

Original Article

Socio-economic factors of value of children affecting ideal number of children by gender

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Abstract

Background: Socio-economic factors, following psychological factors, affect the value of children in parents' view and this value itself could influence Ideal Number of Children (INC), which is one of the most important dimensions of fertility behavior. The aim of the present study was to investigate parents' INC according to the factors influencing the value of children from the viewpoint of men and women, separately.

Methods: In a cross-sectional study, multi-stage stratified sampling method was conducted to collect data from 590 males and 610 females in Tehran province, Iran, using a questionnaire including demographic and attitudinal questions. To describe data, SPSS-17, and to examine the factors influencing INC, path analysis was used in AMOS 22 and Goodness of fitted model was approved using the relative chi-square (χ^2/df), Goodness of Fit Index (GFI), Adjusted GFI (AGFI), and Root Mean Square Error of Approximation (RMSEA) indices.

Results: Indices of Goodness of fit confirmed the fitted models ($\chi^2/df=2.289$, GFI=0.994, AGFI=0.973, and RMSEA=0.047 for males' model and $\chi^2/df=0.511$, GFI=0.989, AGFI=0.994, and RMSEA=0.020 for females' model). Negative psychological (males' coefficient=-0.20 and females' coefficient=-0.17, $P<0.001$) and positive economic (males' coefficient=0.11 and females' coefficient=0.09, $P<0.05$) factors of children values were both significant on INC based on gender. Moreover, negative social factor (males' coefficient=-0.26, $P<0.05$) of value of children was significant on INC only for males. These significant factors had higher impacts on men's INC, as compared with that of women

Conclusion: According to the results of the present study, significant factors influencing INC of males and females were negative psychological and positive economic factors of the value of children and the negative social factor of value of children was the only significant factor influencing INC for males.

Keywords: Child; Fertility; Parents; Psychological

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Introduction

Childbearing is a permanent commitment process for supporting, protecting, and raising a child (1). The Ideal Number of Children (INC), one of the dimensions of fertility behavior, could measure families' childbearing desire. In Iran, many studies have examined the changes in fertility rates and its influencing

factors. The results of these studies proved the direct relationship between fertility and INC (1-9). Economic, social, individual, and cultural changes in families result in fertility transition and reproductive behaviors changes (10). Indeed, the total fertility rate per woman dropped from 7.7 in 1966 (11) to 1.7 in 2011 (12).

One of the most influential factors on INC is the value of children. How to value children is due to the construction of society and family, as well as psychological, social, and economic conditions of couples, who have the power of determining fertility (13). Some studies were devoted to investigate the value of children on fertility behaviors (14). According to the findings the value of children has a meaningful and direct relationship in terms of economic and religious dimensions with ideal fertility. The most and the least important values of children for couples are the attitudinal and economic values, respectively. Furthermore, unwillingness of the childbearing could be determined by economic and social factors (15). The manner individuals value a child and their economic, social, and psychological characteristics have significant relationships with the number of their INC (1, 16). Also, taking into account the aging and widowhood time of mothers, the economic role of children in the life of urban women would be important (13, 17). As a result, fertility rates may alter due to changes of various social, economic, and psychological factors of value of children. Thus, conducting studies to identify the most crucial factors influencing INC can help design efficient interferences, facilitate policy maker's decision-making in the current legal system, and help healthcare providers learn how to assist women in this important process and present useful strategies and interventions. The aim of the present study was to investigate parents' INC according to the factors influencing the value of children from the viewpoint of men and women, separately.

Methods

In the present study, data of a cross-sectional survey under the title of "effects of socio-economic rationality dimensions on childbearing behavior in Tehran" (18) was used.

The population of the study included 3279583 married women and men, aged 15-49 and 20-59, respectively, in Tehran according to the Population and Housing Census, 2011 (19). Considering the design effect of 2.5 and the rate of non-response (1.25), the sample size of 1200 of residents was considered as final sample size using Cochran sample size formula. Therefore, 590 (49.2 percent) eligible 20-59 year old men and 610 (50.8 percent) eligible 15-49 year old women from Tehran province in Iran were studied using multi-stage sampling and proportional probability method.

In the present study, using the hierarchical clustering approach, the 22 metropolitan regions of Tehran province were clustered in terms of developmental degree in four levels of development as developed, relatively developed, moderate, and undeveloped regions (20). Thus, regions 3, 6, 1, and 2 were located at the first level of development, regions 5 and 7 at the second level of development, regions 11, 8, 13, 21, 4, 10, 16, 12, 22, 14, 20, and 9 at the third level of development, and areas 18, 19, 17, and 15 at the fourth level of development. Therefore, each of the levels of development in different regions of Tehran was considered as a class, and the regions in each of these classes were proportionally selected on the basis of their size; therefore, 10 regions were selected for final selection. The logic of this classification was the fact that the components of the explanation of many social, economic, and cultural variables in each region, that are at a level of development, are substantially homogeneous, and the sample findings of that level can largely be extended to that region. Out of 22 regions, 10 were selected in Tehran according to the population size of regions in four developmental levels. In each selected region, four big blocks were randomly chosen. Then, the samples were collected using systematic random sampling method in each block between February to May, 2017.

In the present study, although some behavioral questions were asked, we did not carry out any intervention. Therefore, there was no requirement to obtain ethical code.

The respondent's INC was obtained by asking the question: "How many children do you desire to have by gender?" Data were collected using a questionnaire including demographic and 17 questions on value of children, which were used to extract 5 factors as follows:

- *Negative psychological factors:* The children's noise makes me angry (Q1); The comfort of my life could be reduced by having a kid or kids (Q2); Childbearing means getting scared and worried (Q3).
- *Negative social factors:* Kids bring trouble to the life (Q4); Nowadays, it's hard to train a kid (Q5); It's difficult to go to travel and leisure by having a kid (Q6); Enjoying life is more important than having a kid (Q7); Having a kid means engaging in a long-term commitment (Q8).
- *Positive social factors:* The kid gives meaning to the life (Q9); Kids make life more uniform (Q10); Children will strengthen the relationship between couples (Q11); Childbearing means continuing the generation (Q12); Families with children are more likely to feel happier than childless families (Q13).
- *Negative economic factors:* Having a kid has a heavy financial burden nowadays (Q14); The majority of family expenses are spent on kids (Q15); Fulfilling children's expectations is very costly (Q16).
- *Positive economic factors:* Kids will be helpful in aging and loneliness of the parents (Q17).

The questions related to value of children were scored in Likert scale from completely disagree (1) to completely agree (5). The validity of questionnaire was confirmed by 10 sociologist experts and the reliability was at least 0.74 for each sub item based on Cronbach's alpha. Less than five percentages of questionnaire items in attitudinal questions had missing values, which were imputed using mean method.

Factor scores were computed averaging the questions of each factor. The data were analyzed in SPSS Statistics for Windows, Version 17.0. to present descriptive statistics and AMOS 22 was used to fit path analysis of selected variables on INC and Goodness of fitted model were approved by the relative chi-square (χ^2/df), Goodness of Fit Index (GFI), Adjusted GFI (AGFI), and Root Mean Square Error of Approximation (RMSEA) indices. Based on the theoretical background of the study, the most important confound variable was gender and according to this variable, separated the models were fitted.

Results

Frequency distribution of selected variables in the model is presented in Table (1). According to the results, INC for most of respondents (45.9 percentages of males and 50.2 percentages of females) was 2 children. As for employment, 87.1% of males and 32% of females were employed. About 90% of the males and females were born in urban areas.

The mean (SD), and the normality assessment of the main variables examined in the study are shown in Table (2). The means (SD) of males' INC and females' INC were 2.5 (1.50) and 2.3 (1.22), respectively. The highest and lowest mean were for the social positive and psychological negative value of children were 2.5 (1.50) and 2.3 (1.22), respectively. The highest and lowest mean were for the social positive and psychological negative value of children.

Table 1. sociodemographic variables of the study participants

Variables	Value	Male N (%)	Female N (%)
Ideal number of Children (INC) (Response Variable)	0	25 (4.2)	26 (4.3)
	1	87 (14.7)	77 (12.6)
	2	271 (45.9)	306 (50.2)
	3	65 (11.0)	83 (13.6)
	4 and more	142 (24.2)	118 (19.3)
Job Status	Employed	514 (87.1)	195 (32.0)
	Unemployed	76 (12.9)	495 (68.0)
Residence	Urban	519 (88.0)	551 (90.3)
	Rural	71 (12.0)	59 (9.7)
Age	10-19	0	4 (0.7)
	20-29	92 (15.6)	148 (24.3)
	30-39	224 (38.0)	265 (43.4)
	Above 40	274 (46.4)	193 (31.6)
Marriage Age	10-19	12 (2.0)	152 (24.9)
	20-29	435 (73.7)	401 (65.7)
	30-39	132 (22.4)	50 (8.2)
	40-49	11 (1.9)	7 (1.2)
Marriage Duration	<5	191 (32.3)	156 (25.8)
	5-14	178 (30.2)	214 (35.4)
	15-24	137 (23.2)	173 (28.6)
	25<	84 (14.3)	62 (10.2)
Educational Level	Illiterate	25 (4.4)	33 (6.1)
	Less than diploma	72 (12.4)	44 (8.3)
	Diploma	189 (32.7)	252 (46.8)
	University	292 (50.5)	209 (38.8)
Expenditure (each month)	Less than 10 million Rials	41 (7.0)	43 (7.2)
	10-20 million Rials	279 (47.6)	302 (50.9)
	20-30 million Rials	179 (30.6)	151 (25.5)
	More than 30 million Rials	87 (14.8)	97 (16.4)

Table 2. Descriptive indices of INC and value of children variables by gender

Variables	Male	Female
	Mean (SD)	Mean (SD)
INC	2.50 (1.49)	2.37 (1.22)
Social negative factors	2.73 (0.49)	2.73 (0.48)
Social positive factors	3.88 (0.50)	3.87 (0.49)
Economic positive factors	3.32 (1.22)	3.24 (1.26)
Economic negative factors	3.11 (0.52)	3.17 (0.50)
Psychological negative factors	2.28 (0.94)	2.42 (0.93)

The results of Pearson correlation coefficients and their degrees of significance are given in Table 3. According to the results of this table, males' INC is correlated significantly with all of the value of children factors ($P < 0.05$) except for economic negative factors ($r = -0.034$, $P = 0.06$). Females' INC also significantly correlated with social positive ($r = 0.157$, $P = 0.008$), economic positive ($r = 0.163$, $P = 0.005$), and psychological negative ($r = -0.173$, $P = 0.002$) value of children factors.

Path analysis was used to examine the effect of the value of children factors influencing INC by gender. The fitted model was assessed through a number of indices shown in Table 4. According to the results, the four indices of χ^2/df , RMSEA, GFI, and AGFI were in the acceptable ranges and confirmed the goodness of both fitted models ($\chi^2/df = 2.289$, GFI = 0.994, AGFI = 0.973, and RMSEA = 0.047 for males' model and $\chi^2/df = 0.511$, GFI = 0.989, AGFI = 0.994, and RMSEA = 0.020 for females' model).

Table 3. Pearson Correlation between INC and value of children variables by gender

		INC	Social negative factors	Social positive factors	Economic positive factors	Economic negative factors	Psychological negative factors
Male	INC	1.000	-0.084*	0.172**	0.159**	-0.034	-0.165**
	Social negative factors	-0.084*	1.000	-0.075	-0.091*	0.055	-0.133**
	Social positive factors	0.172**	-0.075	1.000	0.404**	-0.018	-0.334**
	Economic positive factors	.159**	-.091*	.404**	1.000	-.007	-.211**
	Economic negative factors	-0.034	0.055	-0.018	-0.007	1.000	0.096*
	Psychological negative factors	-	-0.133**	-0.334**	-0.211**	0.096*	1.000
		0.165**					
Female	INC	1.000	-0.011	0.157**	0.163**	-0.029	-0.173**
	Social negative factors	-0.011	1.000	-0.144**	-0.107**	-0.020	-0.215**
	Social positive factors	0.157**	-0.144**	1.000	0.457**	0.009	-0.237**
	Economic positive factors	0.163**	-0.107**	0.457**	1.000	0.030	-0.264**
	Economic negative factors	-0.029	-0.020	0.009	0.030	1.000	0.023
	Psychological negative factors	-	-0.215**	-0.237**	-0.264**	0.023	1.000
		0.173**					

INC: Ideal Number of Children

* Significant at the 0.05 level

** Significant at the 0.01 level.

Table 4. Goodness of fit indices for the models by gender

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		Male						Female				
Model index	χ^2	Df	χ^2/df	RMSEA	GFI	AGFI	χ^2	df	χ^2/df	RMSEA	GFI	AGFI
value	11.444	5	2.289	0.047	0.994	0.973	2.556	5	0.511	0.020	0.989	0.994

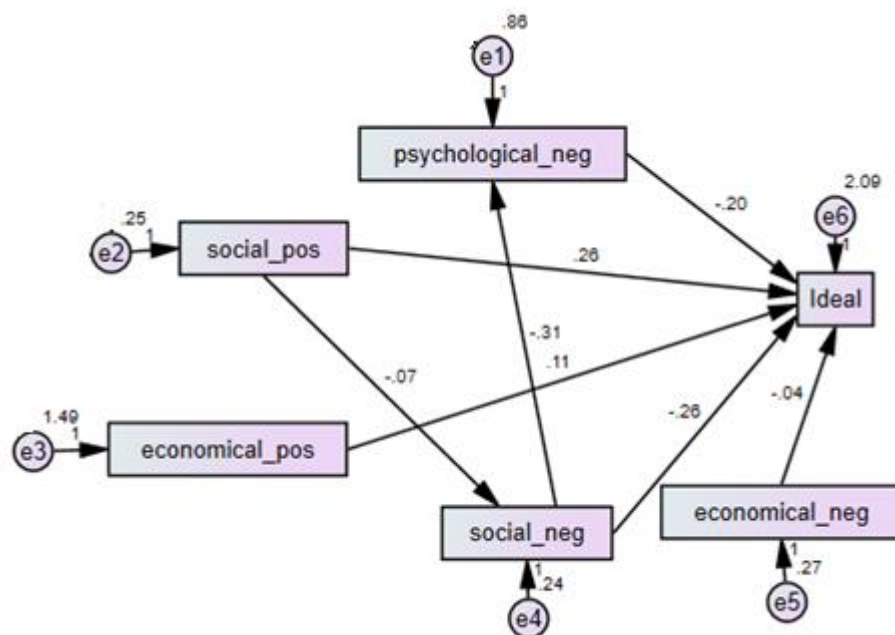


Figure 1. The path diagram of men's value of children factors influencing INC

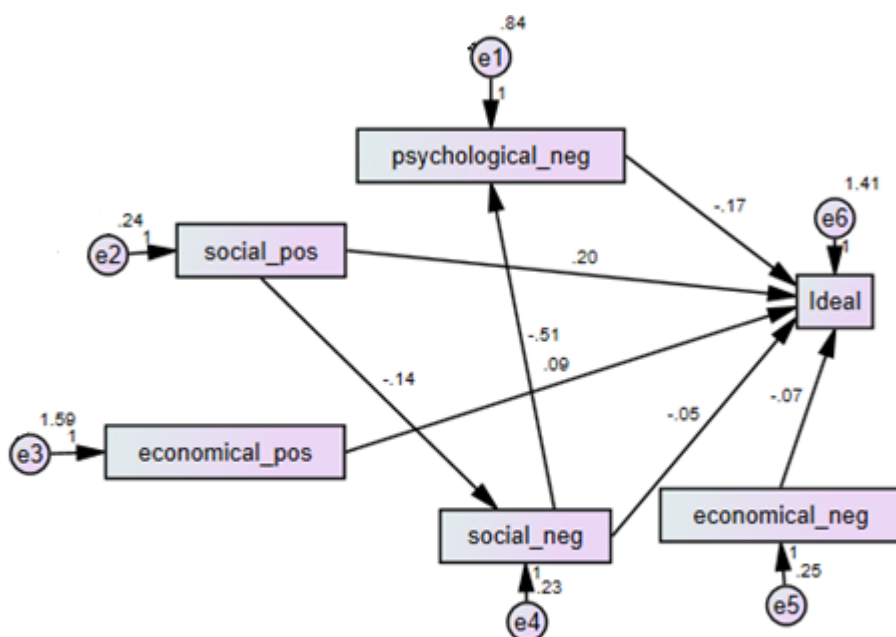


Figure 2. The path diagram of women's value of children factors influencing INC

The schematic plot of the structural model was presented in Figures 1 and 2.

The measured coefficients in both fitted models are presented in Table 5. Social positive value of children factor significantly influences social negative

factors for females ($\beta=-0.14$, $P<0.001$). Psychological negative and economic positive value of children factors were significant on INC for both males and females but in different directions. Increasing psychological negative value

Table 5. Path analysis value of children factors influencing INC by gender

			Male			Female		
			Estimate	SE	P	Estimate	SE	P
Social negative	<---	Social positive	-0.07	0.04	0.069	-0.14	0.04	<0.001**
Psychological	<---	Social negative	-0.31	0.07	<0.001**	-0.51	0.07	<0.001**
negative								
INC	<---	psychological	-0.20	0.07	0.003**	-0.17	0.06	0.002**
		negative						
INC	<---	Social positive	0.26	0.14	0.058	0.20	0.11	0.070
INC	<---	Social negative	-0.26	0.12	0.037*	-0.05	0.10	0.653
INC	<---	Economic	-0.04	0.11	0.717	-0.07	0.01	0.451
		negative						
INC	<---	Economic	0.11	0.05	0.042*	0.09	0.04	0.048*
		positive						

INC: Ideal Number of Children

* Significant at the 0.05 level

** Significant at the 0.01 level

of children factors decreases INC ($\beta=-0.2$, $P=0.003$ for males and $\beta=-0.17$, $P=0.002$ for females). While increasing economic positive factors increases INC for both gender ($\beta=0.11$, $P=0.04$ for males and $\beta=0.09$, $P=0.04$ for females). Social negative value of children factor was found to be significant only for males. By increasing males' social negative value of children factor, INC decreased ($\beta=-0.26$, $P=0.03$). Negative social factor of children value influenced negative psychological factor on INC for both males and females ($\beta=-0.31$, $P<0.001$ for males and $\beta=-0.51$, $P<0.001$ for females). Also, by increasing negative social factor of children value, their negative psychological factor decreases. It seems that social negative factor is more influential compared to negative psychological factor.

Discussion

One of the important, but not the only, function of the families is childbearing. For them, children are the source of happiness, pleasure, and affection and they can have benefits or costs in such dimensions as social and economic dimensions to parents. According to the results, one of the most influential value of children factors on males' INC was negative social factors. As

a result, by increasing these negative social factors, males' INC decreases. This finding is associated with the theory of second demographic transition (21-23), which emphasize shifts in social norms and values. Based on this theory, not only parenthood is not the first goal of individuals in marriage but individuals also seek other goals, like self-fulfillment (14,17,26).

In Ghorbani et al. study it was concluded that the least significant value of children for couples is the positive economic values (15). Hasheminiya et al. also showed that attention to the aging and widowhood time determines the economic value of children in the urban women's life (13). Aycicegi-Dinn et al. indicated that importance of value of children economic factors in rural students was more than that in urban students and had significant influence on their fertility behavior (24). Rani et al. who studied the influence of economic factors of value of children on Indian families included that economic determinants of value of children influence the decision to have more children (25). All these reports confirm the results of the present study which indicated that for both males and females this factor had positive effects on INC. Traditionally, in a society like Iran,

where ‘male breadwinner’ model is more common, especially with regard to economic instability in Iran, men's ideal number of children are expected to be less likely compared with women to increase. But it is somewhat surprising that this study did not find a significant difference between males and females in positive economic of children value.

Negative psychological factors of children value results in decreasing INC according to the results of this study. These results match those observed by other studies (26, 27). Accordingly, the growth of new values like tendency to individualism, freedom, self-realization, and satisfaction of personal preferences can lead to describe children as a factor to decrease comfort of life and also psychological quiet. Moreover, Abbasi-Shavazi et al. and Mayer et al. reported the significant influence of this factor on fertility determinants (16, 28).

As the results showed, social negative factors affected psychological negative factors for both males and females. The second demographic transition theory can explain this finding (22, 29). According to second demographic transition theory and also some previous studies (30, 31), the rise of new values like individual autonomy, self-actualization, and symmetry in sex roles encouraged couples to keep their future open through low INC and trace low fertility. However, by increasing social positive factors for females, a significant decrease was observed in the social negative factors. These results can be explained in part by the first demographic transition theory (32, 33).

Due to some constraints, like lack of respondent's cooperation and lack of time and budget, the present study could not provide a comprehensive review of INC. It is suggested that to gain a comprehensive review of INC, the association of these factors be investigated in future studies. Also, such research could be more applicable and fruitful if further research could be carried out following qualitative and longitudinal methods.

The present study aimed to investigate males' and females' ideal number of children according to the influential factors of children value, separately. According to the results of the current study, significant factors on INC of males and females were negative psychological and positive economic of children value and negative social factor of children value was just significant for males on INC. The consequences of the families' decisions on their desired number of children are very essential. So, to implement successful policies to alter the current trend of fertility decrease, planners and policy makers should consider changes in the psychological, social, and economic factors of value of children.

Conflict of interest

Authors declare no conflict of interests.

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