Original Article

Predictors of Fertility Intention in Parents with Educable Intellectually Disabled Children in Isfahan, Iran

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Abstract

Background: The fertility rate has declined in many countries over the past decades. Fertility intention is the determinant of fertility behavior. Various factors may affect the fertility intention of couples with no or healthy children. However, some parents may also have children with intellectual disabilities that affect their childbearing. Therefore, the main objective of this study is to identify predictors of fertility intention in parents with educable intellectually disabled children. **Materials and Methods:** The present study was a descriptive cross-sectional study conducted on 193 parents with educable intellectually disabled children living in Isfahan. Sampling was implemented using clustering and the classification method from February to July 2019. Data were collected through a self-report questionnaire and analyzed using SPSS 20, logistic regression, and independent t-tests. **Results:** Approximately 83.9% of participants had negative fertility intentions. Predictors of fertility intention were perceived behavior control (95%CI: 1.14- 1.42; p = 0.001; OR = 1.28), attitude (95%CI: 1.06- 1.24; p = 0.001; OR = 1.14) and subjective norm (95%CI: 1.08- 1.33; p = 0.001; OR = 1.20), respectively. On the other hand, the perceived behavioral control was the strongest predictor. The son preference was higher in parents with positive fertility intentions ($p < 0.05$). **Conclusions:** According to the results of the present study, it seemed that factors such as perceived behavior control, attitude, and subjective norms affected fertility intention in parents with intellectually disabled children. Therefore, it is suggested to gain knowledge about the roles of these predictors and counsel parents to choose contraceptive methods or encourage them in childbearing.

Keywords: *Fertility, intellectual disability, intention, parents*

Introduction

Notable demographic changes have occurred worldwide in recent years, including changes in fertility rate.[1] According to demographic science, the fertility rate is the most important determinant of population fluctuation.[2] If the fertility rate is at a replacement level (2.1 children per woman), it can be considered a basis for the development of countries.[3] The fertility reduction not only leads to population aging[4] but also reduces the young labor force and increases expenses related to the care of older people.[5] Findings of studies indicate that the Total Fertility Rate (TFR) has reached less than the replacement value in many developed countries.[6] Iran has not been an exception from this rule, and its population growth has been declining over the past three decades[7]; the total fertility rate in 2013 was 1.6 children per woman.[8]

According to the UN Population Project in 2010, it is predicted that continuing the decline in the fertility rate of Iran would lead to a total fertility rate of 0.8 children per woman during 2025-2030; hence, policies of population growth such as access to fertility rate at a replacement level or above, facilitation and development of family creation and childbearing, and provision of suitable facilities for mothers, particularly during pregnancy and breastfeeding, were adopted to deal with the declining fertility rate in Iran.[6,9]

Fertility is a purposive behavior and is created based on the individual intention. The individual intention as a major factor in the creation of childbearing and future fertility has been taken into account by many studies. In this regard, research results indicated that the couples' fertility intention may be related to their attitudes,

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subjective norms, and perceived behavior control.[10] Attitude toward childbearing means perceived positive or negative consequences of having children. Results of the research indicated that individuals' positive attitude toward childbearing increased their fertility intention. Studies also indicated that the fertility intention in individuals with healthy children was influenced by the ideas of spouses, friends, or their parents. Subjective norms refer to perceived social pressure from individuals or social groups for childbearing. Individuals' perception of childbearing ability could also facilitate or prevent childbearing.[11] A study investigated factors such as family economic status, income level, employment status, and education level as determinants of perceived behavioral control in fertility intention.[12] Perceived behavior control also means assessing own resources and barriers that can facilitate or impede childbearing.[10] Results of another research indicated that individuals who did not achieve the desired sex of children increased the number of their children.[13]

Having a child is an important experience in couples' lives;[14] however, they may have children with disabilities, leading to adverse effects on the family and society.[15]

Intellectual disability is a common complex disorder in children and adolescents that persists until adulthood. It is also a neurodevelopmental disorder with an onset during the developmental period that includes both intellectual and adaptive functioning deficits in conceptual and social domains.[16] The prevalence of this disorder has been reported at 3% in different communities.[17] On the other hand, 85% of intellectual disability cases are mild or educable.[18] There are approximately 1,200,000 individuals with intellectual disabilities in Iran.[19]

Having a disabled child is a stressful experience.[20] Parents of these children are faced with a variety of issues, such as economic problems, social isolation, marital disruption, and lack of enough time to care for their normal children. These factors may affect these parents' childbearing tendency.[21] A number of parents with disabled children may stop having children due to problems relating to the care of disabled children and have no desire to have other children. However, others may wish to have another child because they or others expect them to have children with normal growth and activities.[22] On the other hand, the increased number of members in families with disabled children leads to increased economic problems. Therefore, it may affect couples' childbearing performance.[23]

Despite the fact that encouraging policies to increase childbearing have been adopted following the decline in fertility rates in Iran, it should also be borne in mind that couples may have disabled children, which affects their decisions to have children.[21] Results of a study showed that parents whose first children had disabilities were more likely to endure physical problems and mental stress; as a result, they would not have other children.[22] Another study indicated that the chances of childbearing were higher for parents with normal children.[24] Results of a study in Iran revealed that factors such as attitudes and subjective norms could be predictors of fertility intention in women without children or with normal children.

Given the researcher's exploration, there was no study on factors related to fertility intention in parents of children with intellectual disabilities in Iran. On the other hand, Isfahan has been reported to be one of the cities with a high decrease in fertility during the past years (1.35 children per woman)[25]; hence, the present study aimed to investigate predictive factors of fertility intention in parents of educable intellectual disabled children in Isfahan.

Materials and Methods

The present study was cross-sectional descriptive research on 193 parents with educable intellectually disabled children living in Isfahan (a big city in Iran). Sampling lasted from February to July 2019. Sample size was obtained according to $P = 0.5$, $z = 1.96$ and $d = 0.05$.

Parental inclusion criteria were as follows: alive parents, literacy, having at least one child with intellectual disability, lack of mental disorders in parents, mothers aged from 15 to 45 years, and not being pregnant during the sampling. The criteria for children were IQ score of 50-75 (child with educable intellectual disability) and attending elementary school. The cluster classification sampling was performed. First, six districts were selected. Three districts of the six districts of education and three of the six districts of the welfare organization were randomly selected. One boys' and one girls' school were randomly selected from each district as a cluster (a total of 12 institutions). Afterward, the selection of institutions and students was implemented according to the random number table.

After telephone contact with parents, they were invited to attend the meeting. The participants were assured that their information would be confidential. After obtaining the written informed consent forms, the parents participated in the study and responded to questionnaires using the self-report method. Two questionnaires were used in the present study. First, the fertility intention questionnaire examined fertility intention through the question, "Do you intend to have another child?" The answer was Yes or No. Scores 1 and 0 were considered for positive and negative responses, respectively. The second questionnaire measured the predictors of fertility intention. The questionnaire included questions about attitude (n = 9), subjective norms (n = 4), perceived behavior control (n = 7), and gender preferences (n = 6). Questions of the predictive factor questionnaire were researcher-made. The validity of the questionnaire was examined by 15 experts in reproductive health, hygiene, and psychology, and their correlative comments were applied to the questionnaire. The Total Content Validity Ratio (CVR) and Content

Validity Index CVI values were then estimated to be 0.55 and 0.87, respectively. Questions of the questionnaire were assessed using a 1 to 5-point Likert scale (from strongly agree to strongly disagree). Mean scores of predictive factors, including attitude, subjective norms, perceived behavior control, and gender preferences, were calculated. Higher scores for each item indicated higher fertility intention. The reliability (Cronbach's alpha coefficient) of attitude, subjective norms, perceived behavioral control, and gender preferences was 0.73, 0.72, 0.73, and 0.74, respectively.

In the present study, data were analyzed after collection using SPSS 20. Descriptive statistics (number and percentage) were first used to investigate the frequency distribution of fertility intention. Then, the mean and standard deviation of each predictor (attitude, subjective norm, perceived behavioral control, and gender preference) were calculated in parents. The Independent *t*-test was also utilized to compare predictive factors with fertility intention. Finally, the logistic regression model was used to investigate the significant relationship between each predictor and fertility intention. The Odds Ratio (OR) and 95% confidence interval were presented for all predictors. The significance level of the study was $P < 0.05$.

Ethical considerations

The present study was approved by the Ethics Committee of Isfahan University of Medical Sciences (IR.MUI.RESERCH.REC.1397.350). The written informed consent forms were also obtained from research units after explaining the research.

Result

The present study investigated 193 parents with educable intellectually disabled children. The mean (SD) age of mothers and fathers was 38.21) 4.83(and 44.06) 6.76(, respectively, and the mean (SD) number of children with disabilities was 1.06) 0.25(. On the other hand, 52.81% of children with intellectual disability were male. Most parents (83.92%) had no desire for another child, and only 16.11% had a tendency to re-fertility.

The research also indicated that the mean (SD) scores of attitude, subjective norms, and perceived behavioral control were higher in parents with a tendency to have another child. The results indicated that the son preference was higher in a group with a tendency to have another child than parents with no tendency to have another child, and the difference was statistically significant ($P < 0.05$) [Table 1].

Results of the regression analysis based on the Wald test also indicated that predictors of fertility intention included the perceived behavior control (95% CI: 1.14-1.42; $P < 0.001$, Wald = 20.01), attitude (95% CI: 1.06- 1.24. $P = 0.001$, Wald = 11.89) and subjective norms (95% CI: 1.08-1.33, $P = 0.001$, Wald = 11.49). On the other hand, the perceived behavioral control was the strongest predictor [Table 2].

Discussion

The main objective of this study was to identify predictors of fertility intention in parents with educable intellectually disabled children. The findings indicated that parents with intellectually disabled children were reluctant to have another child. On the other hand, the perceived behavior control was the strongest predictor of fertility intention. In this regard, a Canadian study found that perceived behavior control was the most critical predictor of delay in childbearing for women over 30 and without children.[26] Parents with disabled children were more likely to have economic problems and adverse health conditions, such as physical and mental stress, than parents with normal children.[27] Parents with intellectually disabled children seemed to have more problems with the continuation of their fertility, leading to effects on their fertility intention.[22]

The results of the present study also indicated a significant relationship between parents' fertility intention and their subjective norms; fertility intentions increased as subjective norm scores increased. Consistent with the present study, the results of another study indicated that the more individuals are under greater social pressure to have children, the more they have fertility intentions. Another research found that positive opinions of spouses, parents, and friends about childbearing increased fertility intention in individuals, and they were considered important supporters of childbearing.[28] Since meeting the needs of a disabled child requires more time, energy, and financial resources than a healthy child, parents may feel that they are unable to meet their needs alone.[29] In this regard, the results of a study stated that important persons in individuals' lives, such as parents, friends, or spouses, might play important roles in reducing the material and non-material stresses of childbearing through their financial support or child care.[27] Therefore, the higher subjective norms score indicates the higher fertility intention in this group of parents.

The attitude was another predictor of fertility intention in the present study. The attitude score was higher in parents with positive fertility intentions. In this regard, the research results indicated that attitude was one of the most important factors in women's fertility intentions. Therefore, the chance of childbearing increased in men and women with a high attitude score, and a negative attitude toward a child could delay childbearing.[28] Since costs and social, physical, and psychological problems are higher in parents with disabled children, they may consider having more children as an undesirable behavior that may decrease their desire to have another child.[21]

According to another study finding, the parents with positive fertility intentions had a higher tendency to have a son. On the other hand, research results indicated that

Table 1: Mean (SD) Scores of attitude, subjective norm, perceived behavioral control, gender preference in parents with fertility intention and without fertility intention

Score	Without fertility intention Mean (SD)	With fertility intention Mean (SD)	Independent *t*-test	*P*
Attitude	25.32 (5.82)	31.69 (5.32)	8.01	0.001>
Subjective norms	9.12 (3.74)	13.81 (3.17)	9.25	0.001>
Perceived behavioral control	19.19 (4.45)	25.72 (3.76)	10.82	0.001>
Son preference	13.25 (5.01)	15.32 (4.55)	3.03	0.003

Table 2: Predictors of fertility intention in parents with intellectual disabled children

Variable	Beta	Wald	*p*	OR	Confidence interval 95%	
					Minimum	Maximum
Attitude	0.13	11.89	0.001	1.14	1.06	1.24
Subjective norms	0.18	11.49	0.001	1.20	1.08	1.33
Perceived behavioral control	0.24	20.01	<0.001	1.28	1.14	1.42
Son preference	0.02	0.25	0.62	0.98	0.90	1.06

individuals with both sons and daughters suffered less fertility intention for their future.[30] Gender preference is influenced by cultural, traditional, social, and economic factors. Son-to-daughter preference is still prevalent in many countries, especially developing countries.[31] Sexual preference is the inherent legal or institutional superiority of one gender over the other. The phenomenon of sexual preference is not only one of the cultural problems of third-world countries in the field of demographic issues but an important factor that influences modern communities.

In some cases, sexual preferences are affected by cultural, traditional, and social customs and beliefs, as well as the economic conditions of the families. Sexual preference increases individuals' fertility possibility to a large extent if they do not achieve their desired gender.[13] The son-to-daughter preference in families with disabled children may be due to the higher value of a son according to Asian culture and societies; hence, it seems that their preference for a son is higher if they tend to have another child.[25] The study had some limitations, including the selection of research groups from educable children or with mild intellectual disability. The intellectual disability ranges from moderate to severe, and this variation can affect the parental fertility intention.

Conclusion

Despite the fact that the present study was the first research in Iran to investigate predictive factors of fertility intention in parents of educable intellectually disabled children, it had some limitations. According to the results of the present study, it seemed that factors such as perceived behavior control, attitude, and subjective norms affected fertility intention in parents with intellectually disabled children.

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Conflicts of interest

Nothing to declare.

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