Journal of Ilam University of Medical Sciences

P-ISSN: 1563-4728
E-ISSN: 2588-3135

The relationship between quality of life and pregnancy anxiety with the mediation of childbirth self-efficacy and social support

Mahboubeh Tavangar Dehghan [1], **Sheida Sodagar** [2]✉, **Anvar Sadat Nayebinia** [3]

[1] Depart of Psychology, Ro.C., Islamic Azad University, Roudehen, Iran
[2] Dept of Health Psychology, Ka.C, Islamic Azad University, Karaj, Iran
[3] Dept of Midwifery, Ka.C, Islamic Azad University, Karaj, Iran

Article Info

Article type:
Original Article

Article History:
Received: Dec. 01, 2025
Revised: Jan. 18, 2026
Accepted: Feb. 16, 2026
Published Online: Apr. 04, 2026

✉ ***Correspondence to:***
Sheida Sodagar
Dept of Health Psychology,
Ka.C, Islamic Azad University,
Karaj, Iran

Email:
sh.sodagar@iau.ac.ir

A B S T R A C T

Introduction: Pregnancy is accompanied by physiological and psychological changes that can affect mothers' quality of life and anxiety levels. Examining mediating factors such as childbirth self-efficacy and social support can help identify effective strategies to improve maternal mental health. Therefore, the present study aimed to investigate the relationship between quality of life and pregnancy anxiety with the mediating role of childbirth self-efficacy and social support and to test the fit of a correlation model among these variables.

Materials & Methods: This descriptive-correlational study was conducted on 200 pregnant women who were referred to Shohada-ye Gomnam Comprehensive Health Center, Shohada-ye Golzar Comprehensive Health Center, and Agh-Tappeh Comprehensive Health Center of Karaj in 2025. Participants were selected through convenience sampling and completed a demographic information form along with standardized questionnaires, including pregnancy anxiety, quality of life, childbirth self-efficacy, and perceived social support. Data were analyzed using Pearson correlation, structural equation modeling, and AMOS-24 software.

Results: The results showed that there was a positive and significant relationship between quality of life, childbirth self-efficacy, and perceived social support. In contrast, pregnancy anxiety had a negative and significant relationship with these three variables. Quality of life directly reduced pregnancy anxiety (β=-0.542, p=0.001). Also, perceived social support (β=-0.226, p=0.010) and childbirth self-efficacy (β=-0.273, p=0.001) were also directly related to reducing pregnancy anxiety. In addition, quality of life also indirectly reduced pregnancy anxiety through increasing perceived social support (β=-0.136, p=0.001) and childbirth self-efficacy (β=-0.100, p=0.001). The proposed model also had a good fit.

Conclusion: Based on these findings, it can be concluded that childbirth self-efficacy and perceived social support serve as effective mediators in the relationship between quality of life and pregnancy anxiety.

Keywords: pregnancy, anxiety, self-efficacy, social support, quality of life

➢ **Cite this paper**
Tavangar Dehghan M, Sodagar Sh, Nayebinia AS. The relationship between quality of life and pregnancy anxiety with the mediation of childbirth self-efficacy and social support. *Journal of Ilam University of Medical Sciences*. 2026; 34(1):58-71.

[Downloaded from sjimu.medilam.ac.ir on 2026-10-10]

© Author(s) retain the copyright

Publisher: Ilam University of Medical Sciences

Introduction

Pregnancy is a sensitive and transformative stage in women's lives, accompanied by extensive physiological, psychological, and social changes, and each woman has a unique experience (2 and 1). Although pregnancy is considered an exciting experience for many women and families, it can also be a source of uncertainty and anxiety due to hormonal changes, conflicting emotions, and new responsibilities (4 and 3). Anxiety during pregnancy is one of the most common psychological reactions, which, according to global studies, has been reported to be about 10% in high-income countries and up to 56% in low- and middle-income countries (5).

Pregnancy anxiety may manifest as sleep disturbances; mood swings; decreased motivation; feelings of guilt or worthlessness; and, if persistent, threaten the mental and physical health of the mother and fetus (6). Anxiety during pregnancy can begin at any stage of pregnancy or postpartum and usually begins during pregnancy and continues for up to six weeks after delivery; in some cases, it can even persist for up to a year (8, 7). Identifying anxiety during pregnancy is challenging, as it is not always easy to distinguish between normal feelings and clinical disorders (9). In this regard, women's quality of life during this period plays a key role in managing anxiety, as subjective perceptions of physical, psychological, and social well-being can influence the intensity of anxiety experience (11, 10). Quality of life is a multidimensional concept that encompasses physical, psychological, and social dimensions and an individual's perception of the overall life situation and is defined as an individual's level of satisfaction with life that is influenced by their perception of important aspects of life (12). This construct indicates the extent to which an individual benefits from available opportunities, facilities, and resources and how they interact with environmental and personal constraints (13). During pregnancy, quality of life is influenced by a set of physical, psychological, supportive, and cognitive factors, and one of the important components related to it is labor self-efficacy (14).

Labor self-efficacy refers to pregnant women's perception of their ability to manage stress, pain, and the labor process and is considered one of the psychological factors affecting the labor experience (15). Low levels of self-efficacy are associated with outcomes such as inability to tolerate pain, poor labor progress, and increased medical interventions (16). Women with high self-efficacy believe that they can experience a successful labor with minimal interventions, even if complications occur for themselves or the baby (17). Evidence shows that labor self-efficacy is associated with reduced fear and anxiety before childbirth and can help increase a sense of control, satisfaction with the labor experience, and maternal psychological preparedness (18); therefore, strengthening childbirth self-efficacy can not only play an effective role in improving the quality of the childbirth experience but also provides the basis for increasing the perception of social support and a sense of belonging during this period (19).

Perceived social support is another key factor affecting the mental health of pregnant women and includes receiving emotional, informational, and practical support from the spouse, family, and close social network. Research evidence shows that adequate social support during pregnancy is associated with reduced stress, anxiety, and depression and increases women's feelings of calm, psychological security, and self-efficacy (21, 20). In contrast, women who experience poor social support are more susceptible to psychological problems, emotional distress, and reduced quality of life (23, 22). In fact, social support can significantly

[Downloaded from sjimu.medilam.ac.ir on 2026-10-10]

improve psychological and physical outcomes during this period (24, 21, 19).

A review of the research literature shows that some variables of the study have a significant relationship with pregnancy anxiety (25 and 10). Most findings indicate that social support, especially from spouses and family, reduces anxiety and improves quality of life in pregnant women (26). However, some studies show that childbirth self-efficacy has a weak effect on anxiety, and its role may be better explained by the presence of mediating variables (27). Therefore, research has pointed to an inverse relationship between social support and anxiety (28), but some studies have not confirmed such a relationship (29). On the other hand, based on research, some components of self-efficacy are related to anxiety (30), and some studies have also presented contradictory results about the mediating role of social support (24).

Considering what has been said, most studies have only examined correlational relationships or direct predictions between variables, and a structural causal model that examines the simultaneous role of the research variables in explaining pregnancy anxiety is less common. In addition, in most studies, the indirect effects of these variables and their mediating role have been ignored, while understanding the mediating mechanisms has high theoretical and clinical importance. Also, the use of structural equation modeling to simultaneously test these relationships in the Iranian cultural space is limited, and local data are not sufficient to design specific psychological interventions, because the interaction between individual and social variables has not been well studied in a combined manner in integrated models. Accordingly, this study aimed to investigate the relationship between quality of life and pregnancy anxiety with the mediating role of childbirth self-efficacy and social support and to fit the correlation model between these variables.

Materials and methods

This study was applied in terms of purpose and descriptive-correlational in terms of data collection and analysis. The statistical population included all pregnant women referring to the Shohada-e-Gonnam Comprehensive Health Center, Shohada-e-Golzar Comprehensive Health Center, and Aq-Tape Comprehensive Health Center in Karaj in 1404. To determine the sample size, the proposed formula $n \geq 8M + 50$ was used (31). Considering the number of hidden variables in the model and the possibility of data loss ($n \geq 8(4) + 50 = 80$), the sample size was considered to be 200 people. Participants were selected using convenience sampling. The inclusion criteria for the study included being Iranian, having a minimum literacy level for reading and writing, being of reproductive age, having a first pregnancy experience, having no adverse events for themselves or their relatives, having no mental or physical problems, not taking neuroleptics or psychotropic drugs in the past year, and completing the questionnaires completely. Exclusion criteria included high-risk pregnancy, unwillingness to continue the study, and incomplete responses.

Data were collected using a demographic profile form and standard pregnancy anxiety questionnaires, a quality-of-life questionnaire, a childbirth self-efficacy questionnaire, and a perceived social support questionnaire by following order:

1. The demographic profile form included questions such as nationality, gestational age of the subjects, education, employment status, and economic status of the subjects and their spouses.

[Downloaded from sjimu.medilam.ac.ir on 2026-10-10]

2. The pregnancy anxiety questionnaire was developed by Vandenberg (32) to measure pregnancy-specific anxiety and includes 17 questions in the form of five components: fear of childbirth, concern about having a disabled baby, fear of changes in marital relationships, fear of mood changes and their impact on the child, and fear of changes in the mother's personal life. Responses are scored on a 7-point Likert scale from "strongly disagree" to "strongly agree," and the total score range is between 17 and 119. This tool has been widely used in domestic and foreign studies and has good validity and reliability. Hedai and Taghiloo (33) reported the reliability of the Persian version of this tool with a Cronbach's alpha of 0.78 and a content validity of 0.82, indicating its high validity for measuring pregnancy anxiety in Iranian society. In the present study, this questionnaire had an overall Cronbach's alpha of 0.89. Also, Cronbach's alpha for the subscales was obtained as follows: fear of childbirth 0.84, fear of fetal abnormality 0.80, changes in marital relationships 0.78, mood changes 0.76, and changes in lifestyle 0.81.

3. The Quality-of-Life Questionnaire was designed by the World Health Organization (34) to assess quality of life in four areas: physical health, mental health, social relationships, and environmental health. The questionnaire consists of 26 questions and is administered on a 5-point Likert scale from “very poor” to “very good.” Two questions are assigned to the overall quality of life, and 24 questions are assigned to the above dimensions. The raw scores for each dimension are converted to a scale of 0 to 100 using a standard formula, with a higher score indicating a higher quality of life. The minimum score in this instrument is 0, and the maximum score is 100. Nejat et al. (35) validated the Persian version and reported that its Cronbach’s alpha for the entire scale was 0.84 and for the subscales between 0.71 and 0.84, confirming the appropriate internal consistency of this instrument. In this study, the Cronbach’s alpha coefficient for the overall quality of life scale was calculated to be 0.87. The coefficients for the sub-dimensions included physical health 0.79, mental health 0.83, social relationships 0.75, and environmental health 0.81, all of which were in the acceptable to good range.

4. The Childbirth Self-Efficacy Questionnaire was developed by Lowe (36) to assess the level of self-efficacy of pregnant women facing childbirth and includes 62 questions in two main subscales: expectation of a successful outcome and expectation of self-efficacy. Responses are made on a 10-point Likert scale from “completely uncertain” to “completely certain," and the total score for each section is calculated from the sum of its corresponding scores. A higher score indicates a higher level of childbirth self-efficacy and belief in successful control of the childbirth process. The minimum score in this tool is 24, and the maximum score is 120. According to Lowe (36), this tool has a Cronbach’s alpha of 0.82 and a validity of 0.76. In the Persian version, Khorsandi et al. (37) reported a Cronbach's alpha of 0.82 for the total scale and 0.88 for the subscales, indicating the accuracy and reliability of this tool in assessing the psychological readiness of pregnant women. In the present study, the Cronbach's alpha of the total scale was 0.91. Also, the expected self-efficacy subscale had an alpha of 0.88, and the expected outcome subscale had an alpha of 0.86.

5. The Perceived Social Support Questionnaire (PSSQ) was designed by Wax et al. (38) based on Cobb's (39) definition of social support. The instrument consists of 23 questions that measure three dimensions of social support: family support, friends' support, and support from others. Responses are scored on a 5-point Likert scale from "very little" to "very much." A higher score indicates a higher perception of receiving social support. The minimum score on this

[Downloaded from sjimu.medilam.ac.ir on 2026-10-10]

instrument is 23 and the maximum score is 92. Ebrahimi-Qavam (40) reported the reliability of this questionnaire as 0.82 and its validity as 0.75. The overall reliability of this instrument in the present sample was estimated with Cronbach's alpha of 0.85. Alpha was also reported for three subscales: family support as 0.83, friends' support as 0.79, and support from others as 0.74.

In the present study, after obtaining the code of ethics, the necessary coordination was made with the selected centers from different regions, including the Unknown Martyrs Comprehensive Health Center, the Golzar Martyrs Comprehensive Health Center, and the Aq-Tape Comprehensive Health Center in Karaj (there are a total of 30 comprehensive health centers). The researcher, by visiting these centers in person and after introducing himself, explained the general purpose of the study to pregnant women who had their first pregnancy experience and were at different stages of pregnancy, and they were asked to participate in the study voluntarily if they wished. Anonymization of all questionnaires was considered to maintain confidentiality and reduce the subjects' anxiety. After receiving the necessary explanations, the participants completed and signed a written informed consent form and then answered the aforementioned questionnaires. The researcher was ready to answer the participants' questions at all stages so that the process of completing the questionnaires was carried out without ambiguity and accurately. At all stages, ethical principles, including confidentiality of information, anonymity of analyses, non-coercion, non-harm, and participants' freedom of access to the results, were observed. Data were analyzed using descriptive (mean, standard deviation, Pearson correlation) and inferential (structural equations) statistical methods using SPSS version 26 and AMOS version 24 software.

Results

Table 1 shows the demographic characteristics (subjects' gestational age, age, level of education, employment status, and economic status of the subjects and their spouses).

Table 1. Demographic characteristics of participants and spouses.

Demographic Variable	Category	Participants (n / Mean)	Participants (SD / %)	Spouses (n / Mean)	Spouses (SD / %)
Gestational Age (weeks)	—	28.80	5.05	—	—
Age (years)	—	30.68	7.16	34.54	8.11
Education Level	Below Diploma	3	1.5%	7	3.5%
	Diploma	109	54.5%	104	52%
	Associate Degree	8	4%	15	7.5%
	Bachelor’s Degree	66	33%	56	28%
	Master’s Degree and Above	14	7%	18	9%
Employment Status	Employed	71	35.5%	200	100%
	Homemaker (Unemployed)	129	64.5%	0	0%
Economic Status	Poor	65	32.5%	—	—
	Moderate	121	60.5%	—	—
	Strong	14	7%	—	—

[Downloaded from sjimu.medilam.ac.ir on 2026-10-10]

According to Table 1, 200 pregnant women participated in this study. The average gestational age of the participants was 28.80 weeks with a standard deviation of 5.05 months. Also, the average age of pregnant women was reported to be 30.68 years with a standard deviation of 7.16 years. In terms of education level, 3 people (1.5%) had a diploma, 109 people (54.5%) had a diploma, 8 people (4%) had a post-diploma, 66 people (33%) had a bachelor's degree, and 14 people (7%) had a post-diploma or higher. Regarding employment status, 71 people (35.5%) were employed and 129 people (64.5%) were housewives. In terms of economic status, 65 people (32.5%) reported a poor economic status, 121 people (60.5%) reported an average economic status, and 14 people (7%) reported a good economic status. Also, the results of Table 1 regarding the demographic characteristics of the spouses of pregnant women showed that the average age of the spouses was 34.54 years with a standard deviation of 8.11 years. In terms of the spouses' education level, 7 (3.5%) had a diploma, 104 (52%) had a diploma, 15 (7.5%) had a post-diploma, 56 (28%) had a bachelor's degree, and 18 (9%) had a master's degree or higher. In terms of employment status, the results showed that all spouses of the pregnant women studied were employed. Table 2 shows the mean, standard deviation, and Pearson correlation coefficients between the variables of quality of life (physical health, mental health, social relationships, and environmental health), childbirth self-efficacy, perceived social support, and childbirth anxiety (fear of childbirth, giving birth to a disabled child, changes in marital relationships, changes in mood, and changes in personal life).

Table 2. Mean and standard deviation of Pearson correlation coefficients between research variables.

Research Variables	1	2	3	4	5	6	7	8	9	10	11
1. Quality of Life – Physical Health	-										
2. Quality of Life – Mental Health	0.65**	-									
3. Quality of Life – Social Relationships	0.54**	0.59**	-								
4. Quality of Life – Environmental Health	0.58**	0.64**	0.61**	-							
5. Childbirth Self-Efficacy	0.30**	0.27**	0.28**	0.32**	-						
6. Perceived Social Support	0.41**	0.45**	0.50**	0.53**	0.34**	-					
7. Childbirth Anxiety – Fear of Childbirth	-0.34**	-0.27**	-0.36**	-0.39**	-0.25**	-0.31**	-				
8. Childbirth Anxiety – Giving Birth to a Disabled Child	-0.30**	-0.33**	-0.29**	-0.32**	-0.33**	-0.37**	0.42**	-			
9. Childbirth Anxiety – Changes in Marital Relationship	-0.20**	-0.34**	-0.15*	-0.26**	-0.38**	-0.28**	0.37**	0.42**	-		
10. Childbirth Anxiety – Mood Changes	-0.27**	-0.33**	-0.22**	-0.28**	-0.32**	-0.30**	0.38**	0.50**	0.58**	-	
11. Childbirth Anxiety – Life Changes	-0.42**	-0.39**	-0.37**	-0.41**	-0.38**	-0.47**	0.41**	0.55**	0.56**	0.70**	-
Mean	23.78	22.82	11.67	31.44	492.53	63.53	8.45	12.80	10.44	9.35	11.14
Standard Deviation	3.27	3.04	2.15	4.92	77.20	12.16	3.11	4.20	3.09	3.14	4.81
$p < 0.05$, ** $p < 0.01$											

[Downloaded from sjimu.medilam.ac.ir on 2026-10-10]

According to the results of Table 2, there is a positive and significant relationship between different dimensions of quality-of-life variables, childbirth self-efficacy, and perceived social support ($P < 0.01$), and there is a negative and significant relationship between different dimensions of childbirth anxiety with three variables of quality of life, childbirth self-efficacy, and perceived social support ($P < 0.01$) (Table 2).

Model analysis

In the present research model, quality of life and childbirth anxiety were latent variables and formed the measurement model of the research. It was assumed that the latent variable of quality of life would be measured by indicators of physical health, mental health, social relationships, and environmental health, and the latent variable of childbirth anxiety would be measured by indicators of childbirth anxiety, giving birth to a disabled child, changes in marital relationships, changes in mood, and changes in personal life. The fit of the measurement model was evaluated using confirmatory factor analysis, AMOS 26.0 software, and maximum likelihood (ML) estimation. Table 3 shows the fit indices of the measurement and structural models.

Table 3. Fit indices of measurement and structural models.

Fit Indices	Measurement Model	Structural Model	Cut-off Point
Chi-square	53.62	74.02	—
Model Degrees of Freedom	26	41	—
χ^2/df	2.06	1.81	Less than 3
GFI	0.943	0.936	Greater than 0.90
AGFI	0.902	0.898	Greater than 0.85
CFI	0.968	0.967	Greater than 0.90
RMSEA	0.073	0.064	Less than 0.08

The fit indices from the confirmatory factor analysis support the acceptable fit of the measurement model with the collected data. In the measurement model, the largest factor loading belonged to the mental health indicator (β=0.873), and the smallest factor loading belonged to the fear of childbirth indicator (β=0.523). Thus, considering that the factor loadings of all indicators were higher than 0.32 (42), it can be said that all of them had the necessary power to measure the latent variables of the present study (Table 3). Following the assessment of the fit of the measurement model, in the second stage, the fit indices of the structural model were estimated and evaluated. In the structural model of the study, it was assumed that quality of life is related to both direct and mediated self-efficacy of childbirth and perceived social support. The model was analyzed, and according to the results of Table 3, the fit indices from the analysis supported the acceptable fit of the structural model with the collected data.

Table 4. Total and direct path coefficients between research variables in the structural model.

Path	b	S.E.	β	p
Quality of Life → Perceived Social Support	1.031	0.136	0.588	0.001
Quality of Life → Childbirth Self-Efficacy	1.252	0.263	0.374	0.001
Perceived Social Support → Childbirth Anxiety	-0.037	0.016	-0.226	0.010
Childbirth Self-Efficacy → Childbirth Anxiety	-0.009	0.003	-0.273	0.001

[Downloaded from sjimu.medilam.ac.ir on 2026-10-10]

Direct Effect: Quality of Life → Childbirth Anxiety	-0.355	0.135	-0.307	0.002
Indirect Effect: Quality of Life → Childbirth Anxiety	-0.272	0.096	-0.235	0.001
Total Effect: Quality of Life → Childbirth Anxiety	-0.627	0.152	-0.542	0.001

Table 4 shows that the total path coefficient between quality of life and childbirth anxiety (β = -0.542, P = 0.001) on the one hand and the path coefficients between perceived social support (β = -0.226, P = 0.010) and childbirth self-efficacy (β = -0.273, P = 0.001) with childbirth anxiety on the other hand are negative and significant. Also, the indirect path coefficient between quality of life and childbirth anxiety (β = -0.235, P = 0.001) was negative and significant. This finding indicates that the two mediating variables, perceived social support and childbirth self-efficacy, positively and significantly mediate the relationship between quality of life and childbirth anxiety. Next, Baron and Kenny's formula (43) was used to determine the unique role of the mediating variable. The results showed that the indirect path coefficient between quality of life and childbirth anxiety through perceived social support (β = -0.136, P = 0.001) and childbirth self-efficacy (β = -0.100, P = 0.001) was negative and significant. Based on this, it was concluded that both variables of perceived social support and childbirth self-efficacy negatively and significantly mediate the relationship between quality of life and childbirth anxiety. Figure 1 shows the standard parameters in the structural model of the study.

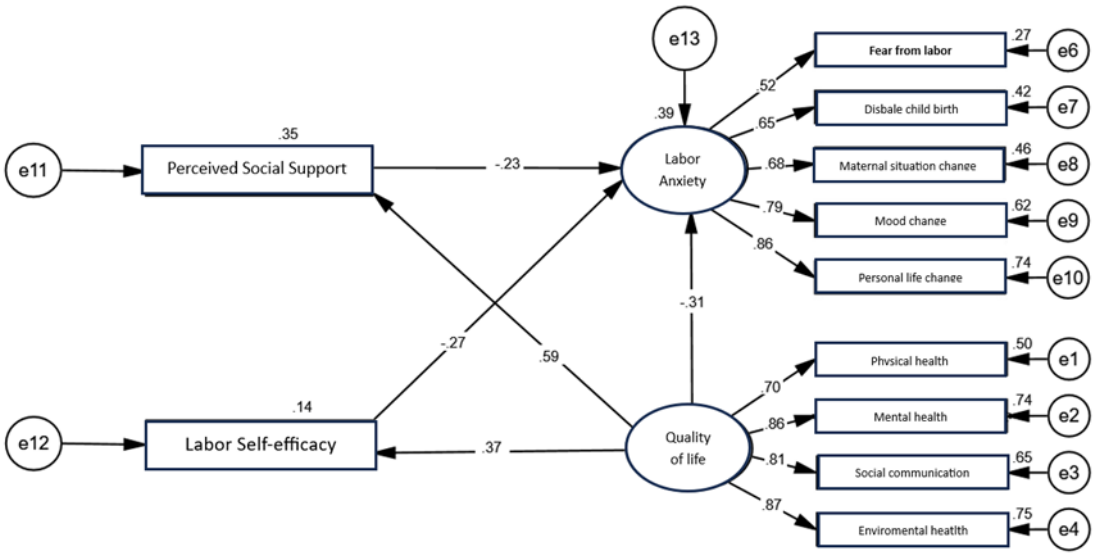

Figure 1. Standard parameters in the structural research model.

Figure 1 shows that the sum of squared multiple correlations (R^2) for labor anxiety was obtained as 0.39, indicating that quality of life, perceived social support, and labor self-efficacy together explain 39% of the variance in Ziman anxiety.

Discussion

The aim of the present study was to investigate the relationship between quality of life and pregnancy anxiety with the mediating role of childbirth self-efficacy and social support and to fit the correlation model between these variables. The results obtained from structural equation modeling after fully fitting the data of the model in question showed that the direct path between quality of life and childbirth anxiety was reported to be negative and significant, indicating a

[Downloaded from sjimu.medilam.ac.ir on 2026-10-10]

decrease in anxiety with an increase in quality of life. Also, the direct paths between perceived social support and childbirth self-efficacy and pregnancy anxiety were also negative and significant, meaning that an increase in each of these variables is associated with a decrease in pregnancy anxiety. The indirect paths also indicated that quality of life negatively and significantly affects childbirth anxiety through the two mediating variables of perceived social support and childbirth self-efficacy.

The findings of the present study are in line with a significant part of previous research; Many recent studies, such as Badaso et al. (2023), Wang et al. (2023), Bilgin et al. (2024), and Zhou et al. (2023), have shown that perceived social support and childbirth self-efficacy play an effective role in reducing pregnancy anxiety and improving the quality of life of pregnant women. These findings emphasize that social support can directly, and through enhancing self-efficacy, create positive psychological effects during pregnancy. In contrast, some studies, such as Tani et al. (2017) and Zakeri and Dasht-Barzegi (2018), did not find a significant relationship between social support and anxiety or psychological indicators of pregnancy, which may be related to cultural differences, measurement tools, or sample characteristics. In explaining the finding that the direct path between quality of life and pregnancy anxiety is negative and significant, pregnancy anxiety can disrupt women's quality of life through psychological, physical, and behavioral effects that affect daily experience and overall health. Feelings of excessive worry, intrusive thoughts, and chronic psychological stress can lead to reduced life satisfaction, conflict in daily functioning, sleep disturbance and insomnia, decreased energy, and the ability to cope with challenges, all of which are important components of quality of life (1). High anxiety during pregnancy is also associated with increased mental disorders and an increased risk of postpartum depression, decreased mental health, and a worse sense of physical and mental well-being, which directly lowers overall quality of life (44).

This study also showed that the direct paths between perceived social support and pregnancy anxiety were also negative and significant. Pregnant women's social support, including emotional, informational, and practical support from their spouse, family, and friends, plays an important role in reducing anxiety during pregnancy. Receiving social support makes women feel safer and more able to cope with the pressures and concerns associated with pregnancy, thereby reducing their anxiety levels. Meta-analyses have shown that women with low levels of social support are more likely to experience prenatal anxiety, while strong social support is associated with significant reductions in anxiety (45).

In addition, this study showed that the direct paths between labor self-efficacy and pregnancy anxiety were also negative and significant. Labor self-efficacy refers to a person’s belief in their ability to manage the pain stages and the labor process, and this belief can reduce pregnancy anxiety levels by enhancing a sense of control and self-confidence. When women feel that they can manage the challenges associated with labor, worrying thoughts about pain, consequences, or lack of control decrease, which leads to a decrease in anxiety. Conversely, when self-efficacy is low and the person believes that they cannot cope with the experience, feelings of lack of control and worry increase, which in turn increases anxiety (46).

Also, this study showed that the indirect path of quality of life through the mediator variable of labor self-efficacy negatively and significantly affects labor anxiety. In explaining this finding, it can be said that the higher the quality of life of a person, the more cognitive, emotional, and

[Downloaded from sjimu.medilam.ac.ir on 2026-10-10]

psychological resources they have to cope with stress; as a result, they perceive threatening events as less dangerous and experience less anxiety (47). In fact, the presence of general resilience resources such as self-efficacy enhances a sense of existential solidarity and increases the individual's ability to understand, manage, and make sense of stressful situations (49, 48). Higher self-efficacy causes the individual to view challenges as learning opportunities and to feel less helpless. This leads to greater effort and better cognitive control in stressful situations, ultimately reducing anxiety reactions (56, 55). More specifically, when pregnant women feel that they have the ability to control the process of childbirth and child care, their stress levels decrease and their quality of life improves (50); therefore, a favorable quality of life acts not only as a consequence of mental health but also as an active source in reducing anxiety and reduces pregnancy anxiety directly and indirectly through self-efficacy (51, 49).

Finally, this study showed that the indirect path of quality of life through the mediator variable of perceived social support negatively and significantly affects childbirth anxiety. Women with a higher quality of life, especially those who have more proper nutrition and adequate rest, experience less psychological stress and anxiety (53). On the other hand, when pregnant women receive various types of social support such as emotional support, instrumental support, and informational support (counseling and education) from those around them, such as their spouse, relatives, friends, and even religious institutions, it creates a sense of adjustment, dignity, belonging, and psychological security in pregnant women, which in turn leads to positive changes in health behaviors, improvement of the individual's physical condition, and passing this period easily. This process, in turn, reduces negative and anxiety-provoking emotions and thoughts in the individual. (54); In other words, a strong supportive relationship creates greater resilience in the individual when faced with psychological stress. In fact, it can be said that improving various aspects of the quality of life of pregnant women through various social supports leads to a sense of psychological security and a decrease in negative thoughts about childbirth and emotions such as anxiety (55-58).

Conclusion

The overall results of the present study showed that increasing the quality of life has a significant relationship with reducing pregnancy anxiety in women, and this relationship is strengthened through the mediating variables of childbirth self-efficacy and perceived social support. These findings emphasize that strengthening psychological and social resources in pregnant women can play an effective role in improving their mental health. Among the limitations of this study are the use of an accessible sampling method, the non-generalizability of the results to other population groups, and the reliance on self-report instruments, which may affect the accuracy of the responses. Accordingly, it is suggested that future research should use random sampling methods, multi-source instruments, and longitudinal designs. The strength of the study is the simultaneous examination of the role of social support and self-efficacy as mediating variables in the relationship between quality of life and childbirth anxiety, which, by presenting a multivariate model, provides a more comprehensive understanding of the psychological mechanisms affecting childbirth anxiety in pregnant women and is valuable from an application perspective for designing supportive and promotional interventions in the maternal health system.

Funding

This study was conducted without receiving any financial support from domestic and foreign organizations and institutions.

[Downloaded from sjimu.medilam.ac.ir on 2026-10-10]

CRediT authorship contribution statement

Conceptualization, Methodology, Validation, Formal Analysis, Investigation, Resources, Software, Data Curation, Writing–Original Draft Preparation, Writing–Review & Editing, Visualization, Supervision, Project Administration: MTD, SS, AN.

Conflict of interest

The authors declare no conflict of interest.

Ethical considerations

This study was conducted with the approval of the Ethics Committee of Islamic Azad University, Karaj Branch and the ethical code IR.IAU.K.REC.1403.222. The authors avoided data fabrication, falsification, plagiarism, and misconduct.

Acknowledgements

This study is derived from the first author's master's thesis. All participants in this study are thanked and acknowledged.

[Downloaded from sjimu.medilam.ac.ir on 2026-10-10]

References

1. Khosravi SM, Azizi M, Abdollahi S, Aghaei H. Prediction of postpartum depression based on marital satisfaction, body satisfaction, and dysfunctional beliefs in pregnant women of Bukan. Arak Univ Med Sci J. 2024;27:3-15. doi: 10.61186/jams.27.2.68.
2. Rondung E, Massoudi P, Nieminen K, Wickberg B, Peira N, Silverstein R, et al. Identification of depression and anxiety during pregnancy: A systematic review and meta-analysis of test accuracy. Acta Obstet Gynecol Scand. 2024;103:423-36. doi: 10.1111/aogs.14734.
3. Cheraghi P, Jamshidi-Manesh M. Relationship between maternal–fetal attachment, anxiety, and demographic factors in primiparous women with high-risk pregnancy. Iran J Nurs. 2021;34:46-59. doi: 10.32598/ijn.34.6.4.
4. Pownall M, Hutter RRC, Rockliffe L, Conner M. Memory and mood changes in pregnancy: a qualitative content analysis of women's first-hand accounts. J Reprod Infant Psychol. 2023;41:516-27. doi: 10.1080/02646838.2022.2052827.
5. Griffiths A, Shannon OM, Brown T, Davison M, Swann C, Jones A, et al. Associations between anxiety, depression, and weight status during and after pregnancy: A systematic review and meta-analysis. Obes Rev. 2024;25:e13668. doi: 10.1111/obr.13668.
6. Eakley R, Lyndon A. Disparities in Screening and Treatment Patterns for Depression and Anxiety During Pregnancy: An Integrative Review. J Midwifery Womens Health. 2024;69:847-62. doi: 10.1111/jmwh.13679.
7. Biaggi A, Conroy S, Pawlby S, Pariante CM. Identifying the women at risk of antenatal anxiety and depression: A systematic review. J Affect Disord. 2016;191:62-77. doi: 10.1016/j.jad.2015.11.014.
8. Schwarze CE, von der Heiden S, Wallwiener S, Pauen S. The role of perinatal maternal symptoms of depression, anxiety and pregnancy-specific anxiety for infant's self-regulation: A prospective longitudinal study. J Affect Disord. 2024;346:144-53. doi: 10.1016/j.jad.2023.10.035.
9. Testouri F, Hamza M, Amor AB, Barhoumi M, Fakhfakh R, Triki A, et al. Anxiety and Depression Symptoms in At-Risk Pregnancy: Influence on Maternal-Fetal Attachment in Tunisia. Matern Child Health J. 2023;27:2008-16. doi: 10.1007/s10995-023-03736-y.
10. Nejad-Hoseinian Z, Bakhtiarpour S, Zangeneh-Motlagh F. Predictive model of quality of life based on maternal–fetal attachment with the mediating role of pregnancy anxiety in pregnant women. J Modern Psychol Res. 2023;18:251-9. doi: 10.22034/JMPR.2023.16517.
11. Vargas-Escobar LM, Reina-Gamba NC, Medellín-Olaya J, Consuegra-Pareja CA. Palliative home care: health-related quality of life. BMJ Support Palliat Care. 2023;13:e282-e286. doi: 10.1136/bmjspcare-2021-003198.
12. Wójcik M, Aniśko B, Siatkowski I. Quality of life in women with normal pregnancy. Sci Rep. 2024;14:12434. doi: 10.1038/s41598-024-63355-7.
13. Martín-Vázquez C, Urchaga-Litago JD, García-Fernández R, Calvo-Ayuso N, Quiroga-Sánchez E, Liébana-Presa C. Quality of life and social support during pregnancy in Spanish population. A longitudinal study. Midwifery. 2024;137:104119. doi: 10.1016/j.midw.2024.104119.
14. Grossian M, Radnia N, Daneshvar F, Talebi-Ghanaat A, Masnadjam R, Alimohammadi N. Effect of education and telephone follow-up by nurse (telenursing) on self-efficacy and quality of life in pregnant women with diabetes during the COVID-19 pandemic: a clinical trial. AJNMC. 2024;32:140-9 doi: 10.32592/ajnmc.32.2.140.
15. Simon T, Fikadu K, Afework B, Alemu H, Kussia B. Childbirth Self-Efficacy and Its Associated Factors among Pregnant Women in Arba Minch Town, Southern Ethiopia, 2023: A Cross-Sectional Study. J Pregnancy. 2024;2024:6478172. doi: 10.1155/2024/6478172.
16. Simon, T., Berhe, A. K., Gebretsadik, G. G., & Dessalegn, M. (2023). Childbirth self-efficacy and associated factors among pregnant women in Arba Minch town, southern Ethiopia: A community-based cross-sectional study. Journal of Pregnancy; 66(7), 27_47.
17. Abdolalipour S, Mohammad-Alizadeh Charandabi S, Mashayekh-Amiri S, Mirghafourvand M. The effectiveness of mindfulness-based interventions on self-efficacy and fear of childbirth in pregnant women: A systematic review and meta-analyses. J Affect Disord. 2023;333:257-70. doi: 10.1016/j.jad.2023.04.020.
18. Shahidi MS, Amidi-Mazaheri M, Hasanzadeh A, Sadat-Shahidi A. Analysis of factors affecting natural childbirth self-efficacy in pregnant women. Health System Res. 2021;17:16-21. doi: 10.22122/jhsr.v17i1.1403.
19. Bilgin NC, Coskun H, Tunc GC, Boyuk M, Deger HS. Predictive Power of Self-Efficacy on the Fear of Childbirth in Pregnant Women: Underlying Mechanisms of Social Support as a Mediator and the COVID-19 Fear as a Moderator. Niger J Clin Pract. 2024;27:330-37. doi: 10.4103/njcp.njcp_471_23.
20. Bedaso A, Adams J, Peng W, Sibbritt D. The direct and mediating effect of social support on health-related quality of life during pregnancy among Australian women. BMC Pregnancy Childbirth. 2023;23:372. doi: 10.1186/s12884-023-05708-0.
21. Zhu JS, Wang R, Li Y, Fu YJ, Liu HY, Li JQ, et al. The mediating effect of perceived social support in the relationship between maternal personality traits

[Downloaded from sjimu.medilam.ac.ir on 2026-10-10]

and pregnancy-related anxiety. Zhonghua Yu Fang Yi Xue Za Zhi. 2023;57:187-92. Chinese. doi: 10.3760/cma.j.cn112150-20220504-00438.
22. Tani F, Castagna V, Ponti L. Mothers' social perceived support, anxiety and prenatal attachment to child: Which direct and indirect influences on delivery clinical indices. Int J Health Sci Res. 2017; 7: 346-52. doi:10.1027/2512-8442/a000103.
23. Zakker N, Dasht-Bozorgi Z. The relationship of social support, quality of life, and vitality with pregnancy anxiety in primiparous women. Soc Health. 2018;5:366-74. doi:10.22037/ch.v5i4.19308.
24. Wang Y, Gu J, Zhang F, Xu X. The mediating role of social support and resilience between self-efficacy and prenatal stress: a mediational analysis. BMC Pregnancy Childbirth. 2023;23:866. doi: 10.1186/s12884-023-06184-2.
25. Nouri N, Naghsh-Tabrizi M. Predicting pregnancy anxiety based on fertility motives, early maladaptive schemas, marital satisfaction, and quality of life. Women's Psychol Soc Stud. 2024;22:3-18. doi: 10.22051/JWSPS.2024.42087.2691.
26. Abbasi-Fard M, Mirzaei-Khalilabadi S, Aghamohammadhosseini P, Bagheri F, Kamiab Z. Correlation between Social Support, Pregnancy Distress, and Anxiety with Quality of Life of Primiparous Women in Rafsanjan City in 2024. Toloo-e Behdasht. 2025; 24:1-16. doi: 10.18502/tbj.v24i1.18925.
27. Shakarami A, Mirghafourvand M, Abdolalipour S, Jafarabadi MA, Iravani M. Comparison of fear, anxiety and self-efficacy of childbirth among primiparous and multiparous women. BMC Pregnancy Childbirth. 2021; 21:642. doi: 10.1186/s12884-021-04114-8.
28. Nagandla K, Nalliah S, Yin LK, Abd Majeed Z, Ismail M, Zubaidah S, et al. (2016). Prevalence and associated risk factors of depression, anxiety and stress in pregnancy. Int J Reproduc, Contracep, Obstetrics Gynecol. 2016; 5: 2380-9. doi:10.18203/2320-1770.ijrcog20162132.
29. Yu M, Qiu T, Liu C, Cui Q, Wu H. The mediating role of perceived social support between anxiety symptoms and life satisfaction in pregnant women: a cross-sectional study. Health Qual Life Outcomes. 2020;18:223. doi: 10.1186/s12955-020-01479-w.
30. Nikbakht-Moghadam F, Sadeghi-Aval Sh, Amini L, Haghani Sh. The relationship of self-efficacy and attitudes toward natural childbirth with pregnancy anxiety in primiparous women in Shahriar health centers 2018. Nurs Midwifery J. 2020;18:210-22.
31. Tabachnick BG, Fidell LS. Using multivariate statistics. 2007; 5th ed. Boston, MA: Pearson Education.
32. Van den Bergh BRH. The influence of maternal emotions during pregnancy on fetal and neonatal behavior. J Prenatal Perinatal Psychol Health.1990; 5: 119-30.
33. Hodai M, Taghiloo S. Prediction of pregnancy anxiety based on personality traits and spouse's emotional intelligence. New Psychol Ideas. 2020;6:1–14.
34. The World Health Organization Quality of Life assessment (WHOQOL): position paper from the World Health Organization. Soc Sci Med. 1995;41:1403-9. doi: 10.1016/0277-9536(95)00112-k.
35. Nejat S, Montazeri A, Holakouie Naieni K, Mohammad K, Majdzadeh S. The World Health Organization quality of Life (WHOQOL-BREF) questionnaire: Translation and validation study of the Iranian version. SJSPH 2006; 4:1-12.
36. Lowe NK. Maternal confidence for labor: development of the Childbirth Self-Efficacy Inventory. Res Nurs Health. 1993;16:141-9. doi: 10.1002/nur.4770160209.
37. Khorsandi M, Ghofranipour F, Faghihzadeh S, Hidarnia A, Bagheban AA, Aguilar-Vafaie ME. Iranian version of childbirth self-efficacy inventory. J Clin Nurs. 2008;17:2846-55. doi: 10.1111/j.1365-2702.2008.02385. x.
38. Vaux A, Phillips J, Holly L, Thomson B, Williams D, Stewart D. The social support appraisals (SS-A) scale: Studies of reliability and validity. Am J Commun Psychol. 1986; 14: 195-218. doi:10.1007/BF00911821.
39. Cobb S. Social support as a moderator of life stress. Biopsychosocial Sci Med. 1976; 38: 300-314. doi:10.1097/00006842-197609000-00003.
40. Acoba EF. Social support and mental health: the mediating role of perceived stress. Front Psychol. 2024; 15:1330720. doi: 10.3389/fpsyg.2024.1330720.
41. Kline RB. Methodology in the social sciences. Principles and practice of structural equation modeling (4th ed).2016. New York, NY, US: Guilford Press.
42. Hair JF, Black WC, Babin BJ, Anderson RE, Tatham RL. Multivariate data analysis.2019.
43. Mallinckrodt B, Abraham WT, Wei M, Russell DW. (2006). Advances in Testing the Statistical Significance of Mediation Effects. J Counsel Psychol. 2006; 53: 372-8. doi:10.1037/0022-0167.53.3.372.
44. Bernad BC, Tomescu MC, Velimirovici DE, Andor M, Lungeanu D, Enătescu V, et al. Health-Related Quality of Life and Anxiety Levels in Pregnant Women with and Without Associated Pathologies. J Clin Med. 2025; 14:6815. doi: 10.3390/jcm14196815.
45. Kowalska J. The Level of Stress and Anxiety in Pregnant Women Depending on Social Support and Physical Activity. J Clin Med. 2023; 12:3143. doi: 10.3390/jcm12093143.
46. Çiçek Ö, Aypar Akbağ NN, Durmazoğlu G, Öztürk Ç. The relationship between fear of childbirth and birth self-efficacy in low and high-risk pregnant

[Downloaded from sjimu.medilam.ac.ir on 2026-10-10]

women. BMC Pregnancy Childbirth. 2025; 25:1181. doi: 10.1186/s12884-025-08354-w.
47. Acoba EF. Social support and mental health: the mediating role of perceived stress. Front Psychol. 2024; 15:1330720. doi: 10.3389/fpsyg.2024.1330720.
48. Vinje HF, Langeland E, Bull T. Aaron Antonovsky's Development of Salutogenesis, 1979–1994. 2022 Jan 1. In: Mittelmark MB, Bauer GF, Vaandrager L, Pelikan JM, Sagy S, Eriksson M, Lindström B, Meier Magistretti C, editors. The Handbook of Salutogenesis [Internet]. 2nd ed. Cham (CH): Springer; 2022. Chapter 5.
49. Haugan G, Eriksson M, editors. Health Promotion in Health Care – Vital Theories and Research [Internet]. Cham (CH): Springer; 2021.
50. Donyaei-Mobarrez Y, Rezasoltani P, Rafat F, Kazemnejad Leyli E. Evaluation of childbirth self-efficacy and associated factors among pregnant women. J Educ Health Promot. 2023; 12:330. doi: 10.4103/jehp.jehp_1770_22.
51. Mohammadi F, Kohan S, Farzi S, Khosravi M, Heidari Z. The effect of pregnancy training classes based on bandura self-efficacy theory on postpartum depression and anxiety and type of delivery. J Educ Health Promot. 2021; 10:273. doi: 10.4103/jehp.jehp_105_21.
52. Mancini JA, Blieszner R. Social provisions in adulthood: concept and measurement in close relationships. J Gerontol. 1992;47: P14-20. doi: 10.1093/geronj/47.1.p14.
53. Bahrami-Samani S, Omidvar S, Mohsenzadeh-Ledari F, Azizi A, Ashrafpour M, Kordbagheri M. The relationship between perceived stress and pregnancy distress with self-care of pregnant women: The mediating role of social support-A cross-sectional study. Health Sci Rep. 2023;6:e1730. doi: 10.1002/hsr2.1730.
54. Rohandeh S, Tadayin M, Javad Nouri M, Haqiqi M, Zare Z. Investigating the relationship between social support and mental health in pregnant women in Ahvaz. Jundishapur SciMedical J. 2025; 24: 269-59.
55. Naghizadeh S. Comparison of pregnancy self-care, perceived social support and perceived stress in low-risk and high-risk groups. J Health Care. 2019; 21: 16-25. doi:10.29252/jhc.21.1.16.
56. Gariépy G, Honkaniemi H, Quesnel-Vallée A. Social support and protection from depression: systematic review of current findings in Western countries. Br J Psychiatry. 2016; 209:284-93. doi: 10.1192/bjp.bp.115.169094.
57. Tengku Mohd TAM, Yunus RM, Hairi F, Hairi NN, Choo WY. Social support and depression among community dwelling older adults in Asia: a systematic review. BMJ Open. 2019;9: e026667. doi: 10.1136/bmjopen-2018-026667.
58. Bedaso A, Adams J, Peng W, Sibbritt D. The relationship between social support and mental health problems during pregnancy: a systematic review and meta-analysis. Reprod Health. 2021; 18:162. doi: 10.1186/s12978-021-01209-5.

[Downloaded from sjimu.medilam.ac.ir on 2026-10-10]