

The Relationship of Personality Traits and Marital Satisfaction With Fear of Childbirth: The Mediating Role of Self-Efficacy

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ABSTRACT

The present study aimed to examine the relationships of personality traits and marital satisfaction with fear of childbirth and to determine the mediating role of self-efficacy in these relationships. This study employed a descriptive-correlational design and structural equation modeling (SEM). The statistical population consisted of pregnant women attending the prenatal clinics affiliated with Shiraz University of Medical Sciences during 2025–2026, of whom 420 were selected through convenience sampling. Data were collected using the Childbirth Attitudes Questionnaire, the Morris General Self-Efficacy Questionnaire, the NEO Five-Factor Inventory–Short Form, and the Afroz Marital Satisfaction Scale and were analyzed using Pearson's correlation coefficient and structural equation modeling. The findings indicated that the proposed model demonstrated an acceptable fit to the data. Personality traits and marital satisfaction were positively associated with self-efficacy, whereas marital satisfaction and personality traits had significant negative direct associations with fear of childbirth. Among the personality dimensions, openness to experience, agreeableness, and conscientiousness were associated with lower fear of childbirth, with openness to experience demonstrating the strongest predictive power. Moreover, all dimensions of marital satisfaction showed significant negative associations with fear of childbirth, and overall marital satisfaction exhibited the strongest negative association. Although overall self-efficacy did not have a significant direct effect on fear of childbirth, social self-efficacy was significantly and negatively associated with fear of childbirth. Overall, the findings indicate that fear of childbirth results from the interaction of personality factors, interpersonal resources, and psychological beliefs, and that simultaneous attention to personality traits, the quality of the marital relationship, and self-efficacy resources may contribute to a better understanding and management of this fear among pregnant women.

Keywords: fear of childbirth; personality traits; marital satisfaction; self-efficacy; pregnant women.

1. Introduction

Pregnancy and childbirth constitute major developmental and biopsychosocial transitions in women's lives and are often accompanied by substantial emotional, cognitive, interpersonal, and physiological adjustments. Although childbirth can be anticipated as a meaningful and positive life event, a considerable proportion of pregnant women experience apprehension, anxiety, or clinically significant fear related to labor and delivery. Fear of childbirth refers to persistent concerns about the childbirth process, including fear of pain, loss of control, injury, obstetric complications, inadequate support, adverse outcomes for the mother or infant, or the perceived inability to cope effectively with labor. At its more severe end, this fear may be conceptualized as tokophobia, a pathological and potentially disabling fear of pregnancy or childbirth that can substantially interfere with maternal well-being, decision-making, and adjustment during pregnancy (Shabbakhti et al., 2020). Systematic evidence indicates that fear of childbirth is not confined to a particular culture, healthcare system, or obstetric population; rather, it represents a global maternal mental health concern with clinically meaningful prevalence across countries and populations (Maghalian et al., 2026; O'Connell et al., 2017).

Fear of childbirth varies considerably in severity and is shaped by an interaction of obstetric, psychological, social, and contextual factors. Previous research has shown that parity, gestational age, previous childbirth experiences, and obstetric history may influence the degree to which pregnant women experience fear (Rouhe et al., 2009). Women may fear labor pain, medical interventions, emergency cesarean delivery, lack of control, inadequate communication with healthcare professionals, or harm to the fetus. In Iranian samples, concerns about pain, adverse outcomes, insufficient knowledge, and previous negative experiences have similarly been identified as important contributors to childbirth-related fear (Taheri et al., 2015). Broader reviews have also emphasized that fear may be maintained through maladaptive cognitions, avoidance, insufficient coping strategies, and limited preparation for childbirth (Gholamalian et al., 2022). Accordingly, fear of childbirth should not be understood merely as an isolated emotional response but as a multidimensional psychological phenomenon embedded within the woman's personality, perceived resources, interpersonal relationships, and expectations regarding childbirth.

The clinical importance of fear of childbirth lies partly in its consequences. Elevated childbirth fear has been associated with greater distress during pregnancy, stronger preference for cesarean delivery, avoidance of pregnancy, reduced confidence in vaginal birth, and a less satisfactory childbirth experience. Antenatal fear may shape expectations of birth in such a way that threatening interpretations become more salient and coping resources are perceived as insufficient. Evidence suggests that fear experienced during pregnancy can increase the risk of perceiving childbirth negatively, even when objective obstetric outcomes are relatively favorable (Rúger-Navarrete et al., 2023). Fear of childbirth may also extend beyond the delivery itself by contributing to postpartum psychological difficulties and dissatisfaction with the birth experience. Recent evidence further suggests that fear of childbirth is related to reproductive decision-making; for example, women who report greater fear may be more inclined to avoid future pregnancy, particularly when marital satisfaction is also low (Unkazan et al., 2025). These findings underscore the importance of identifying potentially modifiable psychological and relational factors associated with childbirth fear.

One major class of factors that may contribute to differences in childbirth fear is personality. Personality refers to relatively enduring patterns of affect, cognition, motivation, and behavior that influence how individuals perceive and respond to internal and external demands (Schustack & Friedman, 2008). Within the Five-Factor Model, neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness provide a broad framework for understanding individual differences in emotional reactivity, interpersonal orientation, cognitive flexibility, and self-regulation. These characteristics are particularly relevant during pregnancy because childbirth represents a highly salient, uncertain, and potentially stressful event. Women high in neuroticism may be more prone to threat sensitivity, worry, negative affect, and catastrophic interpretation, whereas women higher in conscientiousness, openness, or agreeableness may be more likely to engage in planning, adaptive coping, flexible information processing, and constructive interpersonal communication.

Empirical research supports the relevance of personality to childbirth-related fear. Predictive models based on the Big Five have suggested that personality traits, together with perceived stress, contribute meaningfully to explaining individual differences in fear of childbirth (Lee et al., 2021).

More recent evidence has shown associations between maternal personality traits and fear of childbirth, as well as subsequent birth satisfaction and postpartum depressive symptoms (Reyhan & Dağlı, 2024). A systematic review and meta-analysis specifically examining personality and fear of childbirth has further demonstrated that personality traits represent important psychological correlates of childbirth fear, although the direction and magnitude of associations may differ across dimensions and populations (Weng et al., 2025). In addition, personality characteristics may influence pregnancy-related anxiety indirectly by shaping perceptions of available interpersonal support; evidence suggests that perceived social support can mediate associations between maternal personality and pregnancy-related anxiety (Zhu et al., 2023). These findings imply that personality may affect childbirth fear not only directly but also through psychological and interpersonal mechanisms.

Studies conducted specifically among pregnant women likewise indicate that personality factors, perceived support, and self-evaluative resources interact in explaining fear. Calpinici and colleagues reported meaningful relationships among personality traits, perceived social support, self-esteem, and fear of childbirth, highlighting the need to examine personality within a broader psychosocial framework rather than as an isolated determinant (Calpinici et al., 2023a, 2023b). Similar findings have been reported in Iranian research, where personality traits have been linked to childbirth fear both directly and through intervening psychological resources (Mousavi et al., 2019; Parsa et al., 2014). Ahmadi and colleagues also showed that personality traits and marital satisfaction can contribute to the prediction of fear of childbirth, with social support functioning as an explanatory mechanism (Ahmadi et al., 2021). Collectively, these studies suggest that stable dispositional characteristics may influence how women interpret childbirth-related threats, mobilize coping resources, and benefit from interpersonal relationships.

Among such interpersonal resources, the quality of the marital relationship may be particularly important. Marital satisfaction is a multidimensional evaluation of the quality of the marital relationship that includes emotional closeness, communication, agreement, support, intimacy, behavioral compatibility, problem solving, and satisfaction with shared family roles (King, 2016). Contemporary marital theory emphasizes that satisfying relationships are characterized by responsive communication, mutual respect, constructive conflict management, emotional attunement, and reliable support during periods of stress (Gottman, 2018; Gottman &

Silver, 2015). Pregnancy often increases emotional and practical demands on couples, making the marital relationship an especially salient source of reassurance or stress. A supportive spouse may reduce uncertainty, enhance confidence, facilitate preparation for childbirth, and reinforce perceptions that the woman will not face the demands of labor alone.

The relationship between marital satisfaction and maternal psychological outcomes is therefore theoretically plausible and empirically supported. Earlier work in Iran demonstrated links between marital satisfaction, anxiety, depression, self-esteem, demographic factors, and fear of childbirth among nulliparous women (Akhlaghi, 2012). Longitudinal evidence has also suggested that lower marital satisfaction is associated with greater fear of childbirth over time (Muller et al., 2019). More recently, marital satisfaction has been implicated in women's desire to avoid pregnancy when considered alongside childbirth fear (Unkazan et al., 2025). Iranian studies have similarly proposed that marital satisfaction may reduce childbirth fear either directly or by strengthening supportive and psychological resources (Ahmadi et al., 2021; Mousavi et al., 2019). Furthermore, culturally grounded measures of marital satisfaction developed for Iranian populations reflect the importance of evaluating marital relationships in terms of culturally relevant emotional, interpersonal, and family dimensions (Ghodrati et al., 2011). Thus, marital satisfaction may function as a relational protective factor that reduces perceived threat and strengthens maternal coping.

A second central psychological construct in understanding fear of childbirth is self-efficacy. Self-efficacy refers to individuals' beliefs about their capacity to organize and execute the actions required to manage particular situations or demands. In the context of pregnancy and childbirth, perceived self-efficacy concerns the woman's confidence in her ability to cope with labor, regulate emotional responses, communicate effectively, use coping strategies, and manage challenging aspects of childbirth. Early Iranian research emphasized the relevance of perceived childbirth self-efficacy among pregnant women and highlighted its importance as a psychological resource during pregnancy (Khorsandi et al., 2008). Self-efficacy can affect the appraisal of threatening situations because individuals who perceive themselves as capable are more likely to interpret demanding circumstances as manageable, persist in coping efforts, and regulate distress more effectively.

A growing body of evidence has demonstrated an inverse relationship between childbirth self-efficacy and fear of childbirth. Studies examining women during labor have shown that greater self-efficacy is associated with lower childbirth fear (Huang et al., 2022). Comparative research involving primiparous and multiparous women has similarly indicated meaningful relationships among childbirth self-efficacy, fear of childbirth, and labor pain intensity, suggesting that confidence in coping abilities may influence both psychological and subjective physical experiences of labor (Huang et al., 2024). Among adolescent and adult pregnant women in Iran, childbirth self-efficacy and fear have also been shown to be interrelated and associated with identifiable demographic and psychosocial predictors (Daryani et al., 2023). Evidence among primigravid Afghan migrant women further indicates that fear of vaginal childbirth is significantly associated with self-efficacy, demonstrating the relevance of this construct across culturally and socially diverse populations (Mohammadirad et al., 2025).

Self-efficacy may also operate as an intermediate mechanism linking personality and interpersonal resources to childbirth fear. Women with adaptive personality characteristics may be more likely to believe in their ability to manage challenging situations, while supportive marital relationships may reinforce confidence and perceived coping capacity. This possibility is consistent with studies showing a mediating role of self-efficacy in the relationship between personality traits and childbirth fear (Parsa et al., 2014). Broader psychosocial models have likewise shown that the relationship between self-efficacy and childbirth fear can be influenced by social support and contextual stressors (Anderson et al., 2022). Bilgin and colleagues found that self-efficacy had predictive value for fear of childbirth and that this relationship was embedded within a more complex model involving social support and fear associated with the COVID-19 pandemic (Bilgin et al., 2024). Such findings support the view that self-efficacy is not merely an independent predictor but may be shaped by individual and relational resources.

Interventions that enhance self-efficacy provide further support for its potential clinical importance. Childbirth preparation programs that integrate companions and social support have been shown to reduce childbirth fear while improving maternal self-efficacy and perceived support (Munkhondya et al., 2020). Similarly, online educational interventions designed to increase confidence and preparedness have been reported to improve self-efficacy

and reduce fear of childbirth (Garcia et al., 2020). Educational programs based on structured group inquiry approaches have also demonstrated beneficial effects on fear of childbirth (Mozaffari et al., 2023). More recent evidence indicates that targeted psychological training can simultaneously reduce childbirth fear and improve self-efficacy among pregnant women experiencing anxiety regarding vaginal delivery (Rezaei et al., 2024). These intervention studies suggest that self-efficacy is clinically meaningful because it can potentially be strengthened, thereby offering an actionable target in prenatal psychological care.

The significance of self-efficacy is also evident in its relationship with other adaptive maternal processes. Greater childbirth self-efficacy has been associated with stronger maternal-fetal attachment among primigravid women, indicating that perceived competence may be linked to broader aspects of positive psychological adjustment during pregnancy (Banaei Haravan, 2023). Conversely, lower perceived coping capacity may coexist with psychological vulnerability, social stress, and poorer mental health. Research on psychosocial predictors of mental health in pregnant women highlights the importance of considering multiple psychological and interpersonal resources simultaneously rather than focusing on a single determinant (Shahid et al., 2022). Fear of childbirth has also been associated with intolerance of uncertainty and maladaptive coping styles, particularly during periods of intensified environmental stress such as the COVID-19 pandemic (Han et al., 2022). These findings indicate that women's beliefs about their coping abilities may interact with broader patterns of personality, stress appraisal, and relational support.

Despite substantial empirical attention to fear of childbirth, several gaps remain. First, many studies have examined personality, marital satisfaction, or self-efficacy separately, limiting understanding of how these domains operate within a single explanatory model. Second, although social support has frequently been considered as a mediator between personal characteristics and childbirth fear, fewer studies have directly examined self-efficacy as a mediating psychological mechanism connecting both personality traits and marital satisfaction to fear of childbirth. Third, associations may vary across cultural contexts because expectations surrounding motherhood, family involvement, spousal roles, childbirth, and help-seeking are culturally embedded. Cross-cultural findings indicate that self-efficacy and support processes may play different roles in childbirth

fear depending on social and cultural conditions (Anderson et al., 2022). For this reason, examination of these relationships in Iranian pregnant women can contribute to culturally relevant models of maternal psychological health.

There is also a need to distinguish between general associations and the specific contribution of different dimensions within each construct. The Big Five personality dimensions may not relate uniformly to childbirth fear; meta-analytic and empirical findings indicate that some traits are more strongly associated with fear-related outcomes than others (Reyhan & Dağlı, 2024; Weng et al., 2025). Likewise, marital satisfaction includes multiple components such as emotional satisfaction, communication, agreement, behavioral compatibility, social support, problem solving, and satisfaction with family roles, which may differ in their relevance to childbirth-related anxiety. Self-efficacy is also multidimensional, and social, emotional, and other domains of perceived competence may show distinct relationships with fear. Accordingly, a structural model that integrates these constructs can clarify both their direct relationships and the extent to which self-efficacy functions as an intervening psychological resource.

Recent literature further reinforces the timeliness of such an integrated approach. Contemporary meta-analytic evidence confirms that severe fear of childbirth remains a substantial international concern and is associated with multiple psychological and contextual factors (Maghalian et al., 2026). Current work on personality indicates that enduring dispositional tendencies meaningfully contribute to fear vulnerability (Weng et al., 2025), while emerging evidence on marital functioning suggests that relationship satisfaction can influence both childbirth-related concerns and broader reproductive intentions (Unkazan et al., 2025). At the same time, newer studies continue to identify self-efficacy as a potentially protective psychological resource among pregnant women (Mohammadirad et al., 2025). Together with evidence on maternal coping, social support, and psychological adaptation (Bilgin et al., 2024; Huang et al., 2024), these findings support a model in which fear of childbirth is best understood as the outcome of interacting dispositional, relational, and self-regulatory processes.

Accordingly, the present study aimed to examine the relationships of personality traits and marital satisfaction with fear of childbirth and to determine the mediating role of self-efficacy in these relationships among pregnant women.

2. Methods and Materials

2.1. Study Design and Participants

The present study employed a descriptive-correlational design using structural equation modeling to investigate the antecedents and consequences of fear of childbirth. The statistical population comprised all pregnant women attending prenatal clinics affiliated with Shiraz University of Medical Sciences during 2025–2026. Based on the guidelines proposed by Super (2020), the required sample size was estimated at 420 participants, who were recruited from among clinic attendees using convenience sampling.

2.2. Data Collection Tools

The data collection instrument used in this study was a questionnaire battery. The fear of childbirth measure, known as the Childbirth Attitudes Questionnaire, was initially developed by Harman (1988) and was subsequently revised by Lowe (2000). The instrument was developed to assess the extent of women's fear and negative attitudes toward the childbirth process. The questionnaire consists of 14 items measuring a single overall dimension and does not contain separate subscales. Items are rated on a four-point Likert scale, with response options ranging from “not at all” to “very much,” scored from 1 to 4, respectively. Accordingly, the total score ranges from 14 to 56, with higher scores indicating greater fear of childbirth. In Lowe's (2000) study, the 16-item version demonstrated satisfactory internal consistency, with a Cronbach's alpha coefficient of .83. The Persian version of the questionnaire was psychometrically evaluated by Khorsandi et al. (2008), and following the cultural adaptation process, the number of items was reduced to 14. The content validity of the Persian version was confirmed by experts, and its internal consistency was reported to be .84 based on Cronbach's alpha. In the present study, the reliability of this instrument was also assessed using Cronbach's alpha, yielding a coefficient of .794.

The Morris General Self-Efficacy Questionnaire (2001) consists of 16 items and assesses three subscales: academic self-efficacy (6 items), social self-efficacy (7 items), and emotional self-efficacy (8 items). Responses are rated on a five-point Likert scale. In Morris's (2001) study, Cronbach's alpha coefficients for the subscales were reported as .82 for social self-efficacy, .86 for emotional self-efficacy, and .84 for academic self-efficacy. In Iran, the validity coefficients of the questionnaire were calculated and confirmed as .77 for

the academic dimension, .72 for the social dimension, and .69 for the emotional dimension (Cheraghi, 2012).

The short form of the NEO Five-Factor Inventory (NEO-FFI) was developed by Costa and McCrae (1992) to assess the five major personality factors—neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness—for use in studies requiring a brief assessment of the Big Five personality dimensions. The instrument has been widely used and psychometrically evaluated in various cross-cultural studies (McCrae & Costa, 2004). The questionnaire consists of five subscales: neuroticism (N), extraversion (E), openness to experience (O), agreeableness (A), and conscientiousness (C). Each subscale contains 12 items, for a total of 60 items. Responses are rated on a five-point Likert scale ranging from “strongly disagree” to “strongly agree.” The score for each subscale is obtained by summing the scores of its 12 corresponding items. Certain items are reverse-scored; therefore, after reverse scoring has been applied, item scores within each subscale are summed. Higher scores on each subscale indicate a higher level of the corresponding personality trait. Reports concerning the original version indicated Cronbach’s alpha coefficients ranging from .68 to .86 across the five subscales. In addition, two-week test–retest reliability coefficients ranging approximately from .86 to .90 have been reported. Furthermore, the subscale scores have demonstrated adequate correlations with their corresponding scores on the full-length instrument, supporting the convergent and criterion-related validity of the NEO-FFI (McCrae & Costa, 2004). In Iran, the psychometric properties of the short form of the NEO Personality Inventory were examined and standardized by Garousi Farshi (2002). The five-factor structure of the instrument was generally supported, and Cronbach’s alpha coefficients were reported as .86 for neuroticism, .73 for extraversion, .56 for openness to experience, .68 for agreeableness, and .87 for conscientiousness (Garousi Farshi, 2002). In the present study, Cronbach’s alpha coefficients for neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness were .83, .86, .79, .81, and .86, respectively.

The Afroz Marital Satisfaction Scale (AMSS) was developed and standardized by Ghodrati and Ghodrati (2011), in collaboration with Afroz, to assess marital satisfaction among couples within the Iranian cultural context. Subsequent studies have also employed this instrument as an indigenous measure specifically adapted to the cultural characteristics of Iranian society for assessing

marital satisfaction. The scale consists of 51 items and 10 subscales/components. These components include emotional satisfaction (Items 1–6), satisfaction with interaction and communication (Items 7–12), satisfaction with attitudes (Items 13–19), satisfaction with behavior (Items 20–29), satisfaction with social support (Items 30–34), satisfaction with agreement (Items 35–37), satisfaction with personality characteristics (Items 42–44), satisfaction with parenting (Items 45–47), and idealistic satisfaction (Items 48–51). Responses are rated on a five-point Likert scale, with response options ranging from “never” to “always.” The total score is obtained by summing the item scores, with possible scores ranging from 51 to 204. Higher scores indicate greater marital satisfaction (Ghodrati & Ghodrati, 2011). In the development and standardization study, the internal consistency of the scale was assessed using Cronbach’s alpha, and an alpha coefficient of .95 was reported for the total scale. In addition, the 20-day test–retest reliability coefficient was .79, indicating adequate temporal stability. To examine criterion/concurrent validity, the correlation between this scale and the ENRICH Marital Satisfaction Questionnaire was reported to be .43, providing evidence for the concurrent validity of the instrument (Ghodrati et al., 2011). Subsequently, after obtaining the necessary approval from the Ethics Committee of the Islamic Azad University, UAE Branch (Ethics Code: IR.IAU.SRB.REC.1404.136), and coordinating with the administrators of the prenatal clinics affiliated with Shiraz University of Medical Sciences, the researcher attended the designated centers and identified pregnant women who met the study eligibility criteria. The inclusion criteria were gestational age between 20 and 40 weeks; maternal age between 18 and 45 years; ability to read and write in Persian; absence of a known psychiatric disorder or use of psychiatric medications based on self-report; absence of a high-risk pregnancy or medical complications requiring hospitalization; and provision of informed consent to participate in the study. The exclusion criteria were incomplete completion of the questionnaires; withdrawal from participation at any stage of the study; and the occurrence of pregnancy complications or medical problems during the study that prevented continued participation.

2.3. Data Analysis

First, the objectives of the study were clearly explained to the participants, after which written informed consent was obtained. The questionnaires were administered to the

participants in a single session using a self-report format and were collected upon completion. Completion of the questionnaires required approximately 20–30 minutes. Finally, the collected data were analyzed using descriptive statistical methods and, for hypothesis testing, Pearson correlation coefficients and structural equation modeling with SPSS version 22.

3. Findings and Results

The demographic characteristics of the participants indicated that, in terms of educational attainment, the largest proportion held a bachelor's degree (51%; $n = 214$),

followed by those with a master's degree (33%; $n = 137$). Participants with a high school diploma or a doctoral degree or higher together constituted less than 11% of the sample ($n = 62$), whereas the proportion of participants with less than a high school diploma was very small. Regarding number of children, 41% of the participants ($n = 172$) had one child, 30% ($n = 126$) had two children, 23% ($n = 97$) had no children, and 5% ($n = 25$) had three children. Thus, women with one or two children constituted the majority of the sample. Participants ranged in age from 20 to 59 years, with a mean age of 29.80 years ($SD = 7.40$), indicating substantial variability in age within the sample.

Table 1

Descriptive Statistics of the Study Variables and Their Correlations With Fear of Childbirth ($N = 409$)

Variable	Minimum	Maximum	M	SD	r with Fear of Childbirth	p
Personality traits	17	43	30.69	5.76	—	—
Neuroticism	—	—	—	—	.080	.106
Extraversion	—	—	—	—	-.086	.083
Openness to experience	—	—	—	—	-.185	.001
Agreeableness	—	—	—	—	-.098	.048
Conscientiousness	—	—	—	—	-.145	.003
Marital satisfaction	87	156	117.18	12.16	-.333	.001
Emotional satisfaction	—	—	—	—	-.165	.001
Interaction/communication satisfaction	—	—	—	—	-.193	.001
Attitudinal satisfaction	—	—	—	—	-.143	.004
Behavioral satisfaction	—	—	—	—	-.217	.001
Social support satisfaction	—	—	—	—	-.170	.001
Consensus satisfaction	—	—	—	—	-.265	.001
Problem-solving satisfaction	—	—	—	—	-.141	.004
Personality-related satisfaction	—	—	—	—	-.217	.001
Parenting satisfaction	—	—	—	—	-.097	.050
Idealistic satisfaction	—	—	—	—	-.177	.001
Self-efficacy	36	87	62.49	10.01	-.114	.022
Social self-efficacy	—	—	—	—	-.155	.002
Academic self-efficacy	—	—	—	—	-.035	.485
Emotional self-efficacy	—	—	—	—	-.086	.083
Fear of childbirth	14	49	32.75	6.73	1.000	—

As shown in Table 1, the mean scores for personality traits, marital satisfaction, self-efficacy, and fear of childbirth were 30.69 ($SD = 5.76$), 117.18 ($SD = 12.16$), 62.49 ($SD = 10.01$), and 32.75 ($SD = 6.73$), respectively. Regarding personality dimensions, openness to experience ($r = -.185$, $p = .001$), conscientiousness ($r = -.145$, $p = .003$), and agreeableness ($r = -.098$, $p = .048$) were significantly and negatively associated with fear of childbirth, whereas neuroticism and extraversion were not significantly related to fear of childbirth. Openness to experience demonstrated the strongest correlation among the personality dimensions. Marital satisfaction was negatively associated with fear of

childbirth ($r = -.333$, $p = .001$), and negative associations were also observed for all of its reported dimensions. Among the marital satisfaction dimensions, consensus satisfaction showed the strongest association with fear of childbirth ($r = -.265$, $p = .001$), followed by behavioral satisfaction and personality-related satisfaction, both of which were correlated at $r = -.217$ ($p = .001$). Parenting satisfaction demonstrated the weakest association ($r = -.097$, $p = .050$). Total self-efficacy was also weakly but significantly negatively correlated with fear of childbirth ($r = -.114$, $p = .022$). At the subscale level, only social self-efficacy was significantly associated with fear of childbirth ($r = -.155$, p

= .002), whereas academic and emotional self-efficacy were not significantly associated with fear of childbirth. The regression analyses further indicated that openness to experience was the only personality dimension, consensus

satisfaction was the only marital satisfaction dimension, and social self-efficacy was the only self-efficacy dimension with significant predictive power for fear of childbirth.

Table 2

Goodness-of-Fit Indices for the Structural Equation Model

Fit Index	Obtained Value	Recommended Criterion	Evaluation
χ^2/df	1.875	< 3.00	Good
RMSEA	.046	< .06	Excellent
CFI	.942	> .90	Very good
TLI	.927	> .90	Good
IFI	.943	> .90	Very good

The goodness-of-fit indices presented in Table 2 indicated that the proposed structural model provided a satisfactory fit to the observed data. The normed chi-square was below the recommended threshold of 3 ($\chi^2/df = 1.875$), while the RMSEA value of .046 was below the criterion of .06. Furthermore, the CFI (.942), TLI (.927), and IFI (.943)

all exceeded the recommended threshold of .90. Collectively, these indices support the adequacy of the proposed model and indicate that its structural specification was sufficiently consistent with the observed covariance structure.

Table 3

Standardized Path Coefficients in the Structural Model

Structural Path	Standardized Coefficient (β)	<i>p</i>	Result
Personality traits $\rightarrow$ Self-efficacy	.169	.008	Significant positive effect
Marital satisfaction $\rightarrow$ Self-efficacy	.436	.001	Significant positive effect
Self-efficacy $\rightarrow$ Fear of childbirth	.058	.273	Nonsignificant
Marital satisfaction $\rightarrow$ Fear of childbirth	-.317	.001	Significant negative effect
Personality traits $\rightarrow$ Fear of childbirth	-.129	.016	Significant negative effect

As shown in Table 3, personality traits had a significant positive direct effect on self-efficacy ($\beta = .169$, $p = .008$), while marital satisfaction had a stronger positive direct effect on self-efficacy ($\beta = .436$, $p = .001$). Regarding fear of childbirth, marital satisfaction demonstrated a significant negative direct effect ($\beta = -.317$, $p = .001$), indicating that greater marital satisfaction was associated with lower fear of childbirth after accounting for the other variables in the structural model. Personality traits also had a significant negative direct effect on fear of childbirth ($\beta = -.129$, $p = .016$). In contrast, the direct effect of self-efficacy on fear of childbirth was not statistically significant ($\beta = .058$, $p = .273$). Thus, although total self-efficacy showed a small significant negative zero-order correlation with fear of childbirth in the bivariate analysis, it did not independently predict fear of childbirth within the structural model. Overall, the structural findings support direct roles for personality traits and marital satisfaction in fear of childbirth

and demonstrate that marital satisfaction is also a substantial positive predictor of self-efficacy.

4. Discussion

The present study examined the relationships of personality traits and marital satisfaction with fear of childbirth and evaluated the mediating role of self-efficacy among pregnant women. The findings supported several components of the proposed conceptual framework. At the structural level, personality traits had a significant positive effect on self-efficacy and a significant negative effect on fear of childbirth, whereas marital satisfaction showed a relatively strong positive effect on self-efficacy and a significant negative effect on fear of childbirth. In contrast, the direct path from overall self-efficacy to fear of childbirth was not statistically significant in the structural model. At the correlational level, openness to experience, agreeableness, and conscientiousness were significantly and

negatively associated with fear of childbirth, whereas neuroticism and extraversion were not significantly related to childbirth fear. All measured dimensions of marital satisfaction were negatively associated with fear of childbirth, with overall marital satisfaction demonstrating the strongest correlation. Regarding self-efficacy, overall self-efficacy was weakly but significantly negatively correlated with fear of childbirth, while among its dimensions, only social self-efficacy showed a significant negative association. Taken together, these findings suggest that fear of childbirth is shaped by a combination of relatively stable personality characteristics, the quality of the marital relationship, and more specific domains of perceived competence, particularly perceived efficacy in social interactions.

The significant negative relationship between personality traits and fear of childbirth is consistent with the view that individual differences in emotional regulation, cognitive appraisal, interpersonal orientation, and behavioral organization influence how pregnant women interpret and manage the anticipated demands of childbirth. Previous research has repeatedly identified personality as an important correlate of childbirth-related fear. Studies based on the Big Five framework have shown that personality dimensions contribute to the prediction of childbirth fear alongside perceived stress and other psychological variables (Lee et al., 2021). More recent evidence has similarly demonstrated that personality traits are associated not only with fear of childbirth but also with birth satisfaction and postpartum psychological outcomes (Reyhan & Dağlı, 2024). A systematic review and meta-analysis further confirmed that personality characteristics are meaningfully associated with fear of childbirth, reinforcing the importance of dispositional factors in understanding individual differences in this form of anxiety (Weng et al., 2025). The present findings therefore add to a growing body of evidence indicating that personality is relevant to the psychological experience of pregnancy and childbirth.

Among the five personality dimensions, openness to experience exhibited the strongest negative association with fear of childbirth. Women with greater openness may be more cognitively flexible, more willing to process new information, and better able to accommodate uncertainty and unfamiliar experiences. These characteristics may be particularly useful during pregnancy, when women encounter novel bodily sensations, medical information, changing expectations, and uncertainty concerning the course of labor. Greater openness may reduce rigid or

catastrophic interpretations of childbirth and facilitate a more adaptive integration of prenatal education and professional guidance. This interpretation is compatible with studies indicating that personality influences how women respond to pregnancy-related stressors and anxiety (Calpbinici et al., 2023a, 2023b). It is also consistent with evidence suggesting that personality may influence pregnancy-related anxiety indirectly through psychosocial resources such as perceived social support (Zhu et al., 2023). Thus, openness may contribute to lower childbirth fear partly because it facilitates flexibility, information seeking, and adaptive engagement with uncertainty.

Conscientiousness was also negatively associated with fear of childbirth. Women higher in conscientiousness are generally characterized by greater organization, planning, persistence, and self-regulation, qualities that may increase perceptions of preparedness for childbirth. Pregnancy and labor involve multiple tasks, including attending prenatal appointments, acquiring information, preparing for delivery, and managing behavioral recommendations. A conscientious woman may experience greater perceived control over these demands and therefore interpret childbirth as more manageable. Similar mechanisms have been proposed in previous research examining personality and fear of childbirth (Mousavi et al., 2019; Parsa et al., 2014). The finding that agreeableness was also negatively associated with fear may reflect the interpersonal component of childbirth preparation. Agreeable individuals may be more likely to establish cooperative relationships with spouses, family members, midwives, and healthcare professionals and may consequently perceive greater availability of emotional and instrumental support. This explanation corresponds with evidence demonstrating that social support is an important pathway linking personality-related characteristics to pregnancy anxiety and childbirth fear (Ahmadi et al., 2021; Zhu et al., 2023).

In contrast, neuroticism and extraversion were not significantly associated with fear of childbirth in the present sample. The absence of significant relationships may reflect differences in sample characteristics, cultural context, measurement, or the simultaneous influence of other psychosocial variables. Although neuroticism is theoretically associated with greater emotional reactivity and sensitivity to threat, childbirth fear may depend more specifically on pregnancy-related beliefs, previous experiences, relationship quality, perceived coping resources, and anticipated social support. Likewise, extraversion may not independently reduce childbirth fear

unless social engagement is accompanied by effective support and confidence in managing interpersonal demands. Variation across studies is not unexpected, as systematic evidence indicates that the strengths of associations between specific personality traits and childbirth fear differ across populations (Weng et al., 2025). The present findings therefore suggest that the protective relevance of personality may be more evident for traits associated with flexibility, cooperation, and behavioral organization than for general sociability or emotional reactivity in this sample.

A particularly important finding was the significant negative direct effect of marital satisfaction on fear of childbirth. Higher marital satisfaction was associated with lower fear even when the other model variables were considered simultaneously. This result is consistent with the conceptualization of the marital relationship as a central source of emotional security, instrumental support, reassurance, and shared coping during pregnancy. Marital satisfaction reflects more than simple absence of conflict; it encompasses perceived emotional closeness, communication quality, behavioral compatibility, agreement, mutual understanding, and satisfaction with shared family roles (King, 2016). Gottman's relational framework similarly emphasizes responsiveness, emotional connection, constructive communication, and effective conflict management as central characteristics of high-quality marital relationships (Gottman, 2018; Gottman & Silver, 2015). During pregnancy, these relational resources may decrease feelings of isolation and increase the woman's confidence that she will receive practical and emotional support during labor.

The present finding is aligned with earlier studies linking marital satisfaction to fear of childbirth and maternal psychological adjustment. Akhlaghi reported associations among marital satisfaction, anxiety, depression, self-esteem, demographic variables, and childbirth fear among nulliparous women (Akhlaghi, 2012). Longitudinal evidence has also suggested that marital satisfaction and fear of childbirth are related over time, indicating that relationship quality may have sustained relevance for maternal emotional functioning (Muller et al., 2019). In Iranian research, marital satisfaction has similarly emerged as an important predictor of childbirth fear, both directly and in interaction with other psychological and social variables (Ahmadi et al., 2021; Mousavi et al., 2019). More recent findings also suggest that fear of childbirth and marital satisfaction may jointly influence reproductive decision-making, including desire to avoid pregnancy (Unkazan et al., 2025). The present results

therefore strengthen the argument that the marital context should be considered an integral part of psychological assessment during pregnancy rather than treated as a peripheral social variable.

All dimensions of marital satisfaction showed negative associations with fear of childbirth, although the magnitude of these relationships varied. Overall marital satisfaction displayed the strongest correlation, suggesting that childbirth fear may be influenced by the cumulative quality of the relationship rather than by a single relational component. Among the specific dimensions, consensus satisfaction demonstrated the strongest association, followed by behavioral satisfaction and personality-related satisfaction. Consensus within the marital relationship may reduce childbirth fear by increasing the woman's perception that important decisions, expectations, and preparations for childbirth are shared with the spouse. Agreement regarding prenatal care, delivery preferences, family responsibilities, and support during labor may reduce uncertainty and interpersonal tension. Behavioral and personality-related satisfaction may similarly reflect predictability, acceptance, and emotional safety within the relationship. The importance of culturally sensitive assessment of marital satisfaction is particularly relevant in Iranian populations, where family roles, mutual expectations, and relational support may be closely connected with adjustment during pregnancy (Ghodrati et al., 2011).

Another important result was the positive effect of marital satisfaction on self-efficacy. This finding suggests that a supportive marital environment may strengthen women's perceptions of competence and their belief that they can manage challenging situations. Social-cognitive perspectives propose that perceived efficacy is influenced not only by prior mastery experiences but also by verbal encouragement, emotional states, and interpersonal feedback. Within pregnancy, a supportive spouse may reinforce confidence by providing reassurance, participating in prenatal preparation, and reducing emotional strain. This interpretation is consistent with research showing that companion-integrated preparation for childbirth can improve maternal self-efficacy while reducing childbirth fear (Munkhondya et al., 2020). It is also compatible with findings indicating that perceived social support plays an important role in associations among self-efficacy, personality characteristics, and fear of childbirth (Anderson et al., 2022; Bilgin et al., 2024). Consequently, marital satisfaction may contribute to maternal psychological

resilience partly by creating a social environment in which perceptions of competence can develop and be maintained.

The relationship between self-efficacy and fear of childbirth was more complex. At the bivariate level, total self-efficacy was weakly but significantly negatively correlated with fear of childbirth, indicating that women with greater overall perceived competence tended to report somewhat lower fear. However, in the structural model, self-efficacy did not have a significant direct effect on fear of childbirth after personality traits and marital satisfaction were considered simultaneously. This finding differs somewhat from studies that have identified childbirth self-efficacy as an important predictor of childbirth fear. For example, significant inverse associations between childbirth self-efficacy and fear have been reported during labor (Huang et al., 2022), and self-efficacy has also been related to childbirth fear and labor pain intensity among both primiparous and multiparous women (Huang et al., 2024). Similar relationships have been documented among Iranian pregnant women (Daryani et al., 2023) and primigravid Afghan migrant women (Mohammadirad et al., 2025).

One explanation for this difference concerns the type of self-efficacy assessed. Many previous studies have specifically measured childbirth self-efficacy, which directly concerns women's perceived ability to cope with labor and childbirth. The present study, by contrast, assessed broader dimensions of self-efficacy, including social, academic, and emotional efficacy. General competence beliefs may be less proximally related to childbirth fear than situation-specific beliefs about managing contractions, pain, medical procedures, and labor-related uncertainty. This distinction is important because self-efficacy theory emphasizes domain specificity: confidence in one domain does not necessarily generalize equally to another. The stronger results reported in studies using childbirth-specific self-efficacy measures therefore do not necessarily contradict the present structural finding (Banaei Haravan, 2023; Khorsandi et al., 2008). Rather, they suggest that childbirth-specific efficacy may be a more direct determinant of fear than generalized self-efficacy.

The subscale findings reinforce this interpretation. Social self-efficacy was the only self-efficacy dimension significantly associated with lower fear of childbirth. Women who perceive themselves as capable of communicating effectively, seeking assistance, expressing needs, and managing interpersonal situations may feel better equipped to navigate interactions with their spouse, family members, midwives, nurses, and physicians during

childbirth. Such women may also be more likely to request information, clarify uncertainties, and mobilize social resources when distressed. This finding is compatible with evidence emphasizing the protective role of interpersonal support and social resources in childbirth-related anxiety (Anderson et al., 2022; Calpinici et al., 2023a, 2023b). It also accords with research showing that psychological interventions and educational programs that strengthen perceived competence and social preparedness can reduce childbirth fear (Garcia et al., 2020; Mozaffari et al., 2023; Rezaei et al., 2024). Thus, social self-efficacy may be especially relevant because childbirth is not managed in isolation but within an interpersonal healthcare environment.

The nonsignificant structural path from overall self-efficacy to fear of childbirth also has implications for the proposed mediation hypothesis. Because a significant indirect pathway ordinarily requires that the mediator meaningfully predict the outcome within the specified model, the present results do not provide strong support for self-efficacy as a general mediator of the relationships of personality traits and marital satisfaction with fear of childbirth. This contrasts with previous work in which self-efficacy was proposed as a mediating mechanism between personality and childbirth fear (Mousavi et al., 2019; Parsa et al., 2014). However, the discrepancy may again be explained by differences in operationalization. It is possible that specific forms of self-efficacy, particularly childbirth-related or social self-efficacy, function as mediators, whereas a broad composite score does not. The present results therefore suggest that future models should distinguish general self-efficacy from childbirth-specific and interpersonal efficacy rather than treating self-efficacy as a unitary construct.

5. Conclusion

Overall, the findings support a multidimensional understanding of fear of childbirth. Childbirth fear appears to emerge from interactions among dispositional tendencies, relationship quality, coping beliefs, perceived support, and contextual stressors. Research has shown that intolerance of uncertainty and coping styles are related to childbirth fear (Han et al., 2022), while psychosocial characteristics more generally contribute to mental health variation during pregnancy (Shahid et al., 2022). Fear has also been linked to subsequent negative childbirth experiences (Rúger-Navarrete et al., 2023), and severe fear remains a substantial concern internationally (Maghalian et al., 2026; O'Connell

et al., 2017). These findings reinforce the importance of moving beyond exclusively obstetric explanations and conceptualizing childbirth fear as a psychological phenomenon embedded within both individual and interpersonal systems. This perspective may help explain why women facing broadly similar medical circumstances can experience markedly different levels of fear.

The present study has several limitations. First, its descriptive-correlational and cross-sectional design does not permit causal conclusions regarding the direction of relationships among personality traits, marital satisfaction, self-efficacy, and fear of childbirth. Second, convenience sampling from prenatal clinics affiliated with a single medical university may limit the generalizability of the findings to pregnant women from other regions, healthcare systems, cultural groups, or socioeconomic backgrounds. Third, all variables were assessed using self-report questionnaires, which may be affected by social desirability, recall bias, and common-method variance. Fourth, the use of general self-efficacy rather than a childbirth-specific efficacy measure may have reduced the ability to detect a direct or mediating effect on childbirth fear. In addition, potentially relevant obstetric and psychosocial factors, such as parity, planned mode of delivery, previous traumatic childbirth, pregnancy intention, psychiatric history, spousal involvement, and perceived professional support, were not incorporated into the structural model. Finally, because the analytical sample was smaller than the initially recruited sample, attrition or exclusion due to incomplete data may also have introduced some degree of selection bias.

Future research should employ longitudinal designs beginning in early pregnancy and continuing through childbirth and the postpartum period to clarify temporal relationships and determine whether personality, marital satisfaction, and self-efficacy predict changes in fear over time. Future studies should also use probability-based or multisite sampling to improve representativeness and should compare primigravid and multigravid women, women with and without previous negative birth experiences, and participants from different cultural and socioeconomic backgrounds. It would be valuable to examine childbirth-specific self-efficacy alongside general, social, and emotional self-efficacy and to test more differentiated mediation and moderated mediation models. Additional variables such as perceived social support, attachment style, intolerance of uncertainty, coping strategies, pregnancy-related anxiety, spousal involvement, childbirth knowledge, and perceived quality of maternity care could also be

incorporated. Repeated measurement and prospective modeling would help determine whether improvements in marital functioning or specific forms of self-efficacy precede reductions in childbirth fear and whether these effects persist after delivery.

From a practical perspective, the findings suggest that prenatal assessment should include psychological and relational indicators in addition to routine obstetric evaluation. Pregnant women with pronounced childbirth fear may benefit from screening that considers personality-related vulnerability, marital relationship quality, and confidence in seeking and using social support. Prenatal counseling programs could include couple-based components designed to improve communication, shared decision-making, emotional responsiveness, and practical support during pregnancy and labor. Interventions may also benefit from strengthening social self-efficacy through communication skills, help-seeking strategies, rehearsal of interactions with healthcare professionals, and structured childbirth preparation. Rather than assuming that generalized confidence alone will reduce childbirth fear, clinicians may achieve greater benefit by targeting the specific interpersonal and childbirth-related competencies that women need to navigate labor and delivery successfully.

Authors' Contributions

Authors equally contributed to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. This article is derived from the first author's doctoral dissertation at the UAE Branch, Islamic Azad University, Dubai, United Arab Emirates. The study received ethical approval from the Research Ethics Committee of the Science and Research Branch, Islamic Azad University, Tehran, Iran, under the ethics code IR.IAU.SRB.REC.1404.136.

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