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Intergenerational Comparison of Value of Children among Urban Women Population in Mashhad, Iran, 2014

Elham Fazeli (PhD)[1], Nahid Golmakani (MSc)[2]*, Ali Taghipour (PhD)[3], Mohammad Taghi Shakeri (PhD)[4]

[1] PhD Student of Reproductive Biology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran
[2] Assistant Professor, Department of Midwifery, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran
[3] Assistant Professor, Department of Biostatistics and Epidemiology, School of Public Health, University of Medical Sciences, Mashhad, Iran
[4] Professor, Department of Biostatistics and Epidemiology, School of Public Health, Mashhad University of Medical Sciences, Mashhad, Iran

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ABSTRACT

Background & aim: Theory of the value of children refers to the needs that children fulfill for parents. Considering the close relationship between the value orientation of individuals and decisions to organize life and form a family, including having children, as well as the decline in fertility rate in Iran, this study aimed to intergenerationally compare the value of children and its dimensions among women in Mashhad, Iran.

Methods: This cross-sectional study was conducted on 712 women referring to the health centers of Mashhad, Iran selected via multistage sampling. Data were collected using a demographic questionnaire and Value of Children (VOC) questionnaire, including emotional, economic and social dimensions. Validity of the VOC questionnaire was determined via content validity, and its reliability was confirmed via internal consistency. Data analysis was performed in SPSS version 16, and P value of less than 0.05 was considered significant.

Results: Among the studied women, dimension of perceived emotional value of children had the highest mean score in the VOC questionnaire (68.89±18.02), while the lowest mean scores were observed in dimensions of economic and social value of children (46.13±19.36 and 43.89±15.15, respectively). Moreover, mean score of the emotional value of children was higher among younger women, while mean scores of economic and social value were higher among older women.

Conclusion: According to the results of this study, emotional value of children is more important to women. Changing value of children from the economic and social dimensions to the emotional dimension among younger generations is suggestive of a new perspective toward developing comprehensive, regular training interventions in order to promote the reproductive behaviors of women.

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Introduction

In modern societies, fertility is the result of purposeful decision-making and behaviors, as well as the values that affect the decisions regarding fertility and reproductive behaviors. This applies to the assessment of the value of children as well (1). At the international level, theory of the "Value of Children" was proposed in nine countries during the mid-1970s in order to focus on the orientation of values toward children, incentives for childbirth, and fertility outcomes (2).

In previous studies, Hoffman (1973) and Fawcett (1987) have emphasized that desire to have a child depends on the benefits that are attained through childbirth (1). Value of children refers to the functions and needs that children fulfill for parents (3), which is an intermediate psychological variable resulted

* *Corresponding author:* Nahid Golmakani, Assistant Professor, Department of Midwifery, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran. Email: golmakanin@mums.ac.ir

from having children. In fact, the values expected to be obtained from children form the leading motivation of individuals to have children (2).

Children could yield numerous benefits for parents. For instance, childbirth might lead to the higher social status of parents and enhance their social identity, elevate the sense of "self" in parents, strengthen family bonds, provide the opportunity for new experiences, and change or increase family income (1).

Previous research on the theory of the value of children has revealed different views toward childbirth, suggesting that different values of children are independently affected by economic development (2). Furthermore, studies in this regard have proposed three dimensions for the value of children, including emotional, social-normative and economic-utilitarian values (4).

Emotional values refer to the sense of joy and pleasure associated with the parental expectations of having children (5). Social values refer to the social benefits associated with having a child; such examples are social approval and continuing of family line, especially in some communities with having a son. Moreover, having a child leads to the changed relationship of parents, as well as the connections of parents with relatives and friends. Childbirth has been shown to alter the status of parents in the local community as well (1, 5).

Although the social value of a child may appear as a tool, it could have various types depending on the economic value of the child. Utilitarian value of children refers to the expected financial parental support by children during adulthood; such examples are the role of children in family welfare, economic support of the family by young children, and providing care and support for the elderly by young children during adulthood (1, 6).

In this regard, empirical findings indicate that in traditional societies, social and economic values of children are of paramount importance to parents. However, this refutes the fact that the economic and social value of children should be preferred in societies with low economic development (5).

In a pilot study by Arnold (1970) regarding the value of children in the United States, it was reported that changes in the economic status of the country reduced the economic-utilitarian value of children, while the mental and emotional value of children increased or remained unchanged (7). In explanation, it could be stated that with the development of governmental social security systems, economic benefits of children for parents decrease. On the other hand, costs of child raising increase, so that with the industrialization and modernization of societies and economic progress, economic motives to have children tend to reduce. Meanwhile, modernization does not impact on the emotional pleasure of parents with having a child (8).

With this background in mind, it could be inferred that the emotional value of children may be independent of economic development in a culture (8). In this regard, findings of Nauck indicated that the emotional value of children was at a high level in all the studied cultures regardless of the economic situation (9).

Over the past two decades, data of individual and family studies in Europe and other countries have denoted significant changes in the activities, values and attitudes of women (10).

In Iran, family structures have undergone noticeable alterations within the past two decades, changing from extended families to nuclear families. Today, men and women have equal opportunities to enhance their social status through numerous public activities. As such, presence of women in social fields and revenue jobs has increased the employment rate and need for the acquisition of knowledge, which results in the higher accomplishments and social status of women in comparison with previous decades (11, 12).

In today's society, women have multiple roles, some of which have replaced their maternal role and significance of child care. This leads to increased child care costs and reduced benefits of having a child. Consequently, the maternal role in modern societies has been overshadowed by other roles and responsibilities of women (6).

Effects of fertility on determining population fluctuations have rendered related studies more important compared to other demographic phenomena and evaluation of economic, social and cultural factors, all of which could be largely

influential in population fluctuations (13).

On the other hand, to achieve sustainable development, it is necessary to control population growth and fertility status. As such, demographers have been concerned with developing explanatory models and theorizing the mechanism of the effects of social development on the changes of reproductive behaviors (11). Since governments and health organizations cannot directly interfere in fertility issues, demographers seek to identify the influential factors in controlling population growth through the adjustment of these factors (14).

Due to the reduction of fertility rate in Iran (11, 15), and considering that some studies have shown a close association between the value orientation and decisions of individuals to organize life and form a family (e.g., having children) (7), this study aimed to inter-generationally compare the value of children and its dimensions among the women referring to the health centers of Mashhad, Iran.

Materials and Methods

This cross-sectional study was conducted on 712 women referring to the health centers of Mashhad, Iran in 2014. Number of participants was determined based on the findings of Mayer et al. (2009) in a study entitled the "Value of children in Germany: dimensions, comparison of generations and its relationship with parenthood" (4). To calculate the sample size, the highest variable variance (emotional value of children) was used, which was similar to the present study, and maximum sample size was considered in order to cover all the tests and evaluations.

Sample size of this study was calculated using the following formula, considering α=0.05, β=0.05, Z1-α/2=1.96, Z 1-β=1.64, S1=0.74, S2=0.74, and d=0.15:

$$N = \frac{\left(Z_{1-\alpha/2} + Z_{1-\beta}\right)^2 (s_1^2 + s_2^2)}{(d)^2}$$

$$N = \frac{(1.96+1.64)^2(0.74^2+0.74^2)}{(0.15)^2} = 630$$

To ensure more, 10% was added to the sample size, and final sample size was determined at 712 subjects (confidence interval: 95%, α= 5%).

Written informed consent was obtained from all the participants prior to the study, and permission was provided from the subjects to use the data for research purposes. In addition, participants were assured of confidentiality terms regarding their personal and medical history data.

In this study, the medical centers covered by health centers No. 1, 2, 3, 5, and Samen in Mashhad city. In this process, we provided the lists of the patients covered by these health centers, and the health centers were considered as clusters. In each health center, subjects were selected via available sampling based on the sampling criteria.

Inclusion criteria of the study were as follows: 1) Iranian nationality and residence in Mashhad city; 2) basic literacy; 3) being a Muslim; 4) married women and 5) biological parents.

Pregnant and infertile women and those who had children with abnormalities were excluded from the study. In total, 712 women selected from the mentioned health centers were enrolled in the study after completing the informed consent forms.

Data were collected using interview forms consisting of demographic characteristics (age, gravidity, age at marriage, education status, religion [Shia/Sunni], and occupation status), data on family and children (number of children, number of male and female children), and medical and midwifery data.

For this study, we used the Value of Children (VOC) questionnaire based on a primary study on value of children (16, 17). This questionnaire consists of 27 items that are scored based on a five-point Likert scale (Not Important At All=1, Very Important=5).

In this study, the value of children was evaluated in three dimensions of emotional value (seven items), social value (14 items), and economic value (six items). Mean scores of each dimension were calculated, and higher scores in each dimension were indicative of the higher value of children in that aspect.

For this study, the VOC questionnaire was translated and back translated, and content validity was used to determine the validity of research instruments. To do so, the

questionnaires were reviewed by 10 faculty members of the School of Nursing and Midwifery, two epidemiologists from the School of Public Health, two sociologists from Ferdowsi University of Mashhad, and one professor of English language from the School of Nursing and Midwifery. Additionally, the reliability of VOC questionnaire was confirmed via internal consistency in 30 individuals at the Cronbach's alpha of 0.77.

Data analysis was performed in SPSS version 16, and normality of data was measured using the Kolmogorov-Smirnov test. Moreover, we used Pearson's and Spearman's correlation-coefficient to calculate the linear relationship between the variables. Mean variables were compared between the study groups using analysis of variance (ANOVA), and P value of less than 0.05 was considered statistically significant.

Results

In total, 712 women were enrolled in this study. According to the descriptive analysis of data, mean age of the participants was 30.89±8.05 years (age range: 15-66 years).

In women aged less than 25 years, mean number of children was 0.86±0.63, while it was 1.65±0.83 in women aged 26-35 years, 2.49±0.92 in women aged 36-45 years, and 3.76±1.24 in women aged more than 46 years.

With respect to education status, 47.6%, 46.6%, and 35.3% of the women aged less than 25 years, 26-35 years, and 36-45 years had high school diploma, while the highest frequency of primary and secondary education was observed in the women aged more than 46 years (31.7%).

Table 1. Comparison of mean scores and percentages of dimensions of value of children among women of different age groups

Age (year)	Economic value (Mean±SD)	Economic value (%)	Social value (Mean±SD)	Social value (%)	Emotional value (Mean±SD)	Emotional value (%)	Test result
15-25	17.46±4.76	45.92	38.38±8.72	42.77	27.45±5.01	70.51	F=0.43 Df=3 P=0.72
26-35	17.35±4.59	45.40	39.06±8.46	43.96	26.97±4.86	68.86	
36-45	17.95±5.30	46.60	39.63±8.64	44.96	26.59±5.76	67.55	
46-66	18.29±5.56	49.16	40.82±10.74	47.05	25.60±7.05	64.13	

In terms of employment status, 72.8% of the women aged less than 25 years, 69.8% of the women aged 26-35 years, 35.3% of the women aged 36-45 years, and 75.5% of the women aged more than 46 years were housewife.

Results of ANOVA showed a significant difference between age at marriage (P<0.001) and age at the first childbirth (P<0.001) in different generations of women.

In order to compare the mean scores and percentages of different dimensions of the VOC questionnaire, we used the following formula:

$(x-a)/(b-a+1)\times 100$

Score of each dimension was calculated out of 100. In this formula, *X* represents each dimension of the VOC questionnaire, *a* denotes the minimum possible score, and *b* is the maximum possible score to be achieved by the subjects.

Comparison of the obtained scores of each dimension of the VOC questionnaire was performed using post-hoc tests. According to the results, women perceived the emotional benefits of children to be higher than other aspects (mean score: 68.89±18.02), followed by the economic benefits (mean score: 46.13±19.36), whereas the lowest perceived benefits belonged to the social aspect of having a child (mean score: 43.89±15.15).

In the VOC questionnaire, mean score of the emotional value of children was 26.97±5.22 (score range: 7-35), mean score of social value was 39.01±8.63 (score range: 14-70), and mean score of the economic value of children was 17.53±4.84 (score range: 6-30).

Comparison of the mean scores of the dimensions of VOC questionnaire indicated that among different generations, emotional value of a child was higher in women aged less than 25 years (mean score: 27.45±5.01), while women aged more than 46 years obtained the

highest score in the dimension of economic value (mean score: 18.29±5.56) and social value of children (mean score: 40.82±10.74). However, our findings were indicative of no statistically significant differences in the value of children among women at different ages (P>0.05) (Table 1).

Table 2. Regression analysis of value of children variables

Model	Unstandardized coefficients		Standardized coefficients	T	P-value
	β	Standard error	β		
Birth order	.573	.334	.070	1.715	.087
Intention to continue education	1.471	1.788	.037	.823	.411
Age at marriage	-.102	.208	-.022	-.492	.623
Number of children	-.211	.714	-.013	-.295	.768
Education level	-2.565	.698	-.184	-3.676	.000
Occupation status	.668	.619	.044	1.078	.282

Table 3. General linear model analysis of variables on value of children

Parameter	B	Std. Error	t	Sig.
[Education=Illiterate and primary education]	11.886	2.840	4.185	.000
[Education=Secondary education]	7.156	2.363	3.029	.003
[Education=High school]	4.812	1.853	2.597	.010
[Education=academic]	0a	.	.	.
[Occupation=Practitioner]	-2.367	1.841	-1.286	.199
[Occupation= house wife]	0a	.	.	.
Birth Order	.550	.332	1.656	.098
Marriage Age	-.105	.205	-.513	.608
Children Number	-.150	.706	-.212	.832

a. This parameter is set to zero because it is redundant

According to the results of this study, value of children was significantly correlated with the education level (P<0.001), intention to continue education (P<0.001), number of children (P=0.009), occupation (P=0.02), and age at marriage (P=0.01).

On the other hand, no significant associations were observed between the value of children and variables of gravidity (P=0.08), duration of marriage (P=0.34), age of spouse (P=0.52), number of male children (P=0.17), number of female children (P=0.25), religion (P=0.34), occupation status (P=0.15), and economic status of the family (P=0.30).

Regression analysis was used to assess the variables with the significance level of P<0.15, including gravidity, intention to continue education, education level, occupation, number of children, and age at marriage (independent variables). In this analysis, value of children was considered as the dependent variable. According to our findings, education level had the most significant association with the value of children among the women of different generations (Table 2, 3).

Discussion

In the present study, benefits of having children were divided into three categories of emotional, economic-utilitarian, and social-normative. Our participants perceived the emotional benefits of children to be higher than other aspects, followed by economic benefits, and social benefits of children had the lowest priority among the studied women. In other words, the applied value of children has diminished among women, while the emotional value has increased. This denotes the superiority of the emotional value of children over their applied value (2).

In this regard, the study by Mayer et al. (2010) was performed on adolescents in 12 different countries, including China, France, Germany, India, Indonesia, Israel, Japan, Poland, Russia, South Africa, Turkey and the United States. According to the results, the emotional value of children varied in different cultures. While Indonesian subjects perceived the highest emotional value, adolescents in China, Germany, Israel and Japan assumed the lowest emotional value for children.

Furthermore, the utilitarian and normative values of children were variable in different cultures; as such, adolescents in South Africa, Indonesia and India perceived the highest utilitarian and normative values for children, while subjects in France, Germany and Japan obtained the lowest scores in this regard.

In the mentioned study, the researchers claimed that adolescents with poor economic status had higher scores in terms of the normative and utilitarian values of children, while adolescents with favorable economic status perceived higher emotional value for children (1).

In the current study, mean score of the emotional benefits of children was higher in younger women, while older women achieved higher scores in terms of the economic and social benefits of children. This denotes the fact that value of children for women has changed from the traditional (economic-normative value) to a more emotional perspective in younger generations. These results reflect the changing of values among different generations, confirming the theory of modernization regarding the transformation of the general or specific value orientation toward having children (4). The pattern observed in the present study is suggestive of the changed value of children to an emotional perspective, as well as the alterations of family models (2).

Our findings are inconsistent with the study by Mayer et al. (2009) in Germany, which was conducted on three generations of family members (grandmothers, mothers and grandchildren), in addition to the mothers of preschoolers.

In the mentioned research, grandmothers perceived the highest value of children in all the dimensions, while in the current study, the emotional value of children was higher among the younger generations of women, and the economic and social values were higher in the viewpoint of older generations, which is not in correspondence with the findings of Mayer et al.

According to the study by Mayer et al., although the emotional value of children had no changes between different generations, older generations tended to perceive higher utilitarian-normative values for children compared to younger generations (4).

In another research performed in Turkey, Kagitcibasi (2005) observed slight differences in the perception of the emotional value of children among women at different ages, and this dimension was of paramount importance to all the subjects. On the other hand, the utilitarian-normative value of children was higher in older generations compared to younger women, as well as in samples living in rural areas compared to urban residents (2).

Findings of the current study are in line with the results obtained by Albert et al. (2005) in Indonesia, Mishra et al. (2005) in India, and Kim et al. (2005) in Korea.

According to the aforementioned studies, women of the older generations (e.g., mothers and grandmothers) believed that the utilitarian and normative values of children are more important than other aspects of having a child. On the other hand, women of younger generations assumed a higher emotional value for children.

Furthermore, women who lived in urban and rural areas had similar views toward the values of children. As such, urban participants recognized lower utilitarian-normative value for children and had lower fertility, while in some cases, they perceived a higher emotional value for children compared to rural participants (18-20).

In another research, Suckow (2005) compared Jewish and Arab mothers in Israel and reported the higher perception of utilitarian-normative value of children among Arab mothers, while no significant difference was observed in the perceived emotional value of children between the two populations (21).

On the other hand, Sabatier (2005) reported higher recognition of the emotional value of children in French mothers and grandmothers, while perceived utilitarian-normative values were higher among grandmothers compared to their adult daughters (22). In this regard, findings of Bernardi et al. (2013) indicated that cultural background indirectly affects the value orientation of individuals by influencing their social awareness (23).

According to the results of the present study, education level and intention to continue education were correlated with the perceived value of children. In this regard, some studies have suggested that parents coming from

various social classes have different attitudes and values toward parenting (24-27). In the study by Yi et al. (2007), adolescents whose fathers had intermediate education paid less attention to the physical benefits of having a child (economic value), while the physical costs of having children were considered important.

According to the findings of Bernhard et al., high education level of women was associated with higher perceived costs of having children; however, this was not considered statistically significant (23). These findings could be due to the fact that women with higher education tend to believe in lower benefits of marriage and having children.

Women with higher education mostly invest in the benefits of their academic achievements, and consequently, they might assume that having children diminishes their human capital. However, loss of human capital is less important to women with relatively lower education levels. In other words, women with high education are faced with the risk of losing occupational opportunities as a result of childbirth compared to uneducated women (29).

According to the results of the current research, education level and intention to continue education were higher in women aged less than 25 years, while the rate of employment was higher among the women aged 25-30 years compared to other age groups. On the other hand, mean number of children was lower in younger women. All these factors influenced the attitudes of women toward the status and value of children in their life.

Findings of the present study were indicative of the transforming of family structures in Iran into a more Westernized style. Moreover, dimensions of value of children as an intermediate variable are associated with fertility rate, which depends on structural-social factors, cultural conditions, and individual resources in a society.

Value of children is noticeably affected by socioeconomic development and cultural inclinations. In traditional societies with lower socioeconomic status, social and economic benefits of having children are more important to individuals. In countries with no support network to cover life risks, intergenerational relationships and social capital are prioritized, which renders the economic and social values of children more important (1).

According to the literature, gender revolution in Europe and increased burden on women caused by the tasks and activities at home and outdoors are the two main causes of the rapid and sustainable reduction of fertility rate and having no children in the late twentieth century (23).

With small family size in the modern society, men and women have become equal on a social level, while at the same time, child care by relatives has decreased dramatically. Moreover, stress of women has increased due to the tremendous burden of combined employment and household chores (30).

Today, in Western countries, both men and women have the opportunity to continue their education and find a job. Furthermore, extended families are dwindling despite the availability of various facilities for family care, such as child protection and parental leave (31).

Findings of Kagitcibasi (2005) hypothesized that with the development of economic and social status and subsequent reduction of the financial support obtained from children, the importance of the economic and social values of children declines (2).

On the other hand, the emotional value of children is more prominent in affluent and individualistic cultures, where child raising is associated with high costs and does not help old age security. All these factors are associated with reduced fertility (11). It seems that these changes are resulted from the transformation of extended families to nuclear families, changing of dependent families to independent families, and greater independence of children from parents (2).

Among the strengths of our research were the large sample size, importance of the studied issue in the reproductive policymaking of the country, and lack of similar studies in Iran. One of the limitations of the present study was lack of data on family values, marital satisfaction, and work experience and job opportunities of women, which are likely to affect the reproductive behavior of women. Furthermore, there were differences in the understanding of the proposed questions by the subjects.

Findings of the current study imply that changes in the social role or status of an individual

could have a remarkable impact on their goals and incentives for having children (31).

Considering the decline of birth rate in our country, it is recommended that future studies assess the value of children among different religious, cultural and ethnic populations in order to determine the influential factors in fertility in Iran.

Conclusion

According to the results of this study, women perceived higher emotional value for children, and the most notable time-dependent change in this regard was the increased emotional value of children and decreased economic and social values among the women of different generations. These findings could lay the ground for developing new approaches to create comprehensive, regular training programs in order to promote the reproductive behavior of women.

In this regard, effective planning and implementation of necessary policies through psychological consultation by counselors, educators and other employees, who provide health services for the promotion of reproductive behavior in women, could raise the awareness and knowledge of women and enhance their reproductive behaviors.

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Conflicts of interest

The authors declare no conflicts of interest.

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