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The role of social determinants of health in woman's intention to pregnancy: a model with the mediation of social support

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Abstract

Background Childbearing intention is a complex issue that is influenced by a number of factor. However, childbearing intention does not necessarily lead to actual behavior, and mediating factors are effective in the realization and emergence of reproductive behavior. Since childbearing intention is influenced by several factors, including the social determinants of health, a thorough understanding of the effect of health determinants on this intention will help the reproductive process. Therefore, the present study was conducted using a social support-mediated model to examine the role of social determinants of health in women's intention to pregnant.

Methods This cross-sectional study was conducted on 500 married women of reproductive age (age range 15–49 years old) who were referred to health centers affiliated with Shahid Beheshti University of Medical Sciences during 2022–2023. Sampling was performed in a multi-stage (class-cluster) manner. Data collection tools in this study included the Demographic Information Form, the Childbearing Intention Questionnaire, social determinants of health questionnaires such as the Ghodrathnama Socio-Economic Status Questionnaire, the Perceived Social Support Questionnaire, and the Depression Anxiety Stress Scales (DASS-21), and the Dyadic Adjustment Scale (Spinner questionnaire). Data analysis was performed using SPSS21 software with descriptive statistical tests and analytical statistics. Laserl 8.8 software was also used to test the model using the path analysis statistical test.

Results The mean scores of depression, anxiety and stress were 5.03 ± 4.39 , 4.49 ± 3.68 and 7.7 ± 4.67 , respectively. The mean score of marital adjustment was 103.26 ± 23.49 , indicating that the majority of women (60.4%) had marital adjustment. Based on the results of the path analysis, marital adjustment was the only variable that had a direct positive and significant causal relationship with the childbearing intention from only one path ($B=0.74$). Moreover, based on the results of the path analysis, perceived social support had the most direct and indirect positive causal relationship with the childbearing intention to have children ($B=0.74$). Among the components of DASS21, depression was the only variable that had both a direct and indirect negative causal relationship with childbearing ($B=-0.12$). Both stress and anxiety had a direct positive causal relationship with the childbearing intention ($B=0.11$ and $B=0.15$ respectively).

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Conclusion Factors such as marital adjustment, perceived social support, depression, stress, and anxiety, as structural social determinants of health, are associated with childbearing intention. Accordingly, changes in social structures depend on population planning and policies.

Keywords Childbearing intention, Social determinants of health, Social support

Introduction

Total fertility rates are declining worldwide in many developed countries. The global fertility rate is predicted to decrease to 2.2 live births per woman by 2050 [1]. The fertility rate plays an important role in influencing the long-term consequences of a country's economic growth and social development [2]. From a demographic point of view, fertility, and childbearing are considered to be the most important phenomena determining population fluctuations. For this reason, population policies in most countries are mainly based on fertility reduction or increase. The age structure of the population is gradually shifting from young to old as a result of the decline in the birth rate. Moreover, delayed childbearing has become one of the most common reproductive behaviors worldwide [3].

The standard biography, in which the couple's relationship, marriage and childbearing are inextricably linked, has now been replaced by a selective biography based on which, individuals make decisions about the principle of childbearing, who to have children with, and when to have children [4].

The childbearing intention is the conditional choice of couples to have a child, and is related not only to the couple's attitudes towards parenting and children but also to their understanding of their living conditions [5]. Therefore, fertility behavior is affected by people's childbearing which is known as a fundamental variable in fertility behavior [6, 7].

The decision to have children is a complex one and is influenced by many factors. Many theorists believe that changes in the fertility rate are caused by changes in the structural and cultural factors of societies. With the advent of modernity and the expansion of global relations in the current era, societies have undergone fundamental changes in all structural, cultural, and social spheres. One of the areas of transformation of social life in this era is the changes and transformations in women's lives, their high participation in the labor market and their increased independence regarding fertility and reproduction. This is although all traditional societies emphasize the birth and raising of a child as the primary goal of every woman [8]. However, the childbearing intention does not necessarily lead to actual behavior, and mediating factors are effective in the realization and occurrence of reproductive behavior [7].

The conditions in which people are born, grow, live and work are referred to as social determinants of health.

Following the conceptual framework of the World Health Organization's Commission on Social Determinants of Health (CSDH) (Fig. 1), these factors were examined in two groups of structural and intermediate determinants of health. Structural determinants of health include economic and social factors [9]. Social studies have shown that the attitudes and intentions to have children, as well as fertility, are influenced by social and economic factors [10].

On the other hand, the results of a study showed that men and women with a high level of education in Germany tend to have more children than those with a medium level of education. This may be due to the association of higher education with higher income in these countries, making it a suitable proxy for other variables such as childcare and spouse's help at home [11].

Childbearing conflicts with women's economic activity, and an increase in the number of children increases psychological pressure and conflict, which is referred to as the incompatibility of the mother's role with work-family conflict [25]. The proliferation of roles and their additional burdens as well as role clashes have created psychological pressures and these women are in an unfavorable situation in terms of anxiety, fatigue, and depression compared to women who only play traditional roles and have a negative attitude towards childbearing (24,26).

Conversely, marital compatibility plays a crucial role in mental health. Marital compatibility is a state in which couples have a general feeling of satisfaction and happiness with their marriage and with each other [12]. Marital compatibility is the basis for many important decisions in couples' relationships, such as decision-making and fertility [13, 14].

Another intermediate factor in health is social support, which is defined as the affection, companionship, care, respect, attention, and help a person receives from other people and groups such as family members, friends, and significant others. Support and good social relationships make a significant contribution to health and can protect one's health from harmful factors. Additionally, supportive relationships can lead to healthier behaviors in individuals [15].

Some researchers believe that childbearing is a social behavior and is influenced by social interactions and structures. Indeed, couples' values, views and attitudes towards childbearing and their marital interactions, together with government support, social norms and the mechanisms of social networks, may influence

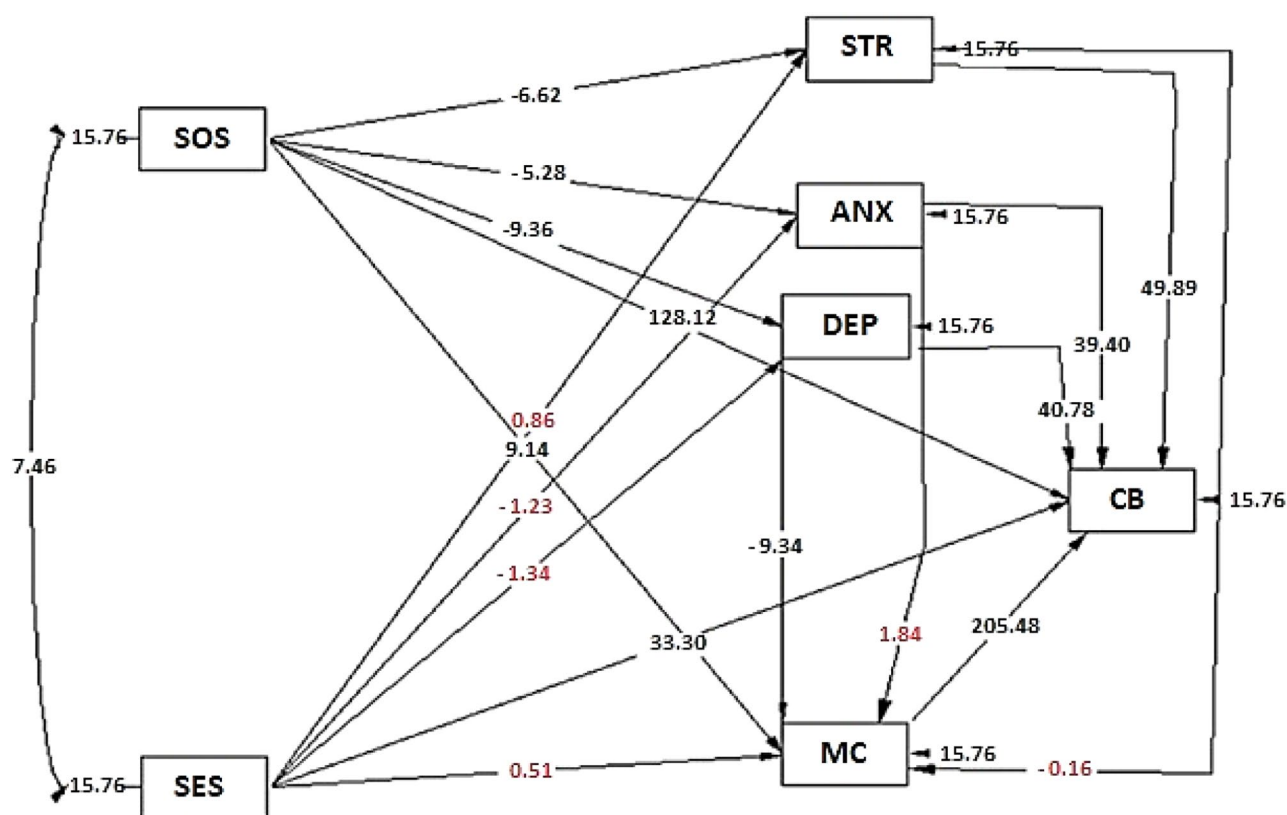


Fig. 1 The relationship of the components of mental disorders (stress, depression, anxiety), marital adjustment, perceived social support and socio-economic status with the childbearing intention based on t-value (STR: Stress, SES: Socio-Economic Status, MC: Marital Adjustment, SOS: Perceived Social Support, DEP: Depression, ANX: Anxiety, CB: Childbearing Intention)

their reproductive attitudes and behavior [16]. Studies have also shown a negative and significant relationship between stress and marital satisfaction [17].

Moreover, the lack of social capital in the life of couples can increase the rate of divorce, addiction, suicide, family conflicts, social damage, and contradictions. These factors negatively affect the quality of married life and, consequently, women's attitudes toward childbearing [18].

Given that childbearing intention is influenced by several factors, including social determinants of health, a thorough understanding of these determinants will help the reproductive process. Therefore, the present study was conducted using a social support-mediated model to examine the role of social determinants of health in women's intention to pregnant.

Method and materials

The present cross-sectional study was conducted on 500 married women of reproductive age (From the age of 15 to 45 years) who were referred to health centers affiliated with Shahid Beheshti University of Medical Sciences during 2022–2023.

To determine the sample size, 15–20 samples were considered appropriate for each variable based on the

literature review and the research variables [42]. In this research, according to the number of investigated variables [19] and considering the dropout rate of 15%, the sample size was determined to be 500 samples.

The sampling was performed in a multi-stage (class-cluster) manner. First, the different areas covered by Shahid Beheshti University of Medical Sciences were defined as classes (North, East, and Shemiranat). From each class, many health centers were then randomly selected as a cluster, and a quota was allocated to that center based on the number of clients in each center.

Inclusion criteria were married women of reproductive age (age range:15–49 years), Iranian nationality, living in Tehran, literacy, having known mental disorders, and no history of infertility, no history of obstetric and gynecological problems or chronic diseases. The exclusion criterion was incomplete responses to questionnaire questions.

The data collection tools in this study included the Demographic Information Form, the Childbearing Intention Questionnaire, social determinants of health questionnaires such as the Ghodrattnama Socioeconomic Status Questionnaire, the Perceived Social Support

Questionnaire, the Depression Anxiety Stress Scales (DASS-21), and the Dyadic Adjustment Scale.

Demographic information form

This form included women's age, number of pregnancies, the interval between pregnancies, husband's age, place of birth of both husband and wife, duration of stay in Tehran, ethnicity of husband and wife, age of marriage, duration of marriage, education, and occupation of the couple. Content validity was used to measure the validity of this form.

Childbearing intention questionnaire

This 4-item questionnaire indicates the level of women's intention to pregnant in the future. The responses to this questionnaire were based on a 5-point Likert scale (strongly agree, agree, have no idea, disagree, strongly disagree). Each item was given a score of 1 (strongly disagree) to 5 (strongly agree), with the total score ranging from 4 to 20. The reliability of the dimensions of the questionnaire was measured by Karimian et al. (2020) using the method of internal consistency with Cronbach's alpha coefficient and the Kuder-Richardson formulas. To measure the content validity of the questionnaire, it was distributed to ten experts (seven reproductive health experts, two health education experts, and one demographer) and their corrective comments were applied. To measure the reliability of the tool, the questionnaire was completed by 30 participants using the test-retest method for the assessment of stability ($r=0.75$) and Cronbach's alpha ($\alpha=0.75$) for the assessment of internal consistency [6].

Ghodratnama socio-economic status questionnaire

This tool includes four components of income level, social class, education level, and housing status, and consists of six demographic questions and five main questions. The scores were based on a 5-point Likert scale ranging from 1 (very low) to 5 (very high). It is an Iranian tool suitable for Iranian studies. Several studies have confirmed the validity and reliability of this questionnaire [20, 21].

Perceived social support questionnaire

The tool consists of 12 questions on a 7-point Likert scale ranging from 1 (totally disagree) to 7 (totally agree) that measures the support individuals receive from three sources of family (5 items), friends (5 items), and significant others (4 items). The minimum and maximum scores are 12 and 84 respectively. A score of 13–48 indicates low social support, 49–68 is indicative of medium social support, and 69–84 represents high social support. The validity and reliability of this questionnaire have been confirmed in various studies [22–24]. In the current

study, the internal consistency of this tool was checked based on Cronbach's alpha was 0.91 for the total tool (family subscale $\alpha=0.85$, friend's subscale $\alpha=0.91$, significant others subscale $\alpha=0.85$).

The depression, anxiety and stress scale (DASS-21)

This scale consists of 21 questions in three dimensions of stress, anxiety and depression symptoms (7 questions for each dimension). The scoring is based on a 4-point Likert scale ranging from 0 (not at all) to 3 (very much). In each dimension, a score of 1–7 indicates a mild level, 8–14 a moderate level and 15–21 a severe level of anxiety, depression and stress. Several studies have confirmed the validity and reliability of this questionnaire [25, 26]. In the current research, the internal stability of this tool was measured based on Cronbach's alpha was 0.90 in the depression subscale, 0.79 in the anxiety subscale and 0.90 in the stress subscale.

Spinner dyadic adjustment scale (DAS)

This 32-item scale has four dimensions that include dyadic consensus, dyadic satisfaction, affection expression, and dyadic cohesion. The total score for this scale is the sum of the scores (0 to 151) for the questions. Individuals whose score is lower than 101 are considered to have Spinner disorder and suffer from incompatibility. Several studies have investigated and confirmed the validity and reliability of this scale [27, 28].

Procedure

Data collection was performed after approval of the proposal, approval of the ethics committee and obtaining the necessary permissions from the Shahid Beheshti University of Medical Sciences.

First, the researcher visited the selected health centers of Shahid Beheshti University of Medical Sciences and explained the objectives of the study to the referring women. After obtaining consent and willingness to participate in the study, eligible women were asked to complete and return to the researcher the demographic information form, social determinants of health questionnaires (such as the Ghodratnama Socioeconomic Status Questionnaire, the Perceived Social Support Questionnaire, and the Depression Anxiety Stress Scales), and the Marital Adjustment Questionnaire (Spinner's Questionnaire).

In this research, reliability was done by the method of stability evaluation (Test re test) and the intraclass correlation index (ICC=0.92) was obtained.

Data analysis

Descriptive statistical tests and analytical statistics such as chi-square and Fisher's exact tests for comparison of qualitative variables and t-test for comparison of

quantitative variables, Mann-Whitney for rank variables and Spearman and Pearson correlation and relative risk and logistic regression were used using SPSS 21 software. Laserl 8.8 software was also used to test the model using the path analysis statistical test. A significance level of less than 0.05 was considered.

Results

The mean age of the research subjects was 32.68 ± 8.23 years (minimum age 16 and maximum age 49 years) and the mean age of their spouses was 36.25 ± 5.25 years (minimum age 23 and maximum age 58 years). The majority of the participants, 184 subjects (36.8%), were in the age group of 30–39 years and the majority of the spouses, 204 subjects (40.8%), were in the age group of 40–49 years. The mean age of marriage of the subjects was 22.76 ± 4.84 (minimum age 13 and maximum age 44 years) and the mean duration of marriage of the research units was 9.94 ± 7.59 years (minimum duration 3 months and maximum 36 years).

In this study, the mean number of women's pregnancies was 1.56 ± 1.27 , with a minimum of zero and a maximum of 6 pregnancies. The mean number of births was 1.27 ± 1.25 , with a minimum of zero and a maximum of 6 births. The mean number of women's live births was 1.26 ± 1.09 , with a minimum of zero and a maximum of 6 live births. The mean number of stillbirths in this study was 0.14 ± 0.48 , with a minimum of zero and a maximum of 4 stillbirths. The mean number of abortions was 0.36 ± 0.68 , with a minimum of zero and a maximum of 4 abortions. In this study, most women (32.4%) used the intermittent contraceptive method, and the lowest rates were for the subcutaneous capsule (0%) and the contraceptive injection (0.4%) methods. In this study, 43.2% of the women had a cesarean section, 25.4% had a vaginal delivery, and 17% of them had experienced both types of delivery (vaginal and cesarean).

The majority of women who participated in the study rated their economic status as average (66.6%) and their family's income level as somewhat adequate (45.4%). Most of the respondents did not own a home (62.2%) and the majority of them reported that they were financially unable to buy a home (41.99%). Most of the women in our study had a bachelor's degree (32.2%), and their mean years of education for women was 13.4 ± 94.48 . Most of the women's spouses had diplomas and lower education (42.2%). The mean years of education for the spouses of these women was 14.2 ± 67.76 . In general, most of the participants in this study (59.4%) were unemployed, with the highest percentage of them (59.4%) as housewives and the lowest of them (3%) as teachers. Most of the spouses were self-employed (50%) and 1.6% of them were retired.

Table 1 Frequency distribution of perceived social support in the participants

Variable	No. (%)	Total, No. (%)
Perceived social support		
Low (12-48)	123 (24.6)	500 (100)
Average (49-68)	235 (47)	
High (69-84)	142 (28.4)	
Mean (sd) of the total scores	58.25±15.27	
Minimum-maximum total scores	(12-84)	

Table 2 Frequency distribution of anxiety, stress, depression in the participants

Variable		Frequency	
		No. (%)	Total
Anxiety	Normal (0-7)	368 (77.2)	500 (100)
	Mild (8-9)	71 (14.2)	
	Medium (10-14)	35 (7)	
	Severe (15-19)	8 (6.1)	
	Very severe (>20)	0 (0)	
Mean (sd) of the total scores		4.49±3.68	
Stress	Normal (0-9)	460 (92)	500 (100)
	Mild (10-13)	26 (5.2)	
	Medium (14-20)	14 (2.8)	
	Severe (21-27)	0 (0)	
	Very severe (>28)	0 (0)	
Mean (sd) of the total scores		7.7±4.67	
Depression	Normal (0-9)	412 (82.4)	500 (100)
	Mild (10-13)	69 (13.8)	
	Medium (14-20)	14 (2.8)	
	Severe (21-27)	5 (1)	
	Very severe (>28)	0 (0)	
Mean (sd) of the total scores		5.03±4.39	
Mean (sd) of DASS-21 questionnaire scores		17.22±11.3	
Minimum-maximum scores		0-52	

In this study, the majority of the women (47%) received moderate perceived social support, with a mean score of 58.25 ± 15.27 (minimum 12 and maximum 84 points) (Table 1).

The mean score of DASS-21 was 17.22 ± 11.3 (minimum 0 and maximum 52). It was observed in our study that in the majority of subjects, the level of stress, anxiety and depression was 92%, 77.2%, and 82.4% respectively in the normal range. The mean depression score was 5.03 ± 4.39 , the mean anxiety score was 4.49 ± 3.68 and the mean stress score was 7.7 ± 4.67 . Thus, the mean score for stress was higher than the mean scores of depression and anxiety (Table 2).

In this questionnaire, high scores indicate better marital adjustment. Individuals with scores lower than 101 have adjustment problems and are considered maladjusted. In this study, it was found that the majority of women (60.4%) had marital compatibility and 39.6% of the women had marital incompatibility, with a mean

score of 103.26 ± 23.49 (minimum 11 and maximum 144) (Table 3).

According to the results of Pearson's tests, among the variables that had a significant correlation with childbearing intention, perceived social support had the most positive and direct correlation, while anxiety, depression and stress had the most negative and inverse correlations (Table 4).

Based on the path analysis test and the results, the paths with a T-value greater than 1.96 were identified as significant. In other words, the paths with a T-value less than 1.96 were not significant and are marked in red in Fig. 1. According to these findings, after examining the significant paths, marital adjustment was the only variable that had a direct positive and significant causal relationship with the childbearing intention from only one path ($B=0.74$). In other words, as marital adjustment increased, so did the childbearing intention.

Based on the results of the path analysis after examining the paths that were significant based on a $t\text{-value} \geq 1.96$, marital adjustment was the only variable that had a direct positive and significant causal relationship with the childbearing intention from only one path ($B=0.74$) (Table 5). In other words, as marital adjustment increased, so did the childbearing intention (Fig. 1).

Based on the results of the path analysis, perceived social support had the most positive causal relationship with the childbearing intention from both direct and indirect pathways ($B=0.74$). Among the components of

Table 3 Frequency distribution of marital adjustment in the participants

Variable	No. (%)	Total No. (%)
Marital adjustment	Incompatible Lower than 101	Compatible Higher than 101
Mean (sd) of the total scores	103.26±23.49	
Minimum-maximum scores	11-144	

DASS21, depression was the only variable that had a negative causal relationship with the childbearing intention from both pathways ($B=-0.12$). Both stress and anxiety had a direct positive causal relationship with the childbearing intention ($B=0.11$ and $B=0.15$ respectively). In other words, as levels of stress and anxiety increased, so did the childbearing intention (Fig. 2). The results of the path analysis, indicated by the standardized beta (β) values, are shown in Fig. 2.

Discussion

The present study was conducted using a social support-mediated model to examine the role of social determinants of health in women's intention to pregnant. The results of the study revealed that the higher the level of marital adjustment, the higher will be the childbearing intention. Marital adjustment is an objective sense of satisfaction, contentment and pleasure experienced by a couple in all aspects of their marital relationship. Marital adjustment is one of the most important components of the emotional stability of couples [29]. Satisfactory

Table 4 Correlation matrix of mental disorders, marital adjustment, perceived social support and socio-economic status with childbearing intention

		Socio-economic status	Stress	Anxiety	Depression	Marital adjustment	Perceived social support	Childbearing intention
1	Socio-economic status	1						
2	Stress	-0.06	1					
3	Anxiety	-0.14**	0.67**	1				
4	Depression	-0.20**	0.73**	0.60**	1			
5	Marital adjustment	0.22**	-0.34**	-0.26**	-0.50**	1		
6	Perceived social support	0.35**	-0.29**	-0.26**	-0.42**	0.54**	1	
7	Childbearing intention	-0.09*	-0.03*	-0.11*	-0.06**	-0.02*	0.006*	1

** $p < 0.01$ * $p < 0.05$

Table 5 Direct and indirect effects of the components of mental disorders (stress, depression, anxiety), marital adjustment, perceived social support and socioeconomic status with childbearing intention

Variables		Standard			t-value	R^2
		Direct effect	Indirect effect	Total effect		
DASS21	Stress	0.15*	-0.0007	0.15*	4.9	0.80
	Depression	0.14*	-0.266*	-0.12*	4.08	
	Anxiety	0.11*	0.05	0.11*	3.4	
Marital adjustment		0.74*	-	0.74*	8.5	
Perceived social support		0.47*	0.31*	0.78*	7.8	
Socio-economic status		0.1*	0.014	0.1*	5.01	

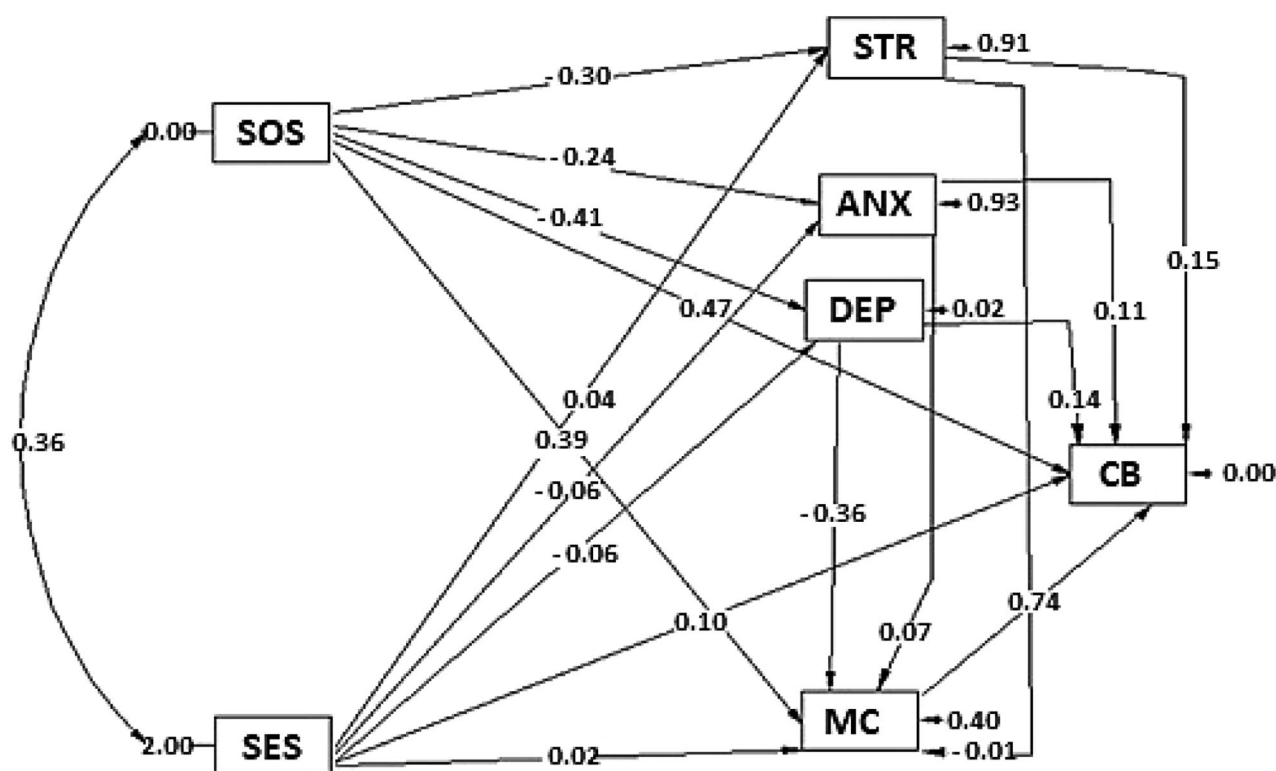


Fig. 2 The relationship of the components of mental disorders (stress, depression, anxiety), marital adjustment, perceived social support and socio-economic status with the childbearing intention based on standardized beta (STR: Stress, SES: Socio-Economic Status, MC: Marital Adjustment, SOS: Perceived Social Support, DEP: Depression, ANX: Anxiety, CB: Childbearing Intention)

relationships between couples can be measured by mutual interest, the level of care given to each other, and acceptance and understanding of each other [30]. In a compatible relationship, even when the participants disagree, they communicate well and resolve their differences satisfactorily and mutually [31]. In a constructive relationship, couples easily discuss and try to resolve their problems and conflicts and avoid irrational and aggressive reactions [32]. Through effective communication, individuals learn to express their feelings, explain their problems and resolve their conflicts. They learn to praise and appreciate others, to make themselves attractive and lovable, to stop involving themselves in mental issues, to enjoy the moments they are with others and to have empathy with the important people in their lives [32].

The results of studies showed that childbearing was more associated with life satisfaction [33]. The presence of a partner contributes to a person's satisfaction with life and influences fertility [34, 35]. Individuals' satisfaction with their life partners has an impact on their life satisfaction in general. On the other hand, improving the stability of the family unit and enabling it to continue will affect fertility. If parents believe that having a child will

increase their happiness in life, they are more likely to have children [36–38].

The improved happiness that parents expect from having children is a key factor in their decision to have children. Finally, it can be said that depression, dissatisfaction and stress and their consequences can reduce fertility [38–40]. The results of studies indicated that women and men without children never thought they were in a relationship with the right person or were dissatisfied with their marital relationship and believed that having children would increase these problems [35, 41].

In other words, a higher quality of life is an effective way out of childlessness and having only one child, and women find a positive attitude towards having children. However, Rijken (2009) found that in cases where women perceive their marital relationship as excellent and are satisfied with it, they have a more negative attitude towards having children and do not see having children as a factor in strengthening their relationship. This is because women are often more aware of the negative consequences of having children than men. Women may be more realistic about the need to share time and energy between children and partners [42].

The results of this study showed that the higher the level of depression, the lower will be the childbearing

intention. The results of one study showed that children are a great source of social support for parents when they get older, leading to a reduction in depression [43]. The results of another study indicated that married women without children had poorer mental health than married women with children, which may be due to the social pressures of having no children in societies that encourage childbearing [44]. Another study found that people who choose not to have children are rejected by society for violating reproductive norms and are labeled as selfish and defective, which has a destructive effect on their mental health [45, 46].

Social pressure or disapproval of childless individuals by society can lead to depression, whereas those who are childless by choice may be less sensitive to pressure from people around them and society, and suffer less emotional and psychological damage [47, 48]. In Iran, a small number of women remain childless voluntarily and postpone childbearing is due to environmental conditions. Therefore, high levels of depression in these women may be caused by their greater sensitivity to environmental and social pressures. The role of the mother is also very important in the formation of the identity of Iranian women, and the delay in the formation of this role may also be one of the causes of depression [49, 50].

Based on the results of the present study, the higher the level of stress and anxiety, the higher will be the childbearing intention. In childless couples, there is concern about infertility. After marriage, women face pressure from their communities to have children. In fact, in Iranian society, the general expectation of people around couples is that they will give birth to their first child within a short time after starting their married life. However, after having one child, others pay less attention to this issue, and other environmental and personal factors, including age of marriage and lack of negative fertility motivation, have a greater influence on the desired interval between the birth of the first and second child [51, 52]. Furthermore, given the potential impact of children on the survival of humanity, childlessness, even voluntary, has always been condemned, and even people who voluntarily choose to postpone childbearing may be under psychological pressure [53]. The results of a study conducted in Germany found that women with children experienced more stress and anxiety than women without children [54]. Based on the results of another study, women suffer a lot of psychological stress as a result of giving up independence through motherhood [55]. On the other hand, being an ideal mother functions as a role model for women and increases their stress and anxiety levels [56].

According to the results of the present study, perceived social support had the most positive causal relationship with the childbearing intention from both direct and

indirect paths. Some researchers believe that childbearing is a social behavior and is influenced by social interactions and social structures [57, 58]. Indeed, couples' values and beliefs about childbearing and marital interactions, on the one hand, and government support, social norms and the mechanism of social networks, on the other, may influence couples' decisions and their reproductive behavior [57, 59].

Several studies have shown that individuals who perceive high levels of support from parents, relatives and friends are more likely to have children and to fulfill their fertility intentions than those who perceive low levels of social support in their environment [7, 60–62]. Based on the results of a study conducted in Norway, the impact of a supportive environment can be more effective in realizing short-term intentions. Accordingly, childless couples who perceived good support from those around them may start having children earlier than the group who planned to have children three years later [62, 63]. Social support may work indirectly by building confidence and reducing the couple's anxiety about becoming parents, so that interaction with network members, and in particular the support of members, may encourage couples to have children [63, 64].

Factors in shaping reproductive health outcomes. Previous studies, such as those by Taheri et al. 2024 identified that relationship quality significantly impacts women's mental well-being, subsequently affecting their intentions regarding childbearing [65]. Our findings reinforce these relationships and underline the importance of considering these determinants in reproductive health research.

The results suggest that women's mental health is intricately linked to their reproductive choices. Studies have indicated that depression and anxiety can lead to adverse health outcomes and lower fertility rates. Women who experience high levels of stress and poor marital adjustment may face challenges in their childbearing intentions [66].

One of the limitations of this research is the lack of examining the social determinants of health with men. Thus, further research into the socio-structural determinants of men's health is recommended.

Conclusion

Factors such as marital adjustment, perceived social support, depression, stress and anxiety, as socio-structural determinants of health, are related to childbearing intention. Accordingly, population planning and policies depend on changes in social structures.

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Author contributions

FR and MAD conceived the study, interpreted the results, and co-wrote the manuscript. F Gh, Z M, MAD, and FR collected the data, helped with data interpretation, and co-wrote the manuscript. All the authors read and approved the final manuscript.

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Data availability

The data that support the findings of this study are available from Mahboubeh Ahmadi Doulabi but restrictions apply to the availability of these data, which were used under license for the current study, and so are not publicly available. Data are however available from the authors upon reasonable request and with permission of Shahid Beheshti University of Medical Sciences.

Declarations

Ethics approval and consent to participate

This article is the result of a project approved by the Midwifery and Reproductive Health Research Center of Shahid Beheshti University of Medical Sciences with the ethical code IR.SBMU.PHARMACY.REC.1402.271. All methods were carried out according to relevant guidelines and regulations. Informed consent was obtained from all subjects.

Consent for publication

"Not applicable" in this section.

Competing interests

The authors declare no competing interests.

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