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Association between childhood trauma and attitudes towards fertility and childbearing: a moderated mediating model among women

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Abstract

This study, it was aimed to investigate the relationships between childhood trauma, attitudes towards fertility and childbearing, marital satisfaction, and educational level in women. A cross-sectional web-based survey was conducted between December 2022 and March 2023 with 425 women. The data were collected through an introductory information form, Childhood Trauma Questionnaire, Marriage Life Scale, and Attitudes towards Fertility and Childbearing Scale. The results obtained showed that marital satisfaction mediated the association between childhood trauma and women's attitudes towards fertility and childbearing. In addition, women's educational level moderated the indirect association between childhood trauma and attitudes towards fertility and childbearing via marital satisfaction. The study helped to shed light on the mechanism that emphasizes the pathway between childhood trauma in women and their attitudes towards fertility and childbearing. However, since the sample consisted mostly of women with relatively high levels of education, the findings are limited in their generalizability. Future studies may be recommended to include larger and more heterogeneous samples to increase external validity.

Keywords Childhood trauma · Fertility · Childbearing · Marital satisfaction · Mediating model

Introduction

In today's world, fertility and childbearing in advanced ages is a common pattern of reproductive behavior (Fakehi et al., 2021). Today, women in countries with rich resources can postpone childbearing to age 30 and above. Advances in medicine and technology have ensured women to give childbirth in a safe way in advanced ages (Soederberg et al., 2015). On the other hand, postponed motherhood carries the risk of numerous complications such as pregnancy-related diseases, genetic diseases, fetal malformations, and miscarriages, as well as preterm delivery and more frequent C-section indications (Kubiak-Fortecka & Wilczyński, 2009; Joseph et al., 2005; Astolfi & Zonta, 2002). According to the latest World Bank data, the global fertility rate was 3.7 in 1980, it declined to 2.3 in 2020 and to 2.2 in 2023 (World Bank, 2025). In addition, approximately 73 million intended miscarriages per year are experienced all over the world (World Health Organization, 2021). Hence, considering the serious results of the decrease in fertility rate and postponing childbearing, it is important to reveal the factors that affect attitudes towards fertility and childbearing. This study focuses specifically on Turkish women's attitudes towards fertility and childbearing due to the significant influence of cultural and societal influences on reproductive behaviors in Türkiye. In Turkish society, traditional gender roles and strong family expectations play an important role in shaping women's fertility-related decisions (Güngör, 2016). Despite modernization and increasing levels of education, social pressure to have children persists, especially in certain regions (Yıldırım & Koç, 2020). Therefore, understanding how factors influencing attitudes towards fertility and childbearing affect them in a Turkish sample

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is important to capture the interplay between psychological and sociocultural dynamics.

Previous research has shown reaching a certain level of maturity, gaining independence through education and being active in labor market, and completing one's education among the reasons for postponing fertility and childbearing (Mills et al., 2011; Tydén et al., 2006). Among other factors presented as the main reasons for postponement, the status of the relationship between couples, effective contraceptive methods, value changes, accommodation conditions, economic uncertainty, and lack of supportive family policies can be listed (Tydén et al., 2006; Proudfoot et al., 2009; Mills et al., 2011). Childhood trauma is also a critical risk factor that may be associated with postponement of fertility and childbearing (Lee et al., 2021; Shreffler et al., 2021). In addition, it has been reported in the literature that childhood trauma can have a multidimensional effect on the social lives and psychological status of individuals, and that therefore, they can affect the attitudes and behaviors of individuals over many variables (Dye, 2018). In other words, childhood trauma creates a high level of sensitivity against future events (Rauschenberg et al., 2017), so much so that individuals' desire for childbearing can be negatively affected. While some may avoid having a child, others might postpone childbearing. It is also likely that those who have experienced childhood trauma may have difficulty in assuming responsibilities brought about by having a child (Berthelot et al., 2020). Moreover, it is believed that having a child may lead to more stress and anxiety in individuals who have experienced childhood trauma (Berthelot et al., 2020; McDonnell & Valentino, 2016). In contrast, in the study conducted by Shreffler et al. (2021), it was reported that being exposed to childhood trauma was related with positive attitudes towards childbearing in adolescence. Considering the inconsistent study results related to the effect of childhood trauma on fertility and childbearing, it is necessary to further investigate the pathway between childhood trauma and attitudes towards fertility and childbearing, and this pathway may be complicated and difficult to be understood.

Childhood trauma contribute to maladaptive interpersonal functionality such as lack of confidence, feeling of incompetence, and alienation in interpersonal relations (Lee et al., 2021; Choi et al., 2014). Such problems can lead to problems in establishing close relations with others (Liu et al., 2019; Sperry & Widom, 2014). According to Attachment Theory, negative experiences in early childhood can impair individuals' ability to form secure attachments, leading to difficulties in establishing and maintaining healthy marital relationships. Moreover, Social Learning Theory suggests that individuals exposed to adverse early life environments may develop maladaptive interpersonal patterns that could negatively impact marital satisfaction. Previous studies have also demonstrated a relationship between childhood trauma and adversities experienced in marriage (Cao et al., 2022; Whisman, 2006).

One of the mechanisms between childhood trauma and fertility attitudes is marital satisfaction (Zhang et al., 2025). This is because having children is negotiated within couple relationships and requires considering their ability to provide the optimal environment (Lainiala, 2011). Interestingly, although it is easily conceivable that marital satisfaction would have an impact on intentions to maintain a marriage and have children, there is relatively little theory and research on this issue (Rijken & Liefbroer, 2009). There are two main theoretical approaches to explain the relationship between marital satisfaction and attitudes towards having children. The first of these approaches argues that children are the major investment in a marriage and having children will increase the cost of dissolution (Lillard & Waite, 1993). According to this approach, having a child in an unstable marriage carries the risk of raising the child alone or having little or no contact with the children in the future. Friedman et al. (1994) put forward the "alternative" rational choice theory as a counter hypothesis. According to this approach, a child in an unstable marriage is considered as a protective factor as it increases solidarity and reduces uncertainty. There is strong evidence in the literature for the first of these theoretical approaches. For example, Beaujot and Tong (1985) found that marital satisfaction is an incentive factor for individuals who do not have children or have a child. Lainala (2011) concluded that low relationship quality does not increase the likelihood of having children, while medium and high relationship quality increase the likelihood of having children.

More recent studies have also revealed that psychological factors such as marital satisfaction, life satisfaction and subjective well-being are positively associated with the intention to have children (Aassve et al., 2016; Mencarini et al., 2018; Sarsharbeidokhti et al., 2024; Shahmirzad et al., 2025). Schwerdtfeger et al. (2013) emphasized that couple relationship quality should be considered as a mediating and moderating variable in planning research both theoretically and practically. In addition, a recent study (Zhang, 2025) provided evidence for the mediating role of attachment patterns between childhood trauma and fertility intentions. In conclusion, a large body of research seems to support marital satisfaction as a key factor in influencing childbearing intentions. Our expectation is that women with higher marital satisfaction will have more positive attitudes towards childbearing. Social and psychological maladjustment associated with childhood trauma may contribute to difficulties in romantic relationships and a reduced desire to marry and have children (Lee et al., 2021). In this context, we extend

previous research by conceptualizing marital satisfaction as a mediating variable between childhood trauma and attitudes toward authenticity and childbearing.

Education is one of the key factors shaping attitudes towards fertility and childbearing. However, results on the effect of education are inconsistent. Testa (2014), using comprehensive survey data from 27 European countries, reports a positive association between education and women's fertility intentions. These results were interpreted as indicating that education is associated with higher income, which paves the way for a larger family structure. The results of a study conducted in China (Chen et al., 2023) showed that women with higher education and working hours had lower fertility intentions. As an explanation, Hashemzadeh et al. (2021) suggested that the structural conditions affecting fertility in developed countries may be more favorable for educated and working women, and that policies have been developed to ensure work and family life balance.

The socioeconomic approach, which focuses on direct and indirect opportunity costs (Becker, 1993), and gender theory, which focuses on gender roles (McDonald, 2000), are used to explain the impact of education on fertility and attitudes towards having children. According to the socioeconomic approach, for women, some of the gains achieved through education may be interrupted by the obligation to care for children (Testa, 2014). This may lead to the development of negative attitudes towards fertility. In terms of gender roles, in societies that give responsibility for childcare and housework to women, women's increasing level of education leads to questioning these roles, and in the absence of balancing structures, negative attitudes towards having children may develop (Chen et al., 2023; Mencarini et al., 2018). In Türkiye, gender roles have positioned women to take on many responsibilities, including housework and child education, rather than being the breadwinner (Hu, 2022). However, in Türkiye, education means the opportunity to find a job and gain freedom for women (Özekin & Süküti, 2023). Therefore, childbearing may mean a series of threats such as limiting women's freedom and suspending their future plans based on their education. In this context, we add a nuance to the literature by proposing a model in which marital satisfaction encourages attitudes towards fertility and childbearing, but education level moderates this relationship. In this context, in the present study, it was aimed to investigate the relationships between childhood trauma, attitudes towards fertility and childbearing in women, and to investigate the mediating role of marital satisfaction and the moderating role of educational level. Although previous findings on the impact of childhood trauma on fertility attitudes have been inconsistent (Lee et al., 2021; Shreffler et al., 2021), it has been suggested that early trauma shapes long-term psychological and social functioning (McCrory et al., 2017). Considering the explanations about the relationship between the variables and the results of previous research, the following hypotheses were developed and tested through real data.

Hypothesis 1 *Marital satisfaction mediates the association between childhood trauma and attitudes towards fertility and childbearing.*

Hypothesis 2 *Women's level of education plays a moderating role in the mediating effect of marital satisfaction by moderating the association between marital satisfaction and attitudes towards fertility and childbearing.*

Materials and methods

We developed a theoretical model based on the research hypotheses. This model is presented in Fig. 1. In the model, while marital satisfaction is a mediating variable between childhood trauma and attitudes towards childbearing, women's educational level is a moderating variable between marital satisfaction and attitudes towards fertility and childbearing.

Participants

The study was conducted with a cross-sectional design between December 2022-March 2023. The sample size was calculated by running a power analysis on OpenEpi Version

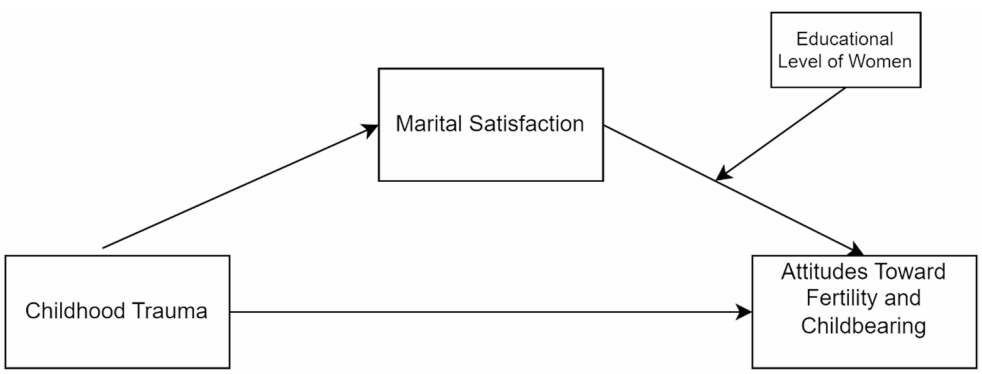

Fig. 1 Proposed moderated mediation model

3 statistical software, which is open to public use. Assuming a prevalence rate of 50% (maximum sample size), the minimum required sample size was calculated as 385, considering a 5% margin of error, a two-tailed significance level, a 95% confidence interval, and 80% statistical power. The study was conducted on social media (WhatsApp, Facebook Messenger, Instagram, etc.) by using a web-based online questionnaire through women's groups. (https://docs.google.com/forms). The questionnaire prepared through Google Forms platform was delivered to the women by using social media tools (WhatsApp, Facebook Messenger, İnstagram, etc.). To prevent duplicate responses, the online questionnaire prepared via Google Forms was restricted to one submission per participant. First of all, the participating women were sent a consent form which included a brief note about the purpose and content of the study and indicated that they volunteered to participate in the study. The women who approved the consent form and met the inclusion criteria were included in the study. The inclusion criteria were being between 18 and 45 years old (reproductive age), being married but having no children, and not experiencing pregnancy in the data collection period. 435 responses were received from the questionnaires. Ethical approval for the study was obtained from the XXXXX University Health Sciences Non-Interventional Clinical Research Ethics Committee Directorate (Decision No: 2022/4093).

Measurements

Childhood trauma questionnaire (CTQ-28)

CTQ-28 was developed by Bernstein and Fink (1998) in order to identify childhood neglect and abuse experiences. This scale measures five dimensions of childhood trauma: emotional neglect, physical neglect, sexual abuse, emotional abuse, and physical abuse. The Turkish validity and reliability study was conducted by Sar Ozturk and Ikikardes (2012), and the Cronbach's alpha coefficient of the scale was found to be 0.93. The 28-item scale is scored through a 5-point Likert scoring system (1 = never, 5 = very frequent). The scale includes 25 clinical items and 3 valid items, and the total score ranges from 25 to 125. High scores to be obtained from the scale indicate more exposure to neglect and abuse (Sar et al., 2012). In the present study, the Cronbach's alpha coefficient of the scale was determined as 0.88.

Different types of childhood trauma are highly interrelated. Indeed, in a study conducted by Dong et al. (2004) with data from 8,629 adults, between 81% and 98% of participants who reported experiencing at least one type of childhood trauma also reported exposure to at least one additional type. Since childhood trauma types do not occur as independent events, it is recommended to evaluate them cumulatively (Anda et al., 2010; Craig, 2019). In this context, in our study, childhood trauma types were evaluated cumulatively rather than separately.

Marriage life scale (MLS)

The scale was developed in Turkish by Tezer (1996) in order to measure marital satisfaction levels of the spouses, and the validity and reliability study of the scale was conducted. The 5-point Likert type scale (1 = Strongly Disagree, 5 = Strongly Agree) has 10 items. The lowest and highest scores to be obtained from the scale are 10 and 50, respectively. This scale assesses overall marital satisfaction, with higher scores indicating greater satisfaction in the marital relationship. The Cronbach's alpha coefficient of the original scale was 0.89 (Tezer, 1996), while it was found to be 0.90 in the present study.

Attitudes toward fertility and childbearing scale (AFCS)

The scale was developed by Soederberg et al., (2015) in order to determine the attitudes of nulliparous women towards fertility and childbearing. The validity and reliability study of the Turkish version of the scale was conducted by Aşcı & Gökdemir (2021), and the Cronbach's alpha coefficient of the scale was found as 0.89. The 5-point Likert type scale (1 = Strongly Disagree, 5 = Strongly Agree) consists of 27 items. The minimum and maximum scores to be obtained on the scale are 27 and 135. This scale evaluates women's attitudes toward fertility and childbearing, with higher scores reflecting more positive attitudes toward childbearing (Aşcı and Gökdemir, 2021). In the present study, the Cronbach's alpha coefficient of the scale was found to be 0.91.rg at al.

Data analysis

In the analysis of the study data, we used SPSS 25 and PROCESS macro software. In the data analysis, we first examined box plot and scatter plot, and we determined outliers. Thus, we ran the analyses 425 data. In the second stage, we examined whether the data were normally distributed and if there was multicollinearity. Skewness and kurtosis values within the range of ± 2 show that the data are normally distributed (George & Mallery, 2003). In order to evaluate multicollinearity, we calculated Tolerance and Variance of Inflation Factors (VIF) values. Tolerance values being higher than 0.2 and VIF values being lower than 10 show that there is no multicollinearity (Cokluk, 2010). As a result

of the analysis, it was seen that there was no multicollinearity problem between the variables. In the third stage of the analysis, we used descriptive statistics and correlation analysis in order to determine the relationships between the variables. In the fourth stage, in order to test the research hypotheses, we used model 14 in PROCESS macro recommended by Hayes (2018). The level of education used as the moderator variable was included in the analysis as a continuous variable. In both models, by choosing 5,000 resampling and 95% confidence interval with bootstrap technique, the analyses were performed. Absence of zero between the 95% confidence intervals shows that indirect effect is significant (Hayes, 2009). Age and income level were entered into the analysis as control variables. In addition, education was included in the analysis as a continuous variable and used as a moderator. When interpreting the results of the moderator analysis, education level is compared within ±1 standard deviation (SD), as suggested by Mackinnon et al. (2004). In this context, the conditioning values in PROCESS macro were selected as ±1 SD.

Results

The mean age of the 425 women who were included in the study was 26.26 years [Standard Deviation (SD): 4.49; min-max: 18–45], and mean educational level was 13.21 years (SD = 3.72; min-max: 4–16) (Table 1).

Preliminary analyses

Mean scores regarding the variables, minimum and maximum scores, skewness and kurtosis values, standard deviations, and correlation analysis results are presented in Table 1. The correlation analysis results show that the relationship between childhood trauma and marital satisfaction ($r = -.41$, $p < .01$) and attitudes towards fertility and childbearing ($r = -.28$, $p < .01$) is significant in a negative direction. There is a positive and significant relationship between marital satisfaction and attitudes towards fertility and childbearing ($r = .37$, $p < .01$). (Table 2).

Table 1 Socio-demographic characteristics of women

Variables	*n*	%
Age (years) (Mean ± SD; 26.26 ± 4.49)		
Education status (Mean ± SD; 13.21 ± 3.37)		
Primary school	77	18.1
Secondary school	111	26.1
University or above	237	55.8
Income status		
Low	91	21.4
Medium	230	54.1
High	104	24.5
Employment status		
Employed	158	37.2
Unemployed	267	62.8
Family type	379	89.1
Nuclear family	46	10.8
Extended family		

SD: Standard Deviation

Table 2 Descriptive statistics and correlation analysis results

	1	2	3
1. Childhood trauma	-	−0.41**	−0.28**
2. Marital satisfaction		-	0.37**
3. Attitudes toward fertility and childbearing			-
Mean	40.49	38.61	99.49
Min.-Max.	25–125	10–50	27–135
Standard deviation	15.13	8.35	18.47
Skewness	1.589	−0.473	−0.167
Kurtosis	1.972	−0.698	−0.626

**$p < .01$

Moderated mediation analyses

A moderated mediation analysis was performed to understand the conditional indirect effect of childhood trauma on attitudes towards fertility and childbearing through marital satisfaction using Hayes' PROCESS Model 14. The results are presented in Table 3.

Childhood trauma significantly predicted attitudes towards fertility and childbearing in a negative direction (B = −0.202, SE = 0.05, $p < .01$). This result shows that childhood trauma has a negative association with attitudes towards fertility and childbearing when marital satisfaction as mediator variable, educational level as moderator variable and age and income level as control variables are taken into account. In other words, higher trauma level is associated with lower attitude towards fertility and childbearing. Similarly, childhood trauma significantly predicted marital satisfaction negatively (B = −0.226, SE = 0.02, $p < .01$). This finding suggests that higher levels of childhood trauma are associated with decreased marital satisfaction. Our analyses showed that marital satisfaction significantly predicted attitudes towards fertility and having children in a positive direction (B = 1.999, SE = 0.35, $p < .01$). This suggests that increased marital satisfaction is associated with more favourable attitudes towards fertility and childbearing. The total effect of childhood trauma on attitudes towards fertility and having children was also significant (B = −0.352, SE = 2.49, $p < .01$). This result shows that childhood trauma can significantly predict attitudes towards fertility and childbearing in a negative direction without taking into account mediator, moderator and control variables. The path

Table 3 Moderated mediation analysis results of the relationship between childhood trauma, marital satisfaction, and attitudes towards fertility and childbearing, moderated by educational level

Effect	Coeff (B)	SE	t	*p*	LLCI	ULCI
Direct Effect						
CT -> AFC	−0.202	0.05	−3,42	0.007	−0.317	−0.086
CT -> MS	−0.226	0.02	−9.14	0.000	−0.274	−0.177
MS -> AFC	1.999	0.35	5.55	0.001	1.292	2.706
Total Effect						
CT -> AFC	−0.372	2.49	−6.11	0.000	−0.465	−0.239
Conditional Indirect Effects at Levels of Educational						
Low	−0.247	0.04			−0.335	−0.169
Mean	−0.170	0.03			−0.242	−0.108
High	−0.115	0.03			−0.191	−0.041

CT: Childhood trauma, *MS*: Marital satisfaction, *AFC*: Attitudes toward fertility and childbearing; Coeff(B): Unstandardised coefficient, LLCI and ULCI represent the lower and upper bounds of the 95% confidence interval respectively

coefficients of the proposed moderated mediation model are presented in Fig. 2.

The analysis examined the conditional indirect effects of childhood trauma on attitudes towards fertility and childbearing through marital satisfaction at different educational levels. Educational level is a moderating variable between marital satisfaction and attitude towards fertility and childbearing (Fig. 3). The indirect effect was significant at all education levels: low (B = −0.247, SE = 0.04, 95% CI [−0.335, −0.169]), mean (B = −0.170, SE = 0.03, 95% CI [−0.242, −0.108]), and high (B = −0.115, SE = 0.03, 95% CI [−0.191, −0.041]). However, when the level of education is lower, the relationship between marital satisfaction and fertility and attitude towards childbearing is stronger. The strength of this relationship weakens as the level of education increases. Finally, the moderate mediation index was significant [Index = 0.084, SE = 0.02, 95% CI (0.037, 0.138)]. This statistical evidence confirms that educational level significantly moderates the mediating effect of marital satisfaction on the association between childhood trauma and fertility and attitudes towards having children.

Discussion

The main purpose of the present study was to investigate the relationship between childhood trauma and attitudes towards fertility and childbearing in young women and to analyze the mediating role of marital satisfaction and the effects of women's educational levels. The results obtained have contributed to better understanding the effective factors in the decrease in fertility rates and postponing childbearing in women. Our analysis showed that childhood trauma negatively predicted both attitudes towards fertility and childbearing and marital satisfaction, whereas marital satisfaction was associated with positive attitudes towards fertility. In line with our expectations, we found in the present study that marital satisfaction mediated the relationship

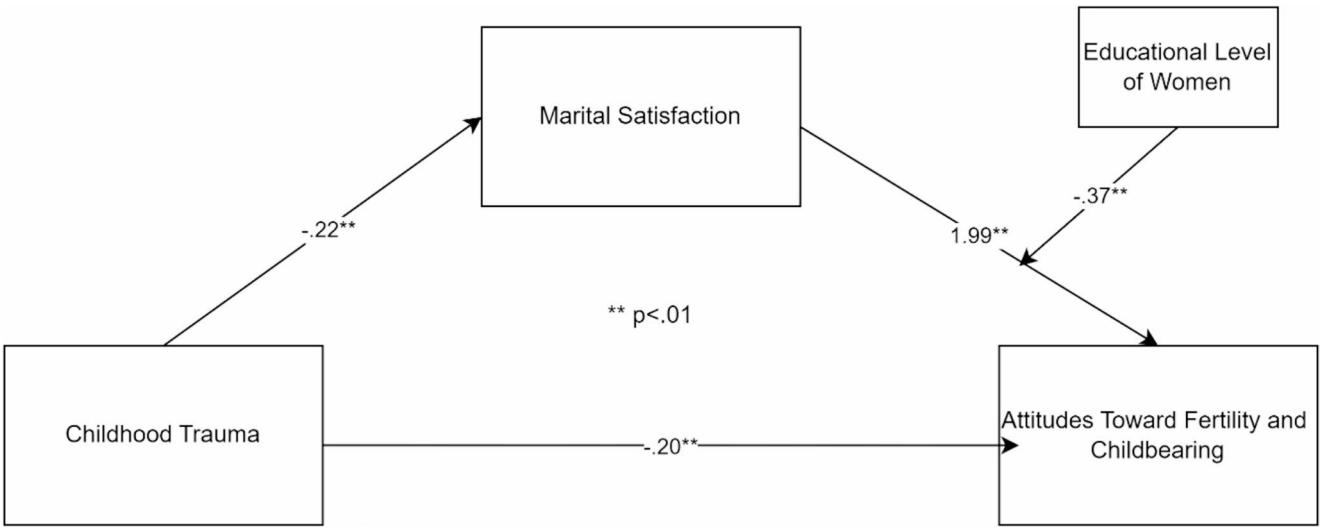

Fig. 2 The path coefficients of the proposed moderated mediation model

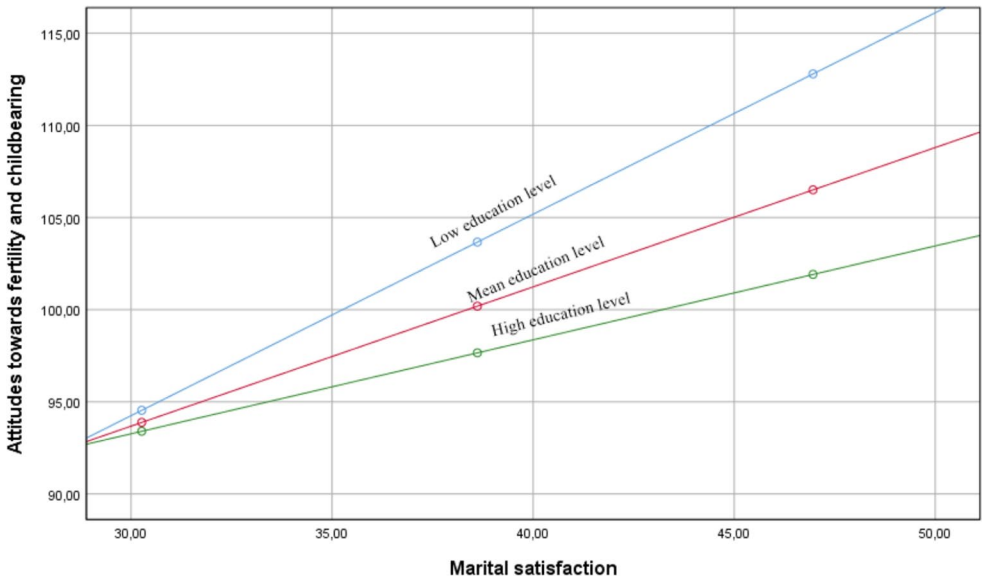

Fig. 3 Moderation graph of marital satisfaction and level of education on attitudes towards fertility and childbearing

between childhood trauma and attitudes towards fertility and childbearing. In addition, women's level of education moderated the relationship between marital satisfaction and attitudes towards fertility and childbearing and played a moderating role in the mediating role on the mediating effect of marital satisfaction. In the following, we begin by discussing the results for the direct relationships between the variables. Thus, we prepare the ground for discussing the results related to our research hypotheses.

First, our preliminary findings indicated that childhood trauma significantly predicted women's attitudes towards fertility and childbearing in a negative direction. This suggests that women who experience higher levels of childhood trauma may have more negative attitudes towards fertility and childbearing. This finding is consistent with previous studies that have explored the relationship between attitudes towards childbearing and childhood trauma (Lee et al., 2021). Childhood trauma is associated with fear of childbirth, depression, and parenting anxiety in women (Berthelot et al., 2020; Fairbrother et al., 2025). Such problems may discourage women's motivation towards fertility and childbearing. In this context, our results highlight the potential influence of early adverse experiences may be a key factor in shaping attitudes towards having children.

Second, our findings revealed that childhood trauma significantly predicted marital satisfaction in a negative direction. This means that women who experience higher levels of childhood trauma tend to report lower levels of marital satisfaction. Our results are consistent with previous research (Whisman, 2006; Tekin & Karakuş, 2019) showing that childhood trauma can affect couple relationships. It is well established that childhood trauma can increase insecurity, emotional dysregulation, and interpersonal problems in relationships (Liu et al., 2019; Whisman, 2006). Moreover, prior study has provided evidence that childhood trauma can impair marital satisfaction by contributing to the development of maladaptive attachment patterns (Zhang, 2025), which in turn can lead to trust problems, fear of abandonment, and deterioration in relationship well-being (Cao et al., 2022). Individuals who have experienced childhood trauma may be more vulnerable to depression, anxiety and stress (Hovens et al., 2012), all of which can negatively impact relationship quality. In conclusion, our findings support the argument that adverse childhood experiences are an important variable that may undermine marital satisfaction.

Third, our analyses indicated that higher marital satisfaction was associated with positive attitudes towards fertility and having children. This result challenges approaches that advocate the idea of having children as a way to revitalize a failing marriage or an unstable marriage (Friedman et al., 1994). Research shows that spouses in failing marriages are less likely to have children (Myers, 1997; Redshaw & Martin, 2014). Satisfying relationships between spouses are a prerequisite for having children (Hashemzadeh et al., 2021). In addition, women are largely responsible for caregiving and tend to seek practical and social support (Luppi & Mencarini, 2018). Marital satisfaction may serve as an indicator for women that they can receive this support. In addition, marital satisfaction is associated with stability and trust in the relationship. This fosters resilience in navigating the complexities of raising children (Sarsharbeidokhti et al., 2024). In sum, our results suggest that the intention to have children may be the result of a good relationship rather than a goal of strengthening a weak relationship. This is because a satisfied marriage may encourage belief in the existence of an appropriate environment for raising children, the sharing of responsibilities, and support from the partner.

The first hypothesis of our study was the mediating role of marital satisfaction in the relationship between childhood trauma and attitudes towards fertility and childbearing. Our analysis results show that childhood trauma is both directly and indirectly related to attitudes towards fertility and childbearing through marital satisfaction. In other words, childhood trauma in women may negatively affect marital satisfaction, which in turn may promote negative attitudes toward fertility and childbearing. Being exposed to maltreatment in childhood has been linked to difficulties in interpersonal relationships and emotional regulation in adulthood. In addition, difficulties in emotion regulation skills and negative world perception are accepted as significant results of maltreatment in childhood (Tekin & Karakus, 2019). Individuals with childhood trauma can rarely have a positive perception in couple relations. Also, the desire to establish an interpersonal romantic relation and intimacy is the prerequisite for the individual's desire to get married and have children (Lee et al., 2021). When the aspect of marital satisfaction that promotes positive attitude towards fertility and childbearing is considered, it can be claimed that the negative effect of childhood trauma on marital satisfaction can indirectly lead to a decrease in fertility rate among women and can be effective in postponing childbearing. These relationships may be particularly relevant in the Turkish context, where strong family structures and societal norms emphasize marital harmony and early motherhood (Yıldırım & Koç, 2020). The findings of this study are consistent with Attachment Theory (Mikulincer & Shaver, 2007) and Social Learning Theory (Bandura, 1977), both of which suggest that individuals with childhood trauma may develop insecure attachment patterns and this may affect their ability to maintain satisfying marital relationships. In addition, the results support theoretical perspectives that emphasize the role of marital satisfaction and stability in shaping individuals' intentions to have children.

The second hypothesis of our study was supported. In this context, we found that women's level of education moderates both the direct relationship between marital satisfaction and attitudes towards fertility and childbearing and the indirect effect of childhood trauma on attitudes towards fertility and childbearing through marital satisfaction. Accordingly, as women's level of education increases, the strength of the relationship between marital satisfaction and attitudes towards fertility and childbearing weakens. In other words, marital satisfaction appears to have a greater impact on positive attitudes towards fertility among women with lower levels of education. This finding, when evaluated in the context of structural factors, indicates that socio-economic variables such as education shape the effect of marital satisfaction on fertility attitudes (Araban et al., 2020, Mencarini et al., 2018). Studies have reported that as the level of education increases, women may consider having children as a risk to their career goals (Beaujot & Tong, 1985), and that education provides women with greater autonomy, which may encourage activities that may prevent childbearing (Miller, 1992). In addition, women in Türkiye have greater opportunities to find employment with higher levels of education. In addition, educated women may approach having children more cautiously by questioning gender roles that assign childcare and housework to women (Öztekin & Süküti, 2023). Moreover, for women with higher levels of education, the goals to be achieved with education may act as alternative sources of fulfillment, and these goals may compete with the goal of having children. On the other hand, for women with low education, having children may stand out as a more central and prioritized goal. In conclusion, although it is well known that marital satisfaction positively affects attitudes towards fertility and having children (Luppi & Mencarini, 2018; Sarsharbeidokhti et al., 2024), our study contributes to the existing literature by identifying women's education level as a moderating factor in shaping this effect.

Our results showed that women's level of education moderated the indirect effect of childhood trauma on attitudes towards fertility and childbearing through marital satisfaction. Accordingly, it is more likely that childhood trauma negatively affects marital satisfaction and weakens attitudes towards fertility and having children in women with low education level. This is because the association between marital satisfaction and fertility intention is higher in women with lower levels of education. Therefore, childhood trauma that decreases marital satisfaction (Cao et al., 2022; Whisman, 2006) may further impair attitudes towards fertility through this pathway in women with low levels of education.

Limitations

The study has certain limitations. First of all, due to the cross-sectional nature of the study, inferences regarding causal relations in the results could not be made. Future research could utilize longitudinal designs to establish causal relationships. Secondly, the data we collected were web-based and based on the women's self-report. This situation may have caused the participants to report their responses less or more than necessary, which could deviate the results we obtained. In future research, it can be recommended to use different data collection methods (e.g., face-to-face interview method, or distributing the questionnaires in closed envelopes and collecting them later). Thirdly, the study was not conducted with a clinical sample, and the participants had a relatively high average education level of 13.21 years. This may limit the generalizability of the results to different

populations, particularly those with lower education levels or clinical conditions. Furthermore, the findings are based solely on women, making it unclear whether they can be generalized to other populations. In future studies, it is recommended to conduct research with larger samples including individuals with different types of childhood trauma. Conducting studies with more diverse and clinical samples may enhance the applicability of the results.

Conclusion

In summary, this study examined the pathway between childhood trauma and women's attitudes towards fertility and childbearing. It makes several important contributions to the existing literature. First, our results confirm the recognized negative impact of childhood trauma on attitudes toward fertility and childbearing. Second, our study positioned marital satisfaction as a mediator between childhood trauma and fertility attitudes and confirmed that marital satisfaction is a mechanism that carries the effects of childhood trauma to fertility attitudes. Third, our results suggest that women's educational level plays a moderating role in the relationship between marital satisfaction and attitudes towards fertility and childbearing. Our research has important implications for the development of policies and interventions. In this context, the psychosocial needs of women who have experienced childhood trauma should be taken into account when developing fertility policies and interventions. In addition, approaches that promote marital satisfaction and relationship quality should be adopted when developing intervention programs. In addition, women with low levels of education may be more vulnerable to the indirect effects of childhood trauma on fertility. Intervention programs for this target group can be planned with priority.

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Author contributions Osman Tayyar Çelik: Conceptualization, Methodology, Software, Supervision, Writing- Reviewing and Editing. Tuba Uçar.: Data curation, Writing- Original draft preparation, Supervision, Writing- Reviewing and Editing. sra Sabancı Baransel.: Visualization, Investigation, Writing- Reviewing and Editing.

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Data availability The data that support the findings of this study are available from the corresponding author, ESB, upon reasonable request.

Declarations

Conflict of interest The authors declare that there were no potential conflicts of interest with regard to the research, authorship and/or publication of this article.

Ethical Aproval Necessary permissions for the study were taken from İnönü University Non-Interventional Clinical Research Ethical Board (Decision No: 2022/4093).

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