of reasons; for instance, boys socialize differently and have different gender expectations that may lead them to play in large age-heterogeneous groups. In addition, resolving conflicts is easier with boys and there is a less need for maternal intervention in boys' social struggles. Moreover, because all the participants in this study were women, other is-

ues should also be considered. When all the members of a family are comprised of men, the mother may feel more gratified because as the only woman in the family, she takes on a distinct position and receive admiration (15). Thus, the present findings reinforced the other researchers' statements (Katreva et al. 1994; Morgan et al. 1988) about the effect of having sons on reduced divorce rates (25, 49). Some researchers have reported a higher marital satisfaction in women with daughters (28). If marital disputes occur due to the enormous pressure of childcare and housework imposed on women, girls can more efficiently support their mothers in handling this problem than boys (50). The results of the present study were in contrast with those of some other studies including studies by Andersson and Woldemicael (2000), Yamaguchi and Ferguson (1995), Hank and Kohler (2000), and Schullstrom (1996) (27, 29, 51, 52). Yamaguchi and Ferguson (1995) found that families with children of both genders (sons and daughters) are more likely to stop childbearing and may thus experience a higher marital satisfaction (29). Andersson and Woldemicael (2000) and Schullstrom (1996) also reported that parents with children of both genders (sons and daughters) are less likely to get divorced compared to parents with children of the same gender (27, 52).

5.1. Conclusions

In the present study, women had a moderate marital satisfaction and variables including number and gender of children were found to affect their marital satisfaction. Although the desire for childbearing and parenting is common in Iran and couples prefer not to prolong their childless status, raising children demands a lot of time and energy and parents tend to note the negative impact of having children in their discussions of their daily life after parenthood. In the present study, marital satisfaction decreased with an increase in the number of children, and the gender of the children also affected the women's marital satisfaction. Given the recent recommendations for childbearing in Iran, it appears that consultations about increasing the number of children and proper spacing between children and advising the husbands on how to help their wives and not to discriminate between girls and boys could increase marital satisfaction and reduce the negative impact of children on marital satisfaction and help having a healthy and productive society.

Acknowledgments

Fereshte Ghahremani extracted this study from her master's thesis. The author would like to express her gratitude to all the personnel, officials, and professors at Shahid

Beheshti University of Medical Sciences and all the participants who kindly cooperated in conducting this study.

Footnotes

Authors' Contribution: Mahbobeh Ahmadi Doulabi and Fereshte Ghahremani conceived and designed the study. Fereshte Ghahremani collected the data. Reza Shekarriz Fomani performed the statistical analysis. Fereshte Ghahremani and Reza Shekarriz Fomani interpreted the data. Fereshte Ghahremani drafted the manuscript. Mohammad Eslami and Mahbobeh Ahmadi Doulabi revised it critically for important intellectual content. Fereshte Ghahremani performed administrative, technical, and material support. Mahbobeh Ahmadi Doulabi, Fereshte Ghahremani and Mohammad Eslami supervised the study. All authors read and approved the final manuscript.

Declaration of Interest: None declared.

Funding/Support: None declared.

References

- Taniguchi ST, Freeman PA, Taylor S, Malcarne B. A Study of Married Couples' Perceptions of Marital Satisfaction in Outdoor Recreation. *J Exp Educ*. 2006;**28**(3):253-6. doi: [10.1177/105382590602800309](https://doi.org/10.1177/105382590602800309).
- Allendorf K, Ghimire DJ. Determinants of marital quality in an arranged marriage society. *Soc Sci Res*. 2013;**42**(1):59-70. doi: [10.1016/j.ssresearch.2012.09.002](https://doi.org/10.1016/j.ssresearch.2012.09.002). [PubMed: [23146598](https://pubmed.ncbi.nlm.nih.gov/23146598/)].
- Sahabi J, Khani A, Khani S. Marriage patterns and marital satisfaction; for students of Islamic Azad University, Sanandaj Branch married [in Persian]. *Sociol Stud Youth J*. 2014;**4**(12):77-112.
- Barghandan M, Enayati M, Mehrabizadeh HM. The effectiveness of problem solving skill in group training on general health and marital satisfaction of wives of satellite workers [in Persian]. *J Socialpsychol*. 2008;**2**(7):95-107.
- Bayrami M, Fahimi S, Akbari E, Amiri Pichakolaei A. Predicting marital satisfaction on the basis of attachment styles and differentiation components [in Persian]. *J Fundam Ment Health*. 2012;**14**(1):64-77.
- Mitnick DM, Heyman RE, Smith Slep AM. Changes in relationship satisfaction across the transition to parenthood: a meta-analysis. *J Fam Psychol*. 2009;**23**(6):848-52. doi: [10.1037/a0017004](https://doi.org/10.1037/a0017004). [PubMed: [20001143](https://pubmed.ncbi.nlm.nih.gov/20001143/)].
- Fatehi DA, nazari AM. Sociological analysis of factors contributing to couples' tendency toward divorce in isfahan province. *J Soc Secur Stud*. 2011;**25**:13-54.
- Fishman EA, Meyers SA. Marital satisfaction and child adjustment: Direct and mediated pathways. *Contemp Fam Ther*. 2000;**22**(4):437-52. doi: [10.1023/a:1007848901640](https://doi.org/10.1023/a:1007848901640).
- Nagaraja A, Rajamma NM, Reddy S. Effect of Parents' Marital Satisfaction, Marital Life Period and Type of Family on their Children Mental Health Status. *Psychol*. 2012;**3**(2):65-70.
- Dabone KT. Marital satisfaction among married people in Sunyani municipality. University of cape Coast; 2012.
- Twenge JM, Campbell WK, Foster CA. Parenthood and marital satisfaction: a meta-analytic review. *J Marriage Fam*. 2003;**65**(3):574-83.
- Xu Q, Yu J, Qiu Z. The impact of children on divorce risk. *J Chinese Sociol*. 2015;**2**(1):1.
- Onyishi EI, Sorokowski P, Sorokowska A, Pipitone RN. Children and marital satisfaction in a non-Western sample: having more children increases marital satisfaction among the Igbo people of Nigeria. *Evol Human Behav*. 2012;**33**(6):771-4. doi: [10.1016/j.evolhumbehav.2012.06.005](https://doi.org/10.1016/j.evolhumbehav.2012.06.005).
- Doss BD, Rhoades GK, Stanley SM, Markman HJ. The effect of the transition to parenthood on relationship quality: an 8-year prospective study. *J Pers Soc Psychol*. 2009;**96**(3):601-19. doi: [10.1037/a0013969](https://doi.org/10.1037/a0013969). [PubMed: [19254107](https://pubmed.ncbi.nlm.nih.gov/19254107/)].
- Mizell CA, Steelman LC. All My Children: The Consequences of Sibling Group Characteristics on the Marital Happiness of Young Mothers. *J Fam Issues*. 2000;**21**(7):858-87. doi: [10.1177/019251300021007003](https://doi.org/10.1177/019251300021007003).
- Heaton TB. Marital stability throughout the child-rearing years. *Demography*. 1990;**27**(1):55-63. [PubMed: [2303141](https://pubmed.ncbi.nlm.nih.gov/2303141/)].
- Hoffman LW, Manis JD. Influences of children on marital interaction and parental satisfactions and dissatisfactions. In: Lehnerand R, Spanier GB, editors. Child influences on marital and family interaction: a life-span perspective. New York: Academic Press; 1978. pp. 165-213.
- Fei X. The institutions for reproduction. Peking: Commercial Press; 1999.
- Thornton A. Children and Marital Stability. *J Marriage Fam*. 1977;**39**(3):531. doi: [10.2307/350907](https://doi.org/10.2307/350907).
- Friedman D, Hechter M, Kanazawa S. A theory of the value of children. *Demography*. 1994;**31**(3):375-401. [PubMed: [7828763](https://pubmed.ncbi.nlm.nih.gov/7828763/)].
- Rijken AJ. Happy families, high fertility? Childbearing choices in the context of family and partner relationships. Utrecht University; 2009.
- Testa MR. On the positive correlation between education and fertility intentions in Europe: Individual-and country-level evidence. *Adv Life Course Res*. 2014;**21**:28-42.
- Zafar MI, Fawad A, Hag navaz A. Perception of male children:satisfaction and expectation. *Pak J Appl Sci*. 2002;**2**(11):1044-9.
- Mansourian M, Khoshnevis A. Sexual preferences and attitudes of married women of reproductive behavior: A Case Study in Tehran. *J Soc Sci Human Shiraz Univ*. 2014;**24**(2):129-46.
- Morgan SP, Lye DN, Condran GA. Sons, Daughters, and the Risk of Marital Disruption. *Am J Sociol*. 1988;**94**(1):110-29. doi: [10.1086/228953](https://doi.org/10.1086/228953).
- Raley S, Bianchi S. Sons, Daughters, and Family Processes: Does Gender of Children Matter? *Ann Rev Sociol*. 2006;**32**(1):401-21. doi: [10.1146/annurev.soc.32.061604.123106](https://doi.org/10.1146/annurev.soc.32.061604.123106).
- Andersson G, Woldemicael G. Sex composition of children as a determinant of marriage disruption and marriage formation: Evidence from Swedish register data. *J Popul Res*. 2001;**18**(2):143-53. doi: [10.1007/bf03031886](https://doi.org/10.1007/bf03031886).
- Abbott DA, Brody GH. The Relation of Child Age, Gender, and Number of Children to the Marital Adjustment of Wives. *J Marriage Fam*. 1985;**47**(1):77. doi: [10.2307/352070](https://doi.org/10.2307/352070).
- Yamaguchi K, Ferguson LR. The Stopping and Spacing of Childbirths and Their Birth-History Predictors: Rational-Choice Theory and Event-History Analysis. *Am Sociol Rev*. 1995;**60**(2):272. doi: [10.2307/2096387](https://doi.org/10.2307/2096387).
- Angeles L. Erratum to: Children and Life Satisfaction. *J Happiness Stud*. 2010;**11**(4):539. doi: [10.1007/s10902-010-9196-8](https://doi.org/10.1007/s10902-010-9196-8).
- Amerian M. Factors involved in decision of women and men for the first childbearing. Shahid Beheshti University of medical sciences and health services faculty of Nursing and Midwifery; 2014.
- Rasekh A, Momtaz M. The determinants of birth interval in Ahvaz-Iran: a graphical chain modelling approach. *J Data Sci*. 2007;**5**:555-76.
- Khadivzadeh T, Latifnejad Roudsari R, Bahrami M. The Influence of Gender Role and Women's Empowerment on Couples' Fertility Experiences in Urban Society of Mashhad, Iran. *J Midwifery Reprod Health*. 2014;**2**(3):170-9.
- Akabry A, Mahmoudi M. Relationship between socio-economic and demographic fertility [in Persian]. *J Sabzevar Univ Med Sci*. 2008;**15**:40-5.
- Yohannes S, Wondafraash M, Abera M, Girma E. Duration and determinants of birth interval among women of child bearing age in Southern Ethiopia. *BMC Pregnancy Childbirth*. 2011;**11**:38. doi: [10.1186/1471-2393-11-38](https://doi.org/10.1186/1471-2393-11-38). [PubMed: [2159927](https://pubmed.ncbi.nlm.nih.gov/2159927/)].

36. Keshavarz H, Hagigatiyan M, Tavasoli DK. Factors determining the distance between marriage and childbearing (The case of married women 49-20 years old in isfahan). *J Appl Sociocol*. 2013;**24**(2):11-25.
37. Shayan Z, Ayatollahi SM, Zare N, Moradi F. Prognostic factors of first birth interval using the parametric survival models. *Iran J Reprod Med*. 2014;**12**(2):125-30. [PubMed: [24799870](#)].
38. Hajizadeh E, Asghari M. Statistical methods and analyses in health and biosciences a research methodological approach [in Persian]. Tehran: Jahade Daneshghi Publications; 2011.
39. Uzan M, Gozlan C, Di Lorio E. [Violence against hospital staff: possible solutions]. *J Gynecol Obstet Biol Reprod (Paris)*. 2005;**34**(1 Suppl):S54-61. [PubMed: [15767932](#)].
40. Kariman N, Simbar M, Ahmadi F, Vedadhir AA. Socioeconomic and emotional predictors of decision making for timing motherhood among Iranian women in 2013. *Iran Red Crescent Med J*. 2014;**16**(2):e13629. doi: [10.5812/ircmj.13629](#). [PubMed: [24719733](#)].
41. Rahmani A, Merghati E, Sadegi N, Alah Gholi A. Sexual satisfaction and marital satisfaction. *J Nurs Res Center Tehran Univ Med Sci*. 2011;**24**(70):82-90.
42. Fowers BJ, Olson DH. Enrich marital inventory: a discriminant validity and cross-validation assessment. *J Marital Fam Ther*. 1989;**15**(1):65-79. doi: [10.1111/j.1752-0606.1989.tb00777.x](#). [PubMed: [21118433](#)].
43. Asoodeh MH, Khalili S, Daneshpour M, Lavasani MG. Factors of successful marriage: Accounts from self described happy couples. *Proc Soc Behav Sci*. 2010;**5**:2042-6. doi: [10.1016/j.sbspro.2010.07.410](#).
44. Kohler HP, Behrman JR, Skytthe A. Partner + Children = Happiness? The Effects of Partnerships and Fertility on Well-Being. *Population Dev Rev*. 2005;**31**(3):407-45. doi: [10.1111/j.1728-4457.2005.00078.x](#).
45. Attari Y, Aman Elahi A. The relationship between personality characteristics and interpersonal factors - family and marital satisfaction in employees' offices in Ahwaz. *J Educ Psychol*. 2006;**3**(13):81-108.
46. Dillon LM, Beechler MP. Marital satisfaction and the impact of children in collectivist cultures: A meta-analysis. *J Evol Psychol*. 2010;**8**(1):7-22.
47. Moshfeg M, Gharib Eshgi S. Analysis of the relationship between the value of children and fertility among women in Tehran. *J Womens Strateg Stud*. 2012;**15**(58):12-94.
48. Abbasi Shavazi J, McDonald P, Hoseini Chavoshi M, Firoz ZK. Evaluation of women's views about reproductive behavior in Yazd province by using qualitative methods. *J Soc Sci*. 2002;**10**(20):160-203.
49. Katzev AR, Warner RL, Acock AC. Girls or Boys? Relationship of Child Gender to Marital Instability. *J Marriage Fam*. 1994;**56**(1):89. doi: [10.2307/352704](#).
50. Brody CJ, Steelman LC. Sibling Structure and Parental Sex-Typing of Children's Household Tasks. *J Marriage Fam*. 1985;**47**(2):265. doi: [10.2307/352127](#).
51. Hank K, Kohler HP. Gender Preferences for Children in Europe. *Demograph Res*. 2000;**2** doi: [10.4054/DemRes.2000.2.1](#).
52. Schullstrom Y. Garçon ou fille? Les preferences pour le sexe des enfants dans les generations suedoises 1946-1975. *Population*. 1996;**51**(6):1243. doi: [10.2307/1534386](#).