

Procreation Anxiety in the Context of Disability: The Role of Irrational Beliefs among Mothers

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ABSTRACT:

Background: The psychological problem of procreation anxiety for mothers who have disabled children remains insufficiently researched, because the population faces increased difficulties. The assumption exists that people develop anxiety from their irrational beliefs, but scientific research has not yet confirmed this connection.

Objective: The study examined how irrational beliefs relate to procreation anxiety experienced by mothers who raise children with disabilities. The study also sought to investigate how irrational beliefs function as predictors of procreation anxiety. Methods: The research used a cross-sectional design to study 224 mothers who had children with disabilities in Irbid Jordan. The researchers collected data through validated self-report measures which evaluated irrational beliefs and procreation anxiety. The researchers conducted statistical analysis through descriptive statistics and Pearson correlation and stepwise multiple regression and Structural Equation Modeling (SEM) procedures.

Results: The findings indicated moderate levels of irrational beliefs ($M = 2.90$) and procreation anxiety ($M = 3.43$). Correlation analysis revealed that only the dimension of comfort and frustration tolerance was significantly associated with procreation anxiety ($r = 0.287$, $p < .001$), whereas other dimensions showed no significant relationships. Regression analysis confirmed that this dimension was the only significant predictor, explaining 7% of the variance ($R^2 = 0.07$). SEM results indicated a non-significant structural relationship

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between irrational beliefs and procreation anxiety ($\beta = 0.067$, $p = .426$), suggesting limited explanatory power of the proposed model.

Conclusion: The study shows that irrational beliefs only partly explain the procreation anxiety experienced by mothers of children with disabilities. results show that procreation anxiety results from psychological factors and environmental elements which require complete treatment methods and additional studies to be understood.

Keywords: Irrational Beliefs; Procreation Anxiety; Mothers of Children with Disabilities; Structural Equation Modeling; Cognitive Factors.

1. INTRODUCTION

Mothers of children with disabilities face multiple psychological challenges because they must provide ongoing care for their children who have permanent disabilities. Research has consistently shown that this group experiences more psychological distress than other groups because studies found that 78% of mothers developed anxiety symptoms and 76% developed depression symptoms compared to mothers of children who develop normally (Ramzan & Minhas, 2014). Similarly, other studies indicate that anxiety levels among mothers can range from moderate to high, with approximately 36% experiencing mild anxiety and around 8–10% experiencing moderate to severe levels (Ogallar et al., 2025). Mothers who have disabled children show emotional problems because of their future worries and their uncertainty about what will happen and their feeling of being overwhelmed which leads to their experience of procreation anxiety (Ergün & Ertem, 2012; Özşavran et al., 2025; Veisson, 1999).

Motherhood in the context of disability presents unique psychological challenges, as mothers are exposed to continuous caregiving demands and heightened concerns about their children's future, which may negatively affect their psychological well-being and parental functioning (Continisio et al., 2023; Porter et al., 2025). Global statistics from the World Health Organization (World Health, 2024) indicate that more than 1.3 billion people, or about 16% of the world's population, suffer from some form of disability (Ferrari et al., 2024). In Jordan, data from the Supreme Council for the Rights of Persons with Disabilities indicate that the

percentage of persons with disabilities is about 11.2% of the total registered population. In this context, mothers bear the greatest burden in caring for and rehabilitating these children, regardless of the type of disability (Rutherford, 2007). It makes them vulnerable to high levels of psychological stress and anxiety about various aspects of their children's lives, most notably the issue of reproduction, marriage, and future independence (Boettcher et al., 2025; Fucà et al., 2022; Lunsy et al., 2022). Procreation anxiety refers to a state of fear and concern related to future reproductive issues, including the ability of children with disabilities to marry, have children, and live independently. that an individual experiences when thinking about issues related to reproduction, including reproductive ability, reproductive integrity, responsibilities associated with parenting, and the social repercussions of reproduction or lack thereof (Oliemat, 2026). Mothers with disabilities are more likely to have these concerns, as they raise deep existential questions about their children's future: will their children be able to start families, will they have healthy children, and who will care for their children if they marry and have children? (Porter, 2018; Šumskiene, 2025). Irrational beliefs are considered key cognitive factors associated with anxiety, as they involve rigid and unrealistic interpretations of events that increase vulnerability to emotional distress (Bridges & Harnish, 2010; Mulaosmanović & Ivanišević; Yiğit & Gülaçtı, 2025).

The results of a study Oliemat (2026) showed that mothers of children with disabilities suffer from a high level of reproductive anxiety. A study

Bujnowska et al. (2019) also indicated that mothers of children with developmental disabilities have a higher level of future anxiety compared to parents of children with developmental disabilities. A study Mhaidat et al. (2024) indicated that there is a moderate level of irrational beliefs among mothers of children with autism spectrum. A study Manzour et al. (2025) showed a high level of irrational beliefs in mothers of children with mental disabilities. Irrational beliefs are one of the cognitive mechanisms that explain the development and persistence of emotional and anxiety disorders. According to the cognitive-behavioral theory founded by Ellis (1994) irrational beliefs refer to absolute and unrealistic thoughts and assessments that an individual adopts toward events and situations ("My children must be perfect", "A disaster if my son had a disabled child"), which contradict objective facts and lead to psychological disorders. noted that these beliefs play a mediating role between the stress of caring for a child with a disability and chronic anxiety in mothers (Aksoy & Kobya Bulut, 2025) Empirical evidence further suggests that mothers of children with developmental or mental disorders tend to exhibit moderate to high levels of irrational beliefs, which are linked to other psychological constructs such as stress and feelings of entrapment ($r = 0.573$, $p < .001$) (Manzour et al., 2025)

The theory of irrational beliefs is closely related to the theory of cognitive assessment of stress (Brekke & Alecu, 2023), where beliefs act as a cognitive candidate that determines how a mother evaluates a situation (having another child, or a disabled son/daughter marriage) as an unbearable "threat." A mother who irrationally believes that "the ideal mother should not feel tired or overwhelmed" may develop severe reproductive anxiety when she considers her ability to care for potential grandchildren with special needs, as confirmed by recent studies on reprimand. Maternal Guilt as a Predictor of Anxiety (Greiner, 2025). Although there are studies that have dealt with psychological stress in mothers of children with disabilities (Auriemma et al., 2022; Ntre et al., 2022) however, the issue of "reproductive anxiety" has remained marginalized in the Arabic literature, with a dearth of studies examining how mothers of

people with disabilities deal with the possibility of having children (people with disabilities themselves) in the future, or how the type of disability affects these concerns (Ayoola et al., 2025; Feizi et al., 2014; Fucà et al., 2022; Hauser-Cram et al., 2001; Lee, 2013; Qi et al., 2025)

Therefore, the present study addresses this gap by examining the relationship between irrational beliefs and procreation anxiety among mothers of children with disabilities

This anxiety is not only manifested in genetic disabilities, but also in acquired disabilities (such as accidents), where the mother fears her son's ability to take responsibility for a family (Boettcher et al., 2025). The problem with the study is rooted in a large knowledge gap: while there is a rich literature on maternal anxiety about daily care, physical therapy, and education, fertility anxiety has remained marginalized. Ignoring this type of anxiety leaves mothers silently suffering from obsessive thoughts, which can turn into chronic anxiety (Greiner, 2025; Sadeghi et al., 2019)

Irrational beliefs play a crucial role in explaining this phenomenon. A mother who holds irrational beliefs such as, "I must ensure a life free of suffering for my children and grandchildren" (an impossible request) or "A catastrophe that would not be tolerated if my disabled son marries and divorces his wife" (catastrophic amplification) will inevitably develop severe reproductive anxiety. These disruptive cognitive patterns prevent the mother from psychologically adjusting to the reality of disability, and make her focus on worst-case scenarios (Ellis, 1994)

2. METHODS

2.1. STUDY DESIGN

A cross-sectional quantitative design was employed to examine the relationship between irrational beliefs and procreation anxiety among mothers of children with disabilities. The study adopted a correlational and predictive approach to explore associations and test potential predictive relationships between variables.

2.2. Participants

The research sample included 224 mothers who had children with disabilities living in Irbid, Jordan. The researchers recruited participants through organizations and rehabilitation facilities which offer support to families who have children with disabilities. while they assisted in study questionnaire distribution to the intended research group. Data were collected using an online questionnaire distributed via Google Forms through associations and rehabilitation centers. to reach mothers who qualified for study participation. Participation was voluntary, and informed consent was obtained electronically prior to data collection. because researchers obtained their informed consent through an electronic process which required them to respond to the first survey question before continuing. Researchers included participants who met all these requirements: they were mothers of children with disabilities who lived in Irbid and were linked to associations or centers which provided services to

them and they could understand the questionnaire language and they provided informed consent. The researchers excluded participants who did not meet the criteria of being mothers of children with disabilities or who failed to finish the questionnaire or who refused to give their consent or who provided either incomplete or contradictory answers. The final sample consisted of 224 mothers.

The study obtained ethical approval from the ethics committees which oversee research activities at the participating associations and rehabilitation centers. Research procedures followed all necessary ethical guidelines which protect human subjects in research studies. The research team promised participants that their answers would remain private and confidential and the study would use the data only for scientific research. The study collected no identifying data and participants learned they could exit the research process at any time without facing any penalties.

Table (1): Demographic Characteristics of the Study Sample (N = 224)

Variable	Category	n	%
Socioeconomic Status	Low	62	27.7
	Medium	125	55.8
	High	37	16.5
Educational Level	Secondary or less	113	50.4
	Bachelor	84	37.5
	Postgraduate	27	12.1
Employment Status	Not working	114	50.9
	Working	110	49.1

Table (1) displays the demographic information which describes the study sample group. Most study participants belonged to the socioeconomic status category of which accounted for 55.8% of the total, while 27.7% belonged to the low socioeconomic status category and 16.5% belonged to the high socioeconomic status category. The educational level of participants showed that more than half (50.4%) had secondary education or less, while

37.5% of the participants possessed a bachelor's degree and only 12.1% earned postgraduate degrees. The sample population showed almost equal distribution of employment status, with 50.9% of the participants not working and 49.1% of the participants working. The sample shows moderate demographic diversity, but the population mostly belongs to middle socioeconomic status and educational level.

2.3. Ethical Considerations

Ethical approval was obtained from the relevant ethics committees of participating associations and rehabilitation centers. Participation was voluntary, and informed consent was obtained electronically. All responses were anonymous and used solely for research purposes.

2.4. MEASUREMENT

The present research used validated instruments to assess irrational beliefs and procreation anxiety which were the main study variables. The study used a demographic data form to gather information about participants' socioeconomic status and educational level and their employment status. The following section provides a detailed description of the instruments used in this study.

Irrational Beliefs Scale

In order to measure illogical beliefs, the Irrational Beliefs Scale was used. This scale is based on (Ellis, 1994) The 30 categories that make up the scale are spread out over three dimensions: Comfort and Frustration Tolerance, Achievement and Competence, and Approval and Recognition. A 4-point Likert scale was used to score the responses. With a Cronbach's α value of 0.86, the scale showed strong internal consistency in the present research. Expert evaluation verified the content's legitimacy.

Procreation Anxiety Scale

The Procreation Anxiety Scale used in this study was adapted from the instrument developed by Oliemat (2026) The anxiety related to procreation was measured using the Procreation Anxiety Scale

The 30 elements on the scale include six domains: mental, spiritual, physical, social, and sexual. Using a 4-point Likert scale, responses were assessed. The scale showed great internal consistency in the present investigation (Cronbach's $\alpha = 0.959$). Expert examination also verified the content's veracity.

2.5. TRANSLATION OF STUDY MEASURES

The study instruments were translated into Arabic using a forward-backward translation procedure to ensure linguistic and conceptual equivalence. The Arabic version was reviewed by experts in psychology and special education to confirm clarity and cultural appropriateness. Minor revisions were made based on their feedback, and the final version was deemed suitable for use in the current study.

2.6. STATISTICAL ANALYSIS

Data were analyzed using IBM SPSS and JASP. Descriptive statistics were calculated, and Pearson correlations were used to examine relationships between variables. Stepwise multiple regression was conducted to assess predictive effects. Structural Equation Modeling (SEM) was used to examine structural relationships. Three-way ANOVA was performed to test differences across demographic variables. Statistical significance was set at $p < .05$.

3. RESULTS

3.1. What is the level of irrational beliefs and procreation anxiety among mothers of children with disabilities?

Table (2): Descriptive Statistics of Irrational Beliefs

Rank	No.	Dimension	Mean	SD	Level
1	3	Comfort and Frustration Tolerance	2.98	0.76	Moderate
2	1	Approval and Recognition	2.88	0.68	Moderate
3	2	Achievement and Competence	2.85	0.61	Moderate
Total Irrational Beliefs Score			2.90	0.50	Moderate

The results shown in Table (2) Mothers who have disabled children showed moderate levels of

irrational beliefs according to the study results with an overall score of 2.90 and a standard deviation of

0.50. The dimension Comfort and Frustration Tolerance obtained the highest average score ($M = 2.98$, $SD = 0.76$) which was followed by Approval and Recognition ($M = 2.88$, $SD = 0.68$) while Achievement and Competence reached the lowest average score ($M = 2.85$, $SD = 0.61$). The study

found that all dimensions of measurement resided within the moderate level range.

3.2 What is the level of procreation anxiety among mothers of children with disabilities?

Table (3): Descriptive Statistics of Procreation Anxiety

Rank	No.	Dimension	Mean	SD	Level
1	4	Physical	3.63	0.94	Moderate
2	5	Social	3.55	0.85	Moderate
3	3	Religious	3.50	0.97	Moderate
4	2	Cognitive	3.48	0.77	Moderate
5	6	Sexual	3.31	0.90	Moderate
6	1	Psychological and Emotional	3.21	0.78	Moderate
Total Procreation Anxiety Score			3.43	0.63	Moderate

Participants exhibited a moderate level of procreation anxiety which resulted in an average score of 3.43 and a standard deviation of 0.63. The Physical dimension achieved the highest rating with an average score of 3.63 and a standard deviation of 0.94 while the social dimension received an average score of 3.55 and a standard deviation of 0.85 and the religious dimension had a total score of 3.50 with a standard deviation of 0.97. The Psychological and Emotional dimension produced

the lowest average score which measured at 3.21 with a standard deviation of 0.78. The assessment results showed that all dimensions fell within the boundaries of moderate assessment scores.

3.3. Is there a statistically significant correlation at ($\alpha \leq 0.05$) between irrational beliefs and procreation anxiety among mothers of children with disabilities?

Table (4): Pearson Correlation between Irrational Beliefs and Procreation Anxiety

Procreation Anxiety Dimensions	Approval and Recognition	Achievement and Competence	Comfort and Frustration Tolerance	Total Irrational Beliefs
Psychological and Emotional	-0.028	-0.067	0.625**	0.276**
Cognitive	-0.028	0.029	0.202**	0.101
Religious	-0.021	0.015	0.163*	0.079
Physical	-0.041	0.038	0.028	0.011
Social	0.012	0.085	0.015	0.047
Sexual	0.014	-0.027	0.009	0.000
Total Procreation Anxiety	-0.020	0.015	0.264**	0.130

The results presented in Table (4) The researchers used stepwise multiple regression to study how irrational beliefs predicted procreation anxiety. The results showed that only Comfort and Frustration Tolerance dimension functioned as a significant predictor for the regression analysis. The model explained 7% of the variance in procreation anxiety ($R^2 = 0.070$), and the overall model was statistically

significant ($F = 16.602$, $p < .001$). The regression coefficient for Comfort and Frustration Tolerance reached statistical significance through its value of ($B = 0.221$, $t = 4.075$, $p < .001$), which showed that increased dimension levels produced greater procreation anxiety. The remaining irrational belief dimensions failed to make any substantial impact on forecasting procreation anxiety.

Table (5): Stepwise Multiple Regression Analysis Predicting Procreation Anxiety

Predictor	R	R ²	B	F	t	Constant
Comfort and Frustration Tolerance	0.264	0.070	0.221	16.602	4.075**	2.771

** $p < .01$

The stepwise multiple regression analysis results shown in Table (5) established that Comfort and Frustration Tolerance dimension functioned as the only substantial predictor for procreation anxiety among mothers who have children with disabilities. The model produced a multiple correlation coefficient of $R = 0.264$ which explained 7.0 percent of procreation anxiety variance according to $R^2 = 0.070$. The regression model achieved statistical significance through its F-value measurement which reached $F = 16.602$ and passed the $p.05$ threshold. The regression coefficient $B = 0.221$ demonstrates that people who experience more challenges with stress and discomfort experience greater anxiety about procreation. The predictor became essential for the model because of its statistical significance which reached $t = 4.075$ and $p.01$ threshold. The constant value of 2.771 shows the starting level of procreation anxiety which exists when all other factors remain unchanged. The stepwise regression method failed to include any of the remaining irrational belief dimensions in the regression model because their actual impact on procreation anxiety prediction did not meet the statistical significance requirement which existed at $\alpha \leq 0.05$. The research

findings demonstrate that irrational beliefs have a minor prediction relationship with procreation anxiety which exists mainly through the Comfort and Frustration Tolerance dimension.

3.4. Are there statistically significant differences ($\alpha \leq 0.05$) in irrational beliefs and procreation anxiety attributed to demographic variables (socioeconomic status, educational level, and employment status)?

Irrational Beliefs

The results from Tables (6,7) show A three-way ANOVA was conducted to examine differences in irrational beliefs based on socioeconomic status, educational level, and employment. Statistical analysis showed that there were no significant differences between the demographic groups which included socioeconomic status ($F = 0.319$, $p = .727$), educational level ($F = 0.621$, $p = .538$), and employment ($F = 0.005$, $p = .942$). The effect sizes showed negligible results ($\eta^2 < .01$) which demonstrated that the demographic variables had minimal power to explain differences in irrational beliefs.

Table (6): Descriptive Statistics of Irrational Beliefs by Demographic Variables

Variable	Category	Mean	SD	N
Socioeconomic Status	Medium	2.89	0.527	125
	High	2.87	0.402	37
	Low	2.95	0.496	62
	Bachelor	2.86	0.486	84

Educational Level	Secondary or less	2.92	0.536	113
	Postgraduate	2.98	0.356	27
Employment Status	Working	2.90	0.463	110
	Not working	2.91	0.533	114

Table (7): Three-Way ANOVA of Irrational Beliefs by Demographic Variables

Source	SS	df	MS	F	p	η^2
Socioeconomic Status	0.161	2	0.080	0.319	0.727	0.003
Educational Level	0.313	2	0.157	0.621	0.538	0.006
Employment Status	0.001	1	0.001	0.005	0.942	0.000
Error	55.016	218	0.252			
Total	55.488	223				

Procreation Anxiety

Table (8) shows that different demographic groups experience only slight differences in their procreation anxiety levels according to the data. The results from the three-way ANOVA test shown in Table (8) proved that procreation anxiety levels did not vary based on socioeconomic status ($F = 0.302$, $p = .740$), educational level ($F = 0.526$, $p = .592$), or employment status ($F = 0.125$, $p = .724$).

The effect sizes (η^2) showed very small values which indicated that demographic factors only explained an extremely small part of the changes in procreation anxiety levels. The study results show that procreation anxiety remains unaffected by the demographic variables which researchers studied in the sample population.

Table (8): Descriptive Statistics of Procreation Anxiety by Demographic Variables

Variable	Category	Mean	SD	N
Socioeconomic Status	Medium	3.41	0.626	125
	High	3.47	0.491	37
	Low	3.46	0.727	62
Educational Level	Bachelor	3.47	0.625	84
	Secondary or less	3.39	0.672	113
	Postgraduate	3.48	0.489	27
Employment Status	Working	3.42	0.644	110
	Not working	3.44	0.627	114

Table (9): Three-Way ANOVA of Procreation Anxiety by Demographic Variables

Source	SS	df	MS	F	p	η^2
Socioeconomic Status	0.246	2	0.123	0.302	0.740	0.003
Educational Level	0.429	2	0.215	0.526	0.592	0.005
Employment Status	0.051	1	0.051	0.125	0.724	0.001
Error	88.971	218	0.408			
Total	89.640	223				

3.5. What is the structural relationship between irrational beliefs and procreation anxiety among mothers of children with disabilities using Structural Equation Modeling (SEM)?

The research question required rigorous testing which researchers used Structural Equation

Modeling (SEM) as their advanced statistical tool to investigate the fundamental link between irrational beliefs and procreation anxiety while they also assessed the measurement model and total model performance.

Table (10): Model Fit Indices for the Structural Model

χ^2	df	p	AIC	BIC	N
231.63	26	< .001	3188.59	3284.12	224

The model fit results indicated that the proposed structural model did not achieve an acceptable level of fit, as the chi-square value was statistically significant ($\chi^2 = 231.63$, $p < .001$). This suggests

that the model does not adequately represent the observed data, indicating the need for potential model refinement

Table (11): Structural Path between Irrational Beliefs and Procreation Anxiety

Path	β	SE	z	p
Irrational Beliefs → Procreation Anxiety	0.067	0.020	0.796	0.426

The structural path analysis revealed that irrational beliefs did not significantly predict procreation anxiety ($\beta = 0.067$, $p = .426$). This indicates that there is no statistically significant direct effect of

irrational beliefs on procreation anxiety among mothers of children with disabilities

Table (12): Standardized Factor Loadings of the Measurement Model

Latent Variable	Indicator	Loading
Irrational Beliefs	Approval and Recognition	0.744
	Achievement and Competence	0.836
	Comfort and Frustration	0.228
	Psychological and Emotional	0.169
Procreation Anxiety	Cognitive	0.688
	Religious	0.788
	Physical	0.866
	Social	0.892
	Sexual	0.722

The factor loadings indicated that most indicators showed acceptable loadings on their respective latent constructs. However, some indicators, such

as Comfort and Frustration Tolerance and Psychological and Emotional, demonstrated relatively low loadings, suggesting potential

measurement limitation. The model fit indices are considered a critical component in SEM analysis, as they determine the extent to which the proposed model adequately fits the observed data. Poor model fit suggests that the theoretical structure may not fully capture the relationships among variables. Overall, the SEM results suggest that the

relationship between irrational beliefs and procreation anxiety is not adequately explained by a direct structural model, highlighting the potential role of additional psychological or contextual factors. This may indicate that procreation anxiety is influenced by more complex mechanisms beyond cognitive distortions alone.

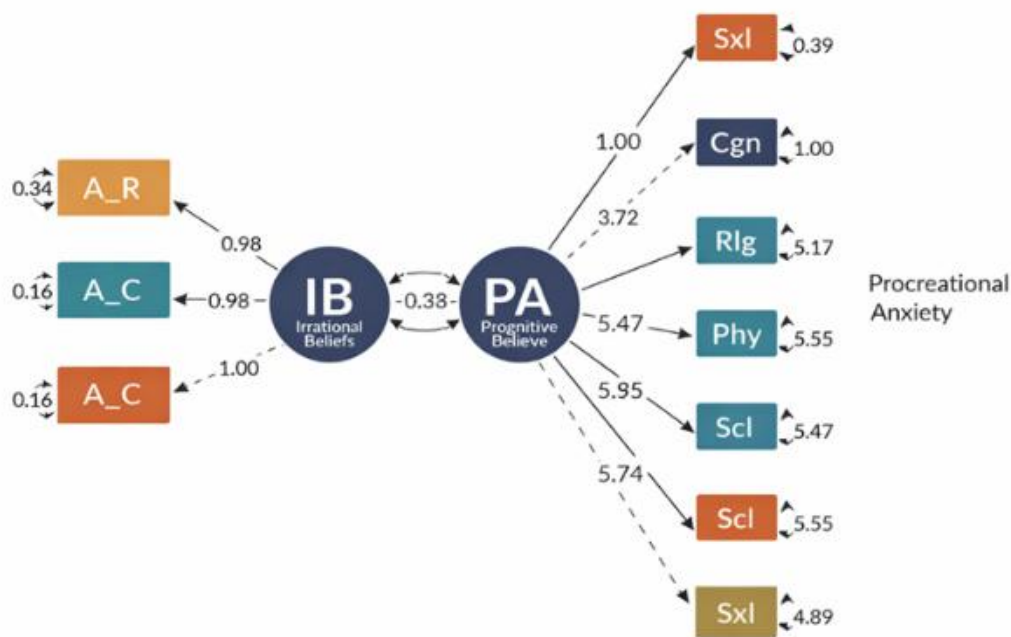


Figure (2): Structural Model of the Relationship between Irrational Beliefs and Procreation Anxiety

The structural model depicted in Figure (2) demonstrates how irrational beliefs (I_B) and procreation anxiety (P_A) function as hidden variables which researchers assess through their multiple measured indicators.

The measurement model indicates that most indicators demonstrated acceptable loadings on their respective constructs particularly for procreation anxiety where the dimensions of physical social and religious exhibited relatively strong loadings. The dimension of Comfort and Frustration Tolerance showed a weak connection to irrational beliefs which indicates that this dimension has a minor impact on the complete construct. The

statistical results from SEM analysis showed that irrational beliefs and procreation anxiety had a weak relationship which resulted in non-significant findings ($\beta = 0.067$, $p > .05$). Results demonstrate that mothers with disabilities children display irrational beliefs which do not serve as important predictors for their procreation anxiety based on the proposed model. The indicator residual variances demonstrate that part of the variance remains unexplained which confirms the model's limited ability to explain results.

3.5. Which dimensions of irrational beliefs are most strongly associated with procreation anxiety among mothers of children with disabilities?

Table (13): Pearson Correlation Coefficients between Dimensions of Irrational Beliefs and Procreation Anxiety

Variable	1	2	3	4
1. Approval	—	0.623***	0.180**	-0.007
2. Achievement		—	0.183**	0.056
3. Comfort			—	0.287*
4. Anxiety				—

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Table (13) Pearson correlation analysis revealed that only the Comfort and Frustration Tolerance dimension was significantly associated with procreation anxiety ($r = 0.287$, $p < .001$), indicating a weak to moderate positive relationship. In

contrast, Approval and Recognition ($r = -0.007$, $p = .917$) and Achievement and Competence ($r = 0.056$, $p = .408$) were not significantly related to procreation anxiety..

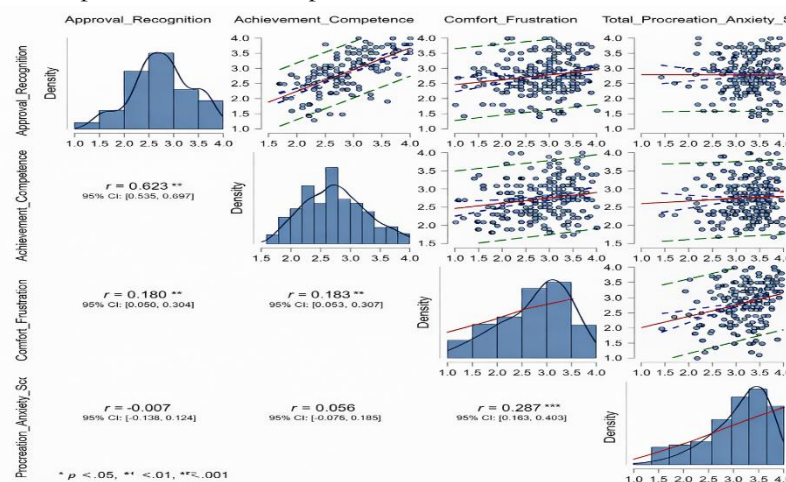


Figure (2): Scatterplot Matrix Showing the Relationships between Dimensions of Irrational Beliefs and Procreation Anxiety

Figure (2) As shown in Figure (X), the visual pattern supports the correlation results, with a clear positive trend observed only for the comfort and frustration tolerance dimension.

4. DISCUSSION

The present findings provide important insights into the role of irrational beliefs in shaping procreation anxiety among mothers of children with disabilities existed at moderate intensity levels. The finding supports earlier research which found that mothers of children with disabilities experience increased psychological distress at nonclinical levels (Fucà et al., 2022; Lunsky et al., 2022). Theoretical examination of this moderate psychological state shows that mothers experience continuous

psychological development between complete distress and full recovery.

Only the comfort and irritation tolerance factor demonstrated a significant link between irrational ideas and procreation anxiety. The research found that comfort and frustration tolerance represented the single dimension that affected and forecasted procreation anxiety. This result can be explained within the cognitive framework, as intolerance of discomfort is a core mechanism underlying anxiety, particularly in situations involving uncertainty about the future which cause anxiety disorders according to cognitive-behavioral theory (DiGiuseppe et al., 2018; Ellis, 1994; Ellis et al., 2010). The mothers who believe they cannot handle stressful situations and that they cannot deal with future unknowns will develop increased anxiety about their children

becoming parents. The research shows that parental stress in families with disabled children occurs because parents develop maladaptive coping styles and cognitive rigidity (Auriemma et al., 2022; Bush et al., 2013; Folkman, 2012)

The research result that irrational beliefs lead to psychological distress (Manzour et al., 2025) shows an initial contradiction with the research literature. The research showed that irrational beliefs function at different levels which impact this specific situation. Existential uncertainty and perceived burden and future-oriented fears drive reproductive concerns which become less important through social approval or personal competence beliefs. The researchers argue that procreation anxiety is a context-specific construct that links to stress tolerance and uncertainty management more than self-evaluative beliefs.

Irrational beliefs predict procreation anxiety through their limited capacity because they account for only 7 percent of procreation anxiety. Although regression analysis identified comfort and frustration tolerance as a significant predictor, its explanatory power remained limited. The SEM results further supported this finding, indicating a non-significant structural relationship and suggesting limited explanatory capacity of the proposed model. These findings suggest that procreation anxiety is likely influenced by a broader set of psychological and contextual factors beyond cognitive distortions alone. The Double ABCX model and other ecological and multidimensional parental stress models show that parental stress outcomes depend on social context and family social support and family coping behavior (Boettcher et al., 2025) Procreation anxiety results from social factors which include cultural expectations and social support networks and economic pressure and future uncertainties rather than cognitive distortions.

The interpretation of the research results received additional support because researchers found no statistically significant differences among different demographic categories. The absence of significant differences across demographic variables suggests that the psychological experience of mothers is relatively consistent regardless of socioeconomic or

educational background. The research shows that self-worth beliefs prove insignificant for reproductive concerns because they do not connect with procreation anxiety (further evidence supports the domain-specific character of procreation anxiety).

The research results present findings which confirm that irrational beliefs affect procreation anxiety through dimension-specific connections which create limited relationships (Gillan et al., 2017; Halpern, 1984; Jin, 2015) Future research should move beyond direct relationships and explore more complex models, including mediating variables such as coping strategies and perceived social support.

5. CONCLUSION

The findings indicate that irrational beliefs play a limited and dimension-specific role in explaining procreation anxiety. The study found that the participants exhibited both irrational beliefs and procreation anxiety at moderate levels. The study results showed that irrational beliefs had a weak connection with procreation anxiety because most of the statistical relationships which existed between these two variables only emerged through testing for comfort and frustration tolerance. The researchers used structural equation modeling to show that irrational beliefs did not serve as significant predictors for procreation anxiety which indicated that the proposed structural relationship did not receive empirical confirmation. The researchers found no statistically significant differences between demographic groups which included socioeconomic status educational level and employment status regarding their levels of irrational beliefs and procreation anxiety. The psychological constructs show relative stability across different demographic groups who participated in the study. The research findings demonstrate that mothers of disabled children experience procreation anxiety which stems from multiple factors beyond their irrational beliefs therefore researchers should explore psychological and social and contextual factors in their future studies.

6. Limitations & Strengths

The findings should be interpreted in light of several limitations, including the cross-sectional design and reliance on self-report measures. The study results depend on self-report measures which create response biases through social desirability and subjective interpretation of items. The research team studied only mothers who lived in Irbid, Jordan and had children with disabilities which makes it hard to apply their results to different cultural contexts and populations. The structural equation modeling results showed a model that did not fit optimally because unmeasured variables needed more complete research to explain procreation anxiety better.

The study presents multiple significant advantages that enhance its overall quality. The research investigates an understudied area by studying procreation anxiety as it relates to disability which adds new knowledge to existing research. The research utilized validated instruments which had suitable psychometric properties and a sample size that met research requirements. The research team used advanced statistical methods like correlation analysis multiple regression and structural equation modeling (SEM) to create a complete picture of how variables interact through direct relationships and hidden structural relationships. The research study provides valuable findings which point to key areas that need further investigation.

7. Practical Implications and Recommendations

The findings of this study have important practical implications for professionals working with mothers of children with disabilities. The present study results provide multiple useful applications for professionals who assist mothers parenting children with disabilities.

Interventions should focus on enhancing stress tolerance and emotional regulation skills. Future studies are encouraged to examine the role of social support, resilience, and cultural factors in shaping procreation anxiety. The psychological support

programs need to be developed because mothers experience moderate anxiety about their future childbearing plans.

Data availability

The data supporting the findings of this study are available from the corresponding author upon reasonable request, subject to ethical and confidentiality considerations.

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CONFLICT OF INTEREST

The authors declare no competing interests.

ETHICS APPROVAL

The study received ethical approval through the necessary processes after obtaining approval from all relevant ethics committees which operate in conjunction with the associations and rehabilitation centers that support mothers of children with disabilities. The research included mothers who use these centers as their regular service providers because they benefit from the services delivered by these centers. All study participants received information about the research objectives and the option to decide whether to join the study. Participants signed digital documents of informed consent before they took part in the study while researchers guaranteed their right to keep their answers secret. The study did not gather any personal details about participants, and researchers used all collected data exclusively for scientific investigation. The study participants received information about their right to exit the research at any moment without facing any negative outcomes.

Competing interests

The authors declare no competing interests.

Clinical trial number

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Reference

- Aksoy, B., & Kobya Bulut, H. (2025). Mother-child relationships, marital adjustment, and attachment styles of mothers of children with intellectual disabilities and typically developing children: A causal-comparative research. *International Journal of Developmental Disabilities*. <https://doi.org/10.1080/20473869.2025.2555954>
- Auriemma, D. L., Ding, Y., Zhang, C., Rabinowitz, M., Shen, Y., & Lantier-Galatas, K. (2022). Parenting stress in parents of children with learning disabilities: Effects of cognitions and coping styles. *Learning Disabilities Research & Practice*, 37(1), 51-63. <https://doi.org/10.1111/ldrp.12265>
- Ayoola, A. A., Adeoye, O. F., & Joy, A. (2025). Maternal mental health and parenting children with disabilities: A systematic review of psychological and social challenges. *International Journal of Pharma Growth Research Review*, 2(2), 16-27 .
- Boettcher, J., Zapf, H., Hohmann, S., Daubmann, A., Denecke, J., Muntau, A. C., & Wiegand-Grefe, S. (2025). Gender-specific insights on parenting children with rare diseases through multiple mediation analyses within the double ABCX model. *Research in Developmental Disabilities*, 167, 105160. <https://doi.org/10.1016/j.ridd.2025.105160>
- Brekke, I., & Alecu, A. (2023). The health of mothers caring for a child with a disability: a longitudinal study. *BMC Women's Health*, 23(1), 639 .
- Bridges, K. R., & Harnish, R. J. (2010). Role of irrational beliefs in depression and anxiety: a review. *Health*, 2(8), 862-877 .
- Bujnowska, A. M., Rodríguez, C., García, T., Areces ,D., & Marsh, N. V. (2019). Parenting and future anxiety: The impact of having a child with developmental disabilities. *International Journal of Environmental Research and Public Health*, 16(4), 668. <https://doi.org/10.3390/ijerph16040668>
- Bush, J. P., Melamed, B. G., Sheras, P. L., & Greenbaum, P. E. (2013). Mother–child patterns of coping with anticipatory medical stress. In *Child health psychology* (pp. 213-233). Psychology Press .
- Continisio, G. I., D’Errico, D., Toscano, S., Maldonato, N. M., De Falco ,R., Nunziata, F., & Malesci, R. (2023). Parenting stress in mothers of children with permanent hearing impairment. *Children*, 10(3), 500-517. <https://doi.org/10.3390/children10030517>
- DiGiuseppe, R., Leaf, R., Gorman, B., & Robin, M. W. (2018). The development of a measure of irrational/rational beliefs. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 36(1), 47-79 .
- Ellis, A. (1994). *Reason and emotion in psychotherapy* (Rev. ed.). Carol Publishing Group .
- Ellis, A., David, D., & Lynn, S. J. (2010). Rational and irrational beliefs: A historical and conceptual perspective. *Rational and irrational beliefs: Research, theory, and clinical practice*, 3-22 .
- Ergün, S., & Ertem, G. (2012). Difficulties of mothers living with mentally disabled children .
- Feizi, A., Najmi, B., Salesi, A., Chorami, M., & Hoveidafar, R. (2014). Parenting stress among mothers of children with different physical, mental, and psychological problems. *Journal of research in medical sciences: the official journal of Isfahan University of Medical Sciences*, 19(2), 145 .
- Ferrari, A. J., Santomauro, D. F., Aali, A., Abate, Y. H., Abbafati, C., Abbastabar, H., Abd ElHafeez, S., Abdelmasseh, M., Abd-Elsalam, S., & Abdollahi, A. (2024). Global incidence, prevalence, years lived with disability (YLDs), disability-adjusted life-years (DALYs), and healthy life expectancy (HALE) for 371 diseases and injuries in 204 countries and territories and 811 subnational locations,

- 1990–2021: a systematic analysis for the Global Burden of Disease Study 2021. *The Lancet*, 403(10440), 2133-2161 .
- Folkman, S. (2012). Stress, coping, and hope. In *Psychological aspects of cancer* (pp. 119-127). Springer .
- Fucà, E., Costanzo, F., Ursumando, L., & Vicari, S. (2022). Parenting stress in mothers of children and adolescents with down syndrome. *Journal of Clinical Medicine*, 11(5), 1188-1203. <https://doi.org/10.3390/jcm11051188>
- Gillan, C., Fineberg, N., & Robbins, T. (2017). A trans-diagnostic perspective on obsessive-compulsive disorder. *Psychological medicine*, 47, 1548-1528 ,(9)7
- Greiner, R. (2025). The unmothering of care: Childhood disability, structural violence, and the politicisation of motherhood. *Social Science & Medicine*, 381, 118274. <https://doi.org/10.1016/j.socscimed.2025.118274>
- Halpern, H. S. (1984). *Development and construct validation of a multidimensional scale of attitudes toward homosexuality*. University of Cincinnati .
- Hauser-Cram, P., Warfield, M. E., Shonkoff, J. P., Krauss, M. W., Sayer, A., Upshur, C. C., & Hodapp, R. M. (2001). Children with disabilities: A longitudinal study of child development and parent well-being. *Monographs of the society for research in child development*, i-126 .
- Jin, B. (2015). *Family cohesion and child functioning among South Korean immigrants in the US: The mediating role of Korean parent-child closeness and the moderating role of acculturation*. Syracuse University .
- Lee, J. (2013). Maternal stress, well-being, and impaired sleep in mothers of children with developmental disabilities: A literature review. *Research in Developmental Disabilities*, 34(11), 4255-4273 .
- Lunsky, Y., Hastings, R. P., & Weiss, J. A. (2022). Psychological well-being and self-compassion in mothers of children with developmental disabilities. *Journal of Autism and Developmental Disorders*, 52 ,(10) 4590-4578 <https://doi.org/10.1007/s10803-022-05649-8>
- Manzour, R., Jamshidi, T., & Mohtashami, J. (2025). Correlation Between Perceived Stress, Sense of Entrapment, and Irrational Beliefs of Mothers Parenting Mentally-Ill Children: A Descriptive-Correlational Study. *Crescent Journal of Medical & Biological Sciences*, 12 ,(2)
- Mhaidat, F. A., Alkailanee, K. K., Mo'een, A., Hani, M., Abood, M., & Alzghoul, Y. (2024). The Level of Depression and Irrational Thoughts Among Mothers of Children with Autism Spectrum. *Journal of Ecohumanism*, 3(7), 329-338 .
- Mulaosmanović, N., & Ivanišević, D. Irrational beliefs as determinants of depression in young people. *Educa, časopis za obrazovanje, nauku i kulturu*, 19 .
- Newton, C. R., Hearn, M. T., Yuzpe, A. A., & Houle, M. (1992). Motives for parenthood and response to failed in vitro fertilization: implications for counseling. *Journal of assisted reproduction and genetics*, 9(1), 24-31 .
- Ntre, V., Papanikolaou, K., Amanaki, E., Triantafyllou, K., Tzavara, C., & Kolaitis, G. (2022). Coping Strategies in mothers of children with autism spectrum disorder and their relation to maternal stress and depression. *Psychiatriki*, 33(3), 210-218. <https://doi.org/10.22365/jpsych.2022.068>
- Ogallar, M. A. D., Vázquez, S. M., Martínez, A. H., Molina, R. A. P., & Galiano, J. M. M. (2025). Prevalence and associated factors of anxiety in postpartum women. *European Journal of Midwifery*, 9, 10.18332/ejm/204308 .

- Oliemat, E. M. (2026). Effectiveness of an existential group counseling program in reducing procreation anxiety among mothers of children with disabilities. *Humanities and Social Sciences Letters*, 14(2), 98-109. <https://doi.org/10.18488/73.v14i2.4848>
- Özsavran, M., Karakaya, C., & Bahadır, Ö. (2025). 'I can't take my eyes off her' problems and difficulties experienced by mothers caring for their intellectually disabled children at home: a qualitative research. *International Journal of Developmental Disabilities*, 71(4), 610-625 .
- Porter, N., Loveland, K. A., Saroukhani, S., Posey, Y .S., & Rahbar, M. H. (2025). Comparative analysis of sources of parenting stress between mothers of children with autism spectrum disorder in the US and Japan. *Advances in Neurodevelopmental Disorders*, 2(2), 1-16. <https://doi.org/10.1007/s41252-025-00444-2>
- Porter, N. B. (2018). Mothers with disabilities. *Berkeley J. Gender L. & Just.*, 33, 75 .
- Qi, X., Wang, Y., Chang, C., & Wang, L. (2025). Disability and reproductive anxiety in China: when the personal becomes political. *BMC psychology*, 13(1), 1306 .
- Ramzan, N., & Minhas, K. (2014). Anxiety and depression in mothers of disabled and non-disabled children. *Annals of King Edward Medical University*, 20(4), 313-313 .
- Rutherford, K. R. (2007). Jordan and disability rights: A pioneering leader in the Arab world .*Review of Disability Studies: An International Journal*, 3 .(4)
- Sadeghi, T., Mohammadi, N., Mohammadpour, A., & Abbasi, M. (2019). Over-challenging Mothers: Motherhood after Assisted Reproductive Technology. *Journal of Midwifery & Reproductive Health*, 7 .(3)
- Sumskiene, E. (2025). Solomon judges Medea: Experiences of mothers with intellectual disabilities whose children were removed. *Journal of Applied Research in Intellectual Disabilities*, 38(3), e70082. <https://doi.org/10.1111/jar.70082>
- Veisson, M. (19 .(99)Depression symptoms and emotional states in parents of disabled and non-disabled children. *Social Behavior and Personality: an international journal*, 27(1), 87-97 .
- Weinberg, R. (2016). *The risk of a lifetime: How, when, and why procreation may be permissible*. Oxford University Press .
- World Health, O. (2024). *Global report on health equity for persons with disabilities*. <https://www.who.int/publications/i/item/9789240065424>
- Yiğit, A., & Gülaçtı, F. (2025). THE ROLE OF IRRATIONAL BELIEFS IN EMOTIONAL AND BEHAVIORAL DISORDERS: A COGNITIVE-BEHAVIORAL PERSPECTIVE. *Kabramanmaraş İstiklal Üniversitesi Sosyal Bilimler Dergisi*, 3(2), 133-143 .