

Childbearing Motivation in Iranian Engaged Couples: A Structural Equation Model

Masumeh Ghazanfarpour¹, Elham Arghavani², *Talat Khadivzade¹, Masumeh Saeidi³, Hossein Kareshki⁴, Morvarid Irani⁵, Elahe Heidari⁶, Fatemeh Rajab Dizavandi⁷

¹Evidence-Based Care Research Centre, Mashhad University of Medical Science, Mashhad, Iran. ²MSc in Midwifery, Department of Midwifery, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran. ³Students Research Committee, Faculty of Medicine, Tehran University of Medical Sciences, Tehran, Iran. ⁴Associate Professor of Educational Psychology, Ferdowsi University of Mashhad, Iran. ⁵Student Research Committee, Department of Midwifery and Reproductive Health, Nursing and Midwifery School, Mashhad University of Medical Sciences, Mashhad, Iran. ⁶Assistant Professor, Department of Pediatrics, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran. ⁷Faculty Member, Department of Community Health and Psychiatric Nursing, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran.

Abstract

Background: Childbearing is considered to be one of the main purposes of marriage in Iranian culture. The aim of this study was to assess relationships among age of marriage, religious and educational levels, participation of couples in childbearing and financial status with childbearing motivation using structural equation model.

Materials and Methods: This study is a secondary analysis of previous data; 450 young couples attending four healthcare centers of Mashhad, Iran, included in this study. Sampling method was convenience sampling. Structural equation modeling was performed using AMOS version 19.0. Model was tested using maximum likelihood. Goodness of fit of the model was evaluated based on the Chi-square to degree of freedom ratio (χ^2/df), goodness-of-fit index (GFI), comparative fit index (CFI), and root mean square error of approximation (RMSEA).

Results: Mean age for women and men were 22.16±4.84 and 26.02±4.6 year-old, respectively. The result of our study showed that suggested childbearing motivation model was well fit with data (GFI=0.96; CFI=0.96; RMSEA=0.063, and $\chi^2/df=4.51$). Marriage age and educational level significantly negatively associated with childbearing motivation, respectively (standardized $\beta = -0.082$, $p=0.018$), and (standardized $\beta = -0.222$, $p<0.001$). Religious level was positively significantly associated with positive motivation (standardized $\beta = 0.226$, $p<0.001$). Participation of couples in childbearing had a significantly strong positive motivation (standardized $\beta = 0.56$, $p<0.001$). The R-squared value for childbearing motivation model was 0.34.

Conclusion: The findings indicated that the couple's childbearing motivations were influenced by educational level, participation of couples in childbearing, marriage age and religious level.

Key Words: Childbearing, Couple, Iran, Structural equation model.

*Please cite this article as: Ghazanfarpour M, Arghavani E, Khadivzade T, Saeidi M, Kareshki H, Irani M, et al. Childbearing Motivation in Iranian Engaged Couples: A Structural Equation Model. Int J Pediatr 2018; 6(4): 7563-68. DOI: [10.22038/ijp.2018.27375.2359](https://doi.org/10.22038/ijp.2018.27375.2359)

Corresponding Author:

Dr. Talat Khadivzade, Department of Midwifery, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Ebn-e Sina St., Mashhad, Iran; Fax: +985118597313

E-mail: KhadivzadehT@mums.ac.ir

Received date: Dec.10, 2018; Accepted date: Feb.12, 2018

1- INTRODUCTION

The most important factor impacted on population growth is fertility (1). Also, childbearing is considered to be one of the main purposes of marriage in Iranian culture. In developed countries, decision about childbearing is being made by couple themselves. While among Iranian couples, the effect of expectation of their relevant and the society on making decision about having child is higher than their own opinion. Pregnancy soon after marriage is highly expected in this culture (2). Regardless of above-mentioned cultural traditions a rapid decrease in fertility rate in short period has been observed only in Iran, out of all countries (3, 4). In 1966, the total fertility rate (TFR) in Iran was 7.7 which remarkably decreased down to 2.17 by 2000 (5).

In 2016, this value was 1.83 births per women (6). The significant decrease in total fertility rate (TFR) could be associated with altered childbearing motivation, marrying at higher ages, increased contraceptive use, willingness of couples to make their own family plan, improving educational level of couples (especially in women), and available reproductive health services, as well as promoting educational programs in schools, religious sites and media. Since government could face several problems arising from rapid reduction in fertility rate and aging population (7, 8), so they changed their policies and plans to increase childbearing (8). Childbearing questionnaire (CBQ) includes two types of positive and negative childbearing motivations, which is designed by Miller (7). In study of Khadivzadeh and Arghavani, religious people were reported to have a higher desired number of children and childbearing motivations (9). Another study conducted by Miller (1995), relieved that childbearing is significantly related with Fertility Preferences (10).

Factors influencing childbearing have not been reported in any previous research in Iran, by utilizing structural equation modeling which takes measurement error into account. The aim of this study was to assess relationships among age of marriage, religious and educational levels, interaction between couples and finical status with childbearing motivation using structural equation model

2- MATERIALS AND METHODS

2-1. Method

This study was a secondary analysis and parts of this research work was published elsewhere (7, 8, 9, 11); 450 young couples, attending four healthcare centers with premarital counseling services of Mashhad city, North East of Iran. Couples were including in this cross-sectional study by a convenience sampling method. The inclusion criteria were as follows: 1) Iranian nationality; 2) being a Muslim; 3) being the first marriage; 3) residing in Mashhad; 4) having consent to participate in the study. A rule of thumb was applied to determine sample size (12-14). Researchers have been suggested that the sample size is reasonable for Structure Equation Model (15, 16). Sample size of 450 couples is more than of suggested sample. A questionnaires consist of three parts were administered to couples. The questionnaire included demographic questionnaire, Ghazanfarpour's responsible participation of couples in childbearing questionnaire (11), Khodayarifard's Religious Attitude questionnaire (17), and Miller's Childbearing Questionnaire (CBQ) (10). Khodayarifard's Religious Attitude questionnaire consists of 23 items. Each items rated on 4- Likert scale (17). The minimum and maximum scores are 23 and 92. Validity and reliability of this questionnaire was determined by Khodayarifard et al. Cronbach's alpha was 0.98 that is more than recommended standard (70%) (17). Childbearing

questionnaire (CBQ) was made by Miller (7). The CBQ consists of 48 items divided into two major scales: positive and negative child bearing motivations. We only include positive childbearing motivation to our study. Items are divided into five subscales of "joy of pregnancy, birth, and infancy", "traditional parenthood", "satisfaction of child rearing", "feeling needed and connected", and "instrumental values of children". Cronbach's alpha coefficients were 0.90 for positive childbearing motivations which showed the acceptable reliability of the questionnaire. In a previous content validity was assessed by 10 faculty member of Mashhad University of Medical Science, and after performing recommendations, tool was administrated between couples. Cronbach's alpha coefficients ranged from 0.91 and 0.94 (9). Ghazanfarpour's responsible participation of couples in childbearing questionnaire was designed to assess extent of couples' involvement in childbearing which is consist of 13 items divided into three subscale, including: "agreement on becoming a parent"; "bilateral accountability"; "gender-based distribution of chores". To this purpose, a 4-point Likert scale ranging from 1 (strongly negative) to 5 (strongly positive) was used to score all items. We only used of subscale "agreement on becoming a parent", and "bilateral accountability". Three factors had acceptable reliability with a Cronbach's alpha of 0.60 to 0.85 (11).

2-2. Statistical analysis

Pearson correlations for ideal number of child, positive motivation, age of marriage, level of religious and participant of couples in childbearing were computed in SPSS version 19.0 (SPSS, Inc., Chicago). Structural equation modeling was performed using AMOS version 19.0 (IBM Corp., Chicago, IL, USA) to test the fit between the research models and the

data set (**Figure. 1**). Goodness of fit of the model was evaluated based on the Chi-square to degree of freedom ratio, goodness-of-fit index (GFI), comparative fit index (CFI) and root mean square error of approximation (RMSEA). A value more than 0.9 was appropriate for for CFI and TLI (18) indices and value below 0.08 was suggested for RMSEA (19). Marsh suggested Chi-square to degree of freedom (χ^2/df) below 5 can also be acceptable (20).

3- RESULT

Four hundred and fifty young couples were included the study. Mean age was 22.16 ± 4.84 for females and 26.02 ± 4.6 for male; 49.7% and 45.6% of females and males had university educational, respectively. The result of current study showed that suggested model was fit with data (GFI=0.96; CFI=0.96; RMSEA=0.063 and Chi-square to degree of freedom ratio $\chi^2/df = 4.51$). Indirect, direct, and total effect are showed in **Table.1**. The marriage age was significantly negatively associated with in participation of couples in childbearing (standardized $\beta = -0.106$, $p=0.048$), and childbearing motivation ($\beta = -0.082$, $p=0.018$). Religious level was positively significantly associated with positive motivation (standardized $\beta = 0.226$, $p<0.001$), but negatively significantly associated with age of marriage (standardized $\beta = -0.06$, $p=0.03$), and educational levels (standardized $\beta = -0.15$, $p<0.001$). Educational level significantly negatively associated with positive childbearing motivation (standardized $\beta = -0.222$, $p<0.001$). However, it was positively significantly associated with Participation of couples (standardized $\beta = 0.30$, $p<0.001$). Participation of couples in childbearing had a significantly strong positive motivation (standardized $\beta = 0.56$, $p<0.001$). Having job had a significant negative relationship with marriage age (standardized $\beta = -0.46$, $p<0.001$)

(Figure.1). We did not find any moderation effect of marriage age, participant of couples in childbearing and educational level on childbearing motivation. The R-squared value for childbearing motivation was 0.36 which

showing the five independent variables (educational level, participation of couples in childbearing, religious level, income, and marriage age) explained 34% of positive motivation childbearing.

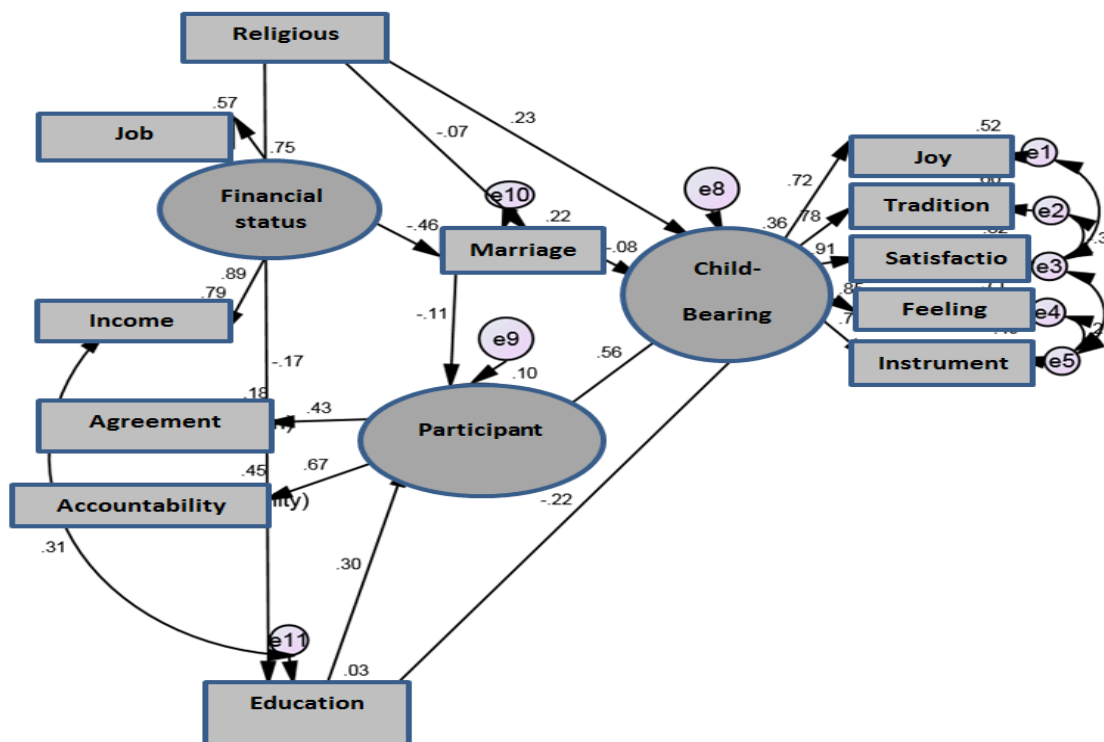


Fig.1: Structural equation model of factors related to Childbearing in Iranian engaged couples including: Accountability (bilateral accountability); Agreement (agreement on becoming a parent), Participation (participation of couples in childbearing); Marriage (marriage age); Childbearing (positive childbearing motivation).

Table-1: Direct and indirect effects of Marriage age, Religious, Educational level, Financial status, Religious levels, and Participation of Iranian couples in childbearing

Variables	Direct effect	Indirect effect	Total effect
Marriage age	-0.082	-0.059	-0.142
Religious levels	0.226	0.018	0.245
Financial status	-	0.066	0.065
Educational level	-0.222	0.169	-0.053
Participation of couples in childbearing	0.56	-	0.56

4- DISCUSSION

As far as we know, the first study that assessed the affecting factor on childbearing using structural equation model. The aim of this study was to assess relationships among age of marriage, religious and educational levels,

interaction between couple and financial status with childbearing motivation using structural equation model. The result of standard error of the mean (SEM) showed that the couple’s childbearing motivation was influenced by educational level, participation of couples in childbearing, religious level and marriage age. But there

was any significant relation between financial status and child bearing. No previous study in Iran have addressed to affecting factor on childbearing using structural equation modeling that have measurement error and more powerful. The aim of this study was to assess relationships between marriage age, religious levels, and educational levels, interaction between couple and economical status with childbearing motivation. The result of our study showed that suggested model was fit with data (TLI=0.97; GFI=0.96; AGFI=0.939; CFI=0.96; RMSEA=0.063 and Chi-square to degree of freedom ratio $\chi^2/df = 4.51$). The findings indicated that the couple's childbearing was influenced by educational level, participation of couples in childbearing, religious level and marriage age. The result of our study showed that couples with stronger religious belief had more motivation for child bearing. There were at least two reasons for this relationship. Some religious individual had more trends to child bearing in order to help to increase number of the Muslim and also some religious participant thinks that use of family planning are against God's will (9).

A study in Shiraz of Iran examined the relationship between religiosity and the number of children among 400 married women. They showed a significant positive correlation between religious beliefs and actual number children ($r=0.273$, $p<0.01$)(21). In consist with our study, Pezeshki et al. showed that Positive Childbearing Motivation (PCM) were significantly negatively correlated with couples education and father education and mother education (2). In contrast to Miller study performed in American, no relation was observed between male's marriage age and educational level, although, our study showed that female being younger at marriage age had less educational level (10). Our study showed that couples with job and higher income were younger at

marriage age consist with present study in Nepal (22), women with higher income had more willing for childbearing. In Pezeshki et al.'s study in Iran was somehow consistent with current study. PCM was positively correlated with child-number desires ($B = 0.22$, $p<0.001$); Childbearing desires ($B = 0.38$, $p<0.001$) in men, and child-number desires ($B = 0.20$, $p<0.001$), and Childbearing desires ($B = 0.34$, $p<0.001$,) (2). The strongest relation was observed between PCM and participation of couple in childbearing. This finding is somehow supported by Rijken and Liefbroer in the Netherlands country. They found the evidence of influence positive and negative interaction on the first, second and third baby rate (23).

4-1. Strengthens and limitations

We are thinking this research is the first study in the world that assessed the affecting factors on childbearing using structural equation model. However, there are at least limitations that it is worth to be addressed. First data were collected using convenience sampling instead of random sampling. The second limitations is subjects include in this study has never experienced having children. It recommends that future study include couples who have at least one child

5- CONCLUSION

The findings indicated that the couple's childbearing was influenced by educational level, participation of couples in childbearing, religious level and marriage age. Identifying these factors can contribute to the design of appropriate interventions to improve reproductive indices.

6- CONFLICT OF INTEREST: None.

7- REFERENCES

1. Keshavarz H, Bahramian M, Mohajerani A, Hossein-Pour K. Factors affecting differences in fertility behavior of

Resident and migrating tribes of Samirom. Health system research. 2012;8(3):456-65.

2. Pezeshki MZ, Zeighami B, Miller WB. Measuring the childbearing motivation of couples referred to the Shiraz Health Center for premarital examinations. *Journal of Biosocial Science*. 2005;37(1):37-53.
3. Hosseini H, Abbasi Shavazi M. Change of thinking and its impact on behavior and ideals Kurdish and Turkish women's fertility. *Journal of Women's Research*. 2009;7(2):55-84.
4. Khadivzadeh T, Arghavani E, Shakeri MT. Attitude toward governmental incentives on childbearing and its relationship with fertility preferences in couples attending premarital counseling clinic in health centers in Mashhad. *Journal of Mazandaran University of Medical Sciences*. 2015;24(120):1-13.
5. Aloosh M, Aloosh A. Iran: the health cost of a political order. *The Lancet*. 2014;384(9958):1926-7.
6. Jaelani A. *Zakah Management for Poverty Alleviation in Indonesia and Brunei Darussalam*. 2016.
7. Khadivzadeh T, Arghavani E, Shakeri MT. Relationship between Fertility Motivations and Preferences in Couples. *The Iranian Journal of Obstetrics, Gynecology and Infertility*. 2014;17(114):8-18.
8. Khadivzade T, Shokrollahi P, Ghazanfarpour M, Kareshki H. Factorial structure of the Persian version of Childbearing Questionnaire in first time engaged couples in Iran. *J Obstet Gynaecol*. 2018 Feb 1:1-6
9. 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):238-45.
10. Miller WB. Childbearing motivation and its measurement. *Journal of Biosocial Science*. 1995;27(4):473-87.
11. Ghazanfarpour M, Khadivzade T, Arghavani E. An Investigation of the Factor Structure and Validity of Responsible Participation of Couples in Childbearing Scale. *Razavi International Journal of Medicine*. 2017;5: e43355.
12. Nunnally JC. *Psychometric theory*, New York: McGraw-Hill Book company; 1967.
13. Tinsley HE, Tinsley DJ. Uses of factor analysis in counseling psychology research. *Journal of counseling psychology*. 1987;34(4):414.
14. Tinsley HE, Kass RA. The latent structure of the need satisfying properties of leisure activities. *Journal of Leisure Research*. 1979;11(4):278.
15. Munro B. *Statistical Methods for Healthcare Research and Application of SPSS in data Analysis* . 1st ed. Translated by Kazemnejad A, Heydari M, Norouzadeh R. Tehran: Jameenegar; 2010.
16. Bollen KA. *Social sciences; Latent variables; Statistical methods*. New York: Willey; 1989.
17. Khodayarifard M, Shokouhi YM, Ghojari BB. Preparing a scale to measure religious attitudes of college students. 2000.
18. Hu Lt, Bentler PM. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*. 1999;6(1):1-55.
19. Byrne B. *Structural equation modeling with Amos: Basic concepts, applications, and programming*. Lawrence Erlbaum Associates. Mahwah: NJ; 2001. ISBN-13: 978-0805863734.
20. Marsh HW, Hocevar D. Application of confirmatory factor analysis to the study of self-concept: First-and higher order factor models and their invariance across groups. *Psychological bulletin*. 1985;97(3):562.
21. Soroush M, Bohrani S. The relationship between religiosity, attitudes toward gender roles and attitudes actual and ideal number of children. *Women in Development & Politics*. 2013;2:209.
22. Pradhan A, Pandey S. Fertility Desire of Working Women in Kathmandu. *J Nepal Health Res Council*. 2010;8(2):95-8.
23. Rijken AJ, Liefbroer AC. The influence of partner relationship quality on fertility. *European Journal of Population/Revue européenne de Démographie*. 2009;25(1):27-44.