Hindawi
Perspectives in Psychiatric Care
Volume 2023, Article ID 8991842, 10 pages
https://doi.org/10.1155/2023/8991842

Research Article

Expectations and Participatory Performance of Husbands in Improvement of Anxiety Disorders in Pregnant Women: A Qualitative Study

Mahbobeh Faramarzi,[1] **Mojgan Shariatpanahi**,[2] **Seyyedeh Mahboubeh Mirtabar**,[3] **Shahnaz Barat**,[4] **Fatemeh Nasiri Amiri**,[5] **Mahboobe Khoozan**,[6] **Khosro Rashid**,[7] **Fazlollah hasanvand**,[8] **and Khadijeh Ezoji**[6]

[1]*Social Determinants of Health Research Center, Health Research Institute, Department of General Courses, Babol University of Medical Sciences, Babol, Iran*
[2]*Islamic Azad University, Saveh Branch, Saveh, Iran*
[3]*Health Research Institute, Babol University of Medical Sciences, Babol, Iran*
[4]*Infertility and Reproductive Health Research Center, Health Research Institute, Department of Obstetrics and Gynecology, Babol University of Medical Sciences, Babol, Iran*
[5]*Social Determinants of Health Research Center, Health Research Institute, Midwifery Department, Babol University of Medical Sciences, Babo, Iran*
[6]*Social Determinants of Health Research Center, Health Research Institute, Babol University of Medical Sciences, Babol, Iran*
[7]*Department of Psychology, Faculty of Humanities and Social Sciences, University of Mazandaran, Babolsar, Iran*
[8]*Allameh Tabatabai University, Tehran, Iran*

Correspondence should be addressed to Khadijeh Ezoji; dr.kh.ezoji@gmail.com

Received 19 September 2022; Revised 14 November 2022; Accepted 24 November 2022; Published 8 February 2023

Academic Editor: Valentina Lucia La Rosa

Purpose. Husbands' participation is important in the success of maternal health programs. This participation is emphasized in all dimensions including mental health. This study was conducted to examine the husband's expectations and participatory performance to improve anxiety in pregnant women. *Design and Methods*. A descriptive qualitative study was conducted via targeted convenience sampling in two public and private maternity care centers. 30 women who were 13–38-week pregnant were diagnosed with anxiety disorder in a Structured Clinical Interview for the DSM-5 (SCID-5), and 16 husbands experienced a semistructured in-depth qualitative interview. Data were extracted by the conventional content analysis using MAXQDA software (version 18). *Findings*. Husbands' expectations and participatory performance to reduce the anxiety of pregnant women were produced in three themes of emotion, behavior, and cognition in terms of the men's and women's perspectives. Approximately 70% of subthemes were common among women and men which included emotion (emotional psychological support, strengthening verbal communication, receiving attention and love, and creating a field of entertainment), behavior (following up on mother and fetus's health, participation in housekeeping, compatibility to mood changes, material and financial provision, and companionship during childbirth), and cognition (increasing the knowledge in the field of pregnancy and the ability to resolve conflict). However, the men's and women's themes had some differences. *Practice Implications*. While men emphasized adjusting communication expectations and making positive changes in lifestyle, anxious women emphasized the themes of receiving attention and love, well-posedness, companionship in childbirth, and loyalty as important factors influencing the improvement of their disease.

1. Introduction

One of the sensitive periods for women is pregnancy and significant physiological and psychological changes occur during this period. Therefore, worry is a usual state for pregnant women. Anxiety, on the other hand, affects some women to the point that their everyday lives are disrupted. During pregnancy, some women develop anxiety disorders for the first time. Some women may experience changes in themselves who already have anxiety disorders [1]. Excessive worries about pregnancy, childbirth, infant health, and future parenting roles are the definition of anxiety during the pregnancy period [2]. According to a global meta-analysis report, the combined prevalence of pregnancy anxiety is estimated at 34.4% in low and middle-income countries, and it is estimated at 19.4% in high-income countries [3]. A systematic review study reported that the prevalence of some mental disorders for pregnant women including panic attack 0.2%–5.7%, agoraphobia 0.9%–17.2%, OCD (obsession-compulsion disorder) 0.2%–5.2%, GAD (generalized anxiety disorder) is 0.0%–10.5%, social anxiety 0.4%–6.4%, specific phobia 3.2%–19.9%, and for PTSD (posttraumatic stress disorder) 0.0%–7.9% (8). It is reported that the prevalence of anxiety in Iranian pregnant women is high [4].

The pregnancy period may cause mental disorders or worsen them [5]. 13% and 39% of pregnant women with OCD had reported that the disease was started when they became pregnant. The onset of panic attack disorder is more common in the first and second trimesters of pregnancy [6]. The loss of previous pregnancy [7], stress, pregnancy abuse, history of mental disease [8], smoking, substance abuse and alcohol drinking [9], low social support, and low-quality relationship with the partner are reported as the risk factors in the anxiety disorders of the pregnancy period.

During pregnancy, there are adverse outcomes such as miscarriage, preterm delivery, and low birth weight that occur due to anxiety disorders [10]. Evidence reported that a high level of maternal anxiety has a significant relationship with mental disorders, emotional problems, lack of concentration and hyperactivity, and impaired cognitive development in children [11]. Furthermore, anxiety during pregnancy has other adverse outcomes, such as prolonged crying in infancy, irritability and restlessness, individual differences in response to stressful life events, weak mother-child interaction, and more fear in dealing with life events [12]. Some studies indicate that children with anxious mothers, both in childhood and adulthood, suffer from serious illnesses such as shortness of breath and rash. Moreover, it was stated that these children will be encountered asthma, coronary artery disease in adulthood, and decreasing heart rate changes [13].

Several options were suggested to treat the anxiety during pregnancy, including psychotherapy [14], medication [15], and psychological and social supports [16]. The uncertain effect of antidepressants at the end of pregnancy is complex and controversial [17]. According to some recent reports on the complications of antidepressant medications on the fetus, there are concerns about taking the medication during pregnancy that has not been resolved yet, such as increasing abnormalities and postnatal nutrition problems [15, 18]. It is generally recommended that psychotherapy is preferable to medication in mild to moderate mental disorders according to the guideline. Using the medication therapy is recommended in prepregnancy disorders or severe disorders [19].

The perinatal period is valuable in many Asian cultures since it is an opportunity to expand the family lineage. Pregnant mothers generally enjoy good physical, emotional, and social support from family and friends [20]. Pregnancy systematically affects not only an individual and a family but also other parts of society such as family, friends, and larger community; therefore, systemic and social supports for pregnant women has significant effects within and throughout society [21]. Social support predicts the mental and physical health of pregnant woman [22]; it is defined as financial, instrumental, emotional, and psychological supports for the pregnant person during pregnancy by a social network of family members, friends, and community members [23]. Nevertheless, large families used to be changed to nuclear families; consequently, most pregnant mothers lose the traditional social support system that is usually caused by family members, and they need more support from their husbands during pregnancy [24].

However, contradictory evidence denies the effect of husband support in improving mental illness, including pregnancy anxiety in pregnant mothers [25]. According to a study conducted on African American pregnant women, the partner participation and type of relationship, and husband support were not effective on the improvement of pregnancy outcomes (preterm delivery and low birth weight) and health behaviors (prenatal care, drug use, and smoking) [26].

1.1. Purpose. This qualitative study was designed to examine the husbands' expectations and participatory performance in improving the anxiety disorders in pregnant women, according to the growing prevalence of anxiety disorders during pregnancy and lack of sufficient information about how the husband participates in treating the mental disorders.

2. Materials and Methods

2.1. Design. In this qualitative descriptive study, a semi-structured interview guided with open questions was used to collect information so that the participants express their views and expectations about the husbands' participatory role in the treatment of anxiety disorders. Transcribed interviews were analyzed using conventional content analysis. The study protocol was approved by the Institutional Ethical Board of Babol University of Medical Sciences (Ethics code: IR.MUBABOL.HRI.REC.1400.052).

2.2. Participants. Targeting convenience sampling was applied in this study. Participants were referred to four maternity care clinics, including two clinics in the hospitals and another in two private clinics. Inclusion criteria for the study

population were pregnant women over 18 years old and 13–38-week gestational age that was diagnosed with anxiety disorders in a structured clinical interview based on SCID-5. Participating females needed to have a partner.

2.3. Data Collection. Structured clinical interview for the DSM-5 (SCID-5) was performed on 98 pregnant women by the second author (MSh) [27] to identify pregnant women with anxiety disorders. The percentage of the positive agreement between the structured clinical interview for the DSM-5 (SCID-5) and clinical diagnoses ranged between 73% and 97% and the diagnostic sensitivity/specificity were >0.70 [28]. Subjects who were diagnosed with one of the types of generalized anxiety disorder, panic, simple panic disorder, agoraphobia, and social disorder were included in the clinical interview. 43 women were diagnosed with anxiety disorder; however, 30 women and 16 men agreed to enter the study until the themes were saturated. After examining the inclusion and exclusion requirements, eligible pregnant women were requested to refer to the clinic with their husbands for a quality interview the following week. A qualitative interview was performed in a separate and quiet room by an experienced clinical psychologist, the second author (MSh), when the informed consent was taken from the patients. The duration of the interview was 90–135 minutes. The interview was 30–45 minutes separately with the woman, 30–45 minutes separately with the man, and 30–50 minutes with the wife and husband. The questions were designed based on the study objectives of men and women, and the research team confirmed them in terms of clarity, simplicity, and appropriateness.

The interview structure began with open questions from the patient such as what do you expect from your husband to do to help reduce your anxiety? What role does your husband have in your anxiety? What behaviors in your husband reduce/increase your anxiety? The same questions were asked of men in a different way? What role do you think you have in reducing/increasing your wife's anxiety? What actions and behaviors in you increase/decrease your wife's anxiety?

The interviews were recorded with the participants' permission, receiving written consent, and nonverbal communication with the patient were noted. The research team analyzed each interview, and the next interview was then conducted. Besides, each recorded interview was transcribed. The couples were referred to a psychiatrist to treat a pregnant woman's anxiety at the end of the interview.

2.4. Analysis of Data. The researchers studied transcribed interviews several times and regarded any words or phrases uttered by the subjects as a code. The main concepts were defined in the form of coding. Codes that had a similar concept were placed in a class, and eventually classes and components were formed at a higher and broader level. This issue was performed several times for the text to reduce the data. Hence, the content was placed in its own category, and the related category was named. The overall data analysis process was performed using MAXQDA software (version 18, VERBI software, Berlin, Germany).

The Kappa index was used to measure the reliability of the coding and the consistency of the results achieved by the findings, and the internal validity or the experts' view was applied to evaluate the validity. Moreover, the kappa coefficient was calculated to be 0.85 and 0.80 for women in relation to the extracted model for the men group.

3. Results

Table 1 illustrates the demographic characteristics of pregnant women with anxiety disorder and their husbands. The mean age of women was ($M = 31.5$, SD = 4.7) and their husbands were ($M = 35.0$, SD = 4.9). Furthermore, the most anxiety disorder in participants was adjustment disorder (28.5%) and GAD (22.8%.), respectively.

Figure 1 shows a summary of the themes and subthemes of the men's view. According to Table 2, men's views on the expectations and participatory performances of husbands to improve pregnant women's anxiety were classified into three themes of emotion, behavior, and cognition. Moreover, some of the free codes proposed by the sample people were expressed to better understand each of the identified subthemes.

Three subthemes in the emotion theme, including psychological emotion support, appropriate verbal communication, and providing conditions for the entertainment had the most importance, respectively. In the behavior themes, following-up maternal and fetal health status, resilience to mood changes, participation in housekeeping, making positive changes in lifestyle, meeting financial and material expectations, participating in parenting, getting help from relatives, and regulating social relationships had great importance. Three subthemes in the cognition theme, including knowledge and information in the field of pregnancy, the ability of conflict resolution, and the adjustment of communication expectations had the most frequency, respectively.

Figure 2 shows a summary of the themes and subthemes of the women's view. According to Figure 2 and Table 3, the view of anxious women on the expectations and participatory performances of husbands to improve their anxiety were classified into three themes of emotion, behavior, and cognition. Furthermore, men's expectations and performances in the behavior theme had the highest frequency, indicating that women believed that their husbands' behaviors were more helpful in improving their anxiety.

In the emotion theme, psychological emotion support, strengthening verbal communication, receiving attention and love, and creating a field of fun and entertainment were important. In the field of behavior, following-up maternal and fetal health status, participation in housekeeping, adaptation to mood changes, financial support, companionship during childbirth, getting help from relatives, marital fidelity, participation in parenting, creating a more appropriate role model, and well-posedness to his family during infancy were significant, respectively. In the cognition field, the growth of knowledge in the field of pregnancy and the ability to resolve the conflict were the most basic components.

Table 1: Characteristics of the participants.

Age		Year	
Female		21–42 (31)	
Male		27–43 (35)	
Education	Under diploma		Above diploma
Female	17		13
Male	6		10
Living place	Urban		Rural
Female	10		20
Male	11		5
Job			
Female	House wife (19)		Employee (11)
Gravid		G1 : 8 ≥G3 : 12 ≥G3:12	
Gestational age at the time of the interview	≤20 weeks : 10		>20 weeks : 20
High risk pregnancy		Yes: 4 No: 26	
Type of anxiety disorder		Panic: 5 Adjustment: 10 PTSD: 4 GAD: 8 Phobia: 3	

PTSD: posttraumatic stress disorder; GAD: generalized anxiety disorder.

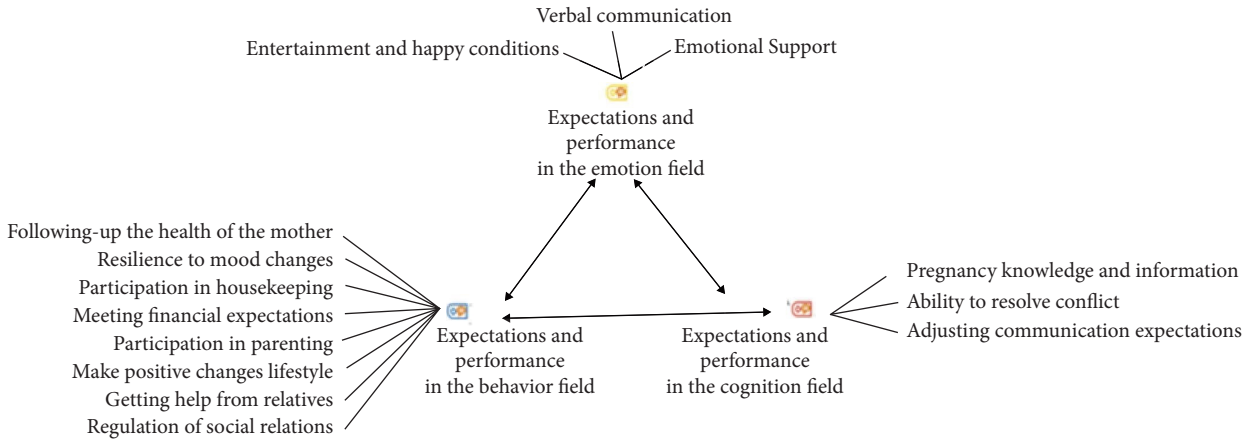

Figure 1: A multidimensional model of men's view from expectations and participatory performance of husbands in improving anxiety disorders in pregnant women.

4. Discussion

This qualitative study aimed to examine the expectations and participatory performance of husbands on improving anxiety disorders in pregnant women. Comparing the multidimensional model explains that the view related to the women and men with many similar themes and subthemes regarding the expectations and basic participatory performance of husbands has been regarding to reduce the anxiety of pregnant women. However, the number of identified subthemes was higher in women. Some studies were consistent with these findings and examined different levels of anxiety in pregnancy and the relationship between the level of this anxiety and various components, including issues related to marital relationships [6, 29]. Besides, other studies have stated the increase in the expectations of pregnant women about husband's participation during pregnancy and childbirth [30, 31].

Expectations and performances in the emotion field were more important from women's perspectives. According to anxious women and their husbands jointly, three components were effective to improve women's anxiety disorder emotional support, strengthening verbal communication, and providing entertainment to their husbands. The frequency of "psychological emotion support" was higher than the other components. The study conducted by Mehran et al. is in agreement with our study, which emphasizes understanding and emotional support of husbands during pregnancy with their wife's [32].

Anxious women stated that the component of "receiving attention and love from their husbands" is an important factor in improving their tensions. Hence, this factor was not

Table 2: Men's view about expectations and participatory performance of husbands in the improvement of anxiety disorders in pregnant women.

Themes	Subthemes	Samples of themes	Frequencies
Emotion	Psychological emotion support	(i) My wife expects me to hope and love her (ii) Give him morale in hardships and be with her	56 cases
	Proper verbal communication	(i) My wife expects me to be a good listener (ii) A woman to be able to easily express her concerns and worries with her husband	25 cases
	Entertainment and happy conditions	(i) To be able to walk with her and provide her with a happy background (ii) Change her circumstances by taking a trip	10 cases
Behavior	Following up the health status of mother and fetus	(i) To be with her in the ultrasound and clinic and listen to the baby's heartbeat (ii) Like a flower, she wants me to follow her health	40 cases
	Resilience against mood changes	(i) To be able to tolerate her physical and mental conditions during pregnancy (ii) To be able to cope with fatigue and boredom and daily worries	27 cases
	Participation in housekeeping	(i) Help her wash the dishes and sweep the house (ii) Do both outdoor work and cook for lunch and dinner	26 cases
	Making positive changes in lifestyle	(i) Avoid smoking and hookah or other substances (ii) Add nutrients to our diet and do exercise	18 cases
	Meeting financial and material expectations	(i) Be able to pay for surgery and pregnancy costs (ii) To be able to provide the cost of child-related purchases	14 cases
	Participation in parenting	(i) Take time to take care of other children (ii) Take the other children out to be able to rest	12 cases
	Getting help from relatives	(i) Get help from my mother and sister to prepare food for us (ii) Be in the hospital my mother or sister during her delivery	7 cases
	Regulation of social relations	(i) Cut off communication with bad friends (ii) Reduce our contact with families who do not benefit us	6 cases
Cognition	Knowledge and information in the field of pregnancy	(i) Go to counseling and get information about pregnancy (ii) Read parenting books and complete information myself	26 cases
	Ability to resolve conflicts	(i) Do not create tension and noise on various issues (ii) To be able to control my anger and solve problems	19 cases
	Adjusting communication expectations	(i) Do not expect to come to different parties and ceremonies as past (ii) Do not force her to have a guest and go to a party every night	11 cases

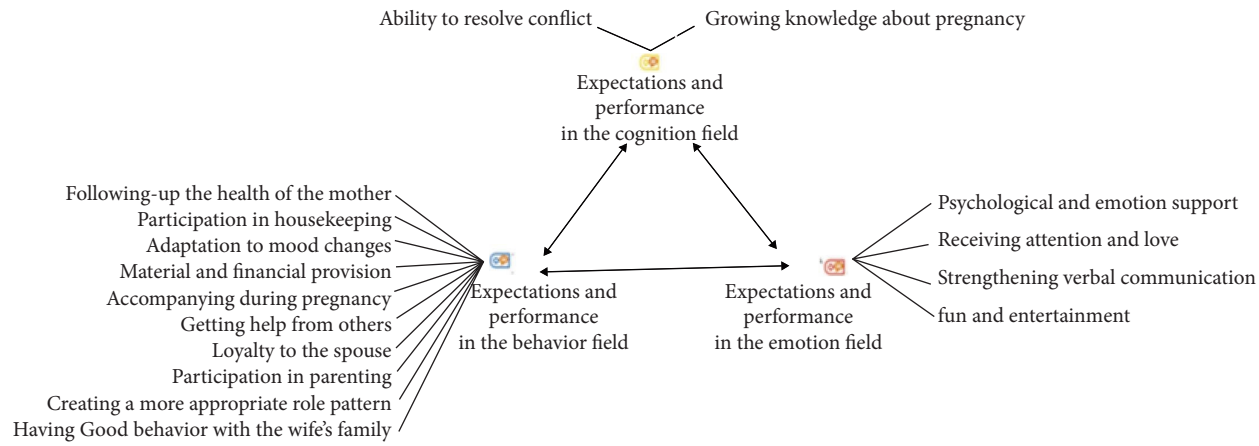

Figure 2: A multidimensional model of women's view from expectations and participatory performance of husbands in improving anxiety disorders in pregnant women.

very significant from the husbands' perspective. The husband's role in the family and towards their wife's, especially in the emotional field usually varies based on their experience in different cultures. One of the effective factors on husbands' participation in the emotional support of their wife's during pregnancy was a proper model [33]. Although realizing women's rights, gender equality, and maternal health have significantly progressed worldwide, there are main differences in the emotional field and expression of love among the sexes in terms of cultural norms [30].

From the perspective of women and men, two components of "knowledge and information in the field of pregnancy" and "ability to resolve conflicts" were identified as the main cognitive elements involved in reducing anxiety during pregnancy in the field of cognition; however, from the perspective of men, the component of "adjustment of men's communication expectations of women" were considered significant during the pregnancy. Some studies have suggested that men's workplaces can be structurally and culturally organized in a way to support fatherhood. Information support and raising men's awareness in the workplace and creating flexible working hours can increase men's participation to support pregnant women and then the role of fatherhood [34]. Individual differences among couples in terms of emotional and social personality and problem-solving ability, and some other skills can be effective for men's participation in the cognitive field [35].

The anxious women and their husbands commonly stated that the most important factor to reduce pregnancy anxiety is the "behavior field" with the most abundant component. There are four components which were important factors to reduce anxiety according to men and women, including following-up maternal and fetal health status, participation in housekeeping, compatibility to mood changes, material and financial support, getting help from relatives, and participation in parenting. Anxious women expected their husbands to contribute to the improvement of their anxiety via behaviors, such as "marital fidelity," "companionship during pregnancy and childbirth," "well-posedness with family and wife's family," and "more proper pattern role." According to these findings, some studies have defined the concept of husbands' participation in women's pregnancy issues as "accompanying the wife to receive maternity care," "participating in household chores," and "providing health advices to pregnant women" [36]. Previous studies, albeit in healthy rather than anxious women, emphasized that women liked that their husbands accompany them on pregnancy visits, especially the first visit [18]. Moreover, another study emphasized that husbands' performance and practical participation significantly affect reducing pregnancy anxiety and also the need to increase awareness and change their attitude about pregnancy [37].

These findings indicated that pregnant women's husbands have a relatively desirable view in harmony with women's needs for participating to reduce their anxiety. However, a study in African country pointed out that men seem to be reluctant to participate with women in pregnancy programs and childbirth [38]. There may be barriers to applying these positive views of men. Some husbands believe that "childbearing and pregnancy care are a feminine thing and their practical participation in matters related to pregnancy and participation in housekeeping and parenting, etc., cause embarrassment" and it is the main barrier to their participation [39, 40]. Hajiyan et al. indicated that many husbands could not properly accompany their wife during the perinatal period despite their inner desires in terms of barriers such as social norms, personal, organizational, economic, and legal constraints. If their wives accompany them in prenatal care, their awareness of pregnancy and the condition of fetus and wife will increase and cause empathy [35]. Soltani et al. reported that almost none of the husbands in the study had a negative attitude towards participation in their wife's' pregnancy care; nevertheless, traditional gender roles and social stigma were the main barriers to their participation in this field [41]. However, some reports from low to middle income countries indicate that husbands' participation in pregnancy and childbirth as well as the involvement in maternal and child health is low [38].

Table 3: Frequency of codes identified from women's perspectives on husbands' participation in the treatment.

Themes	Subthemes	Sample of free codes	Frequency of codes
Emotion	Psychological emotion support	(i) Give me morale and hope and tell me that these difficulties will end (ii) I feel that any problem that arises, he is like a mountain behind me	60 cases
	Strengthening verbal communication	(i) I would like to speak and my husband would fully understand (ii) Allocate time to talk to me during the day	43 cases
	Receiving attention and love	(i) I would like to attract attention and my husband pays attention (ii) Hear the sound of the baby's heart and feel that he is paying attention to me	42 cases
	Creating a field of fun and entertainment	(i) Go to the mountains or the garden, get some fresh air (ii) Go by car outside or do some shopping to change my mood	8 cases
Behavior	Following up the health status of mother and fetus	(i) Book a doctor's visit and be with me in the lab (ii) Have a daily massage and know my medications	52 cases
	Participation in housekeeping	(i) Do not expect that the food to be ready and everything is in order (ii) Take time to buy the essentials of the house	40 cases
	Adaptation to mood changes	(i) When I have pain, do not get angry and do not get bored (ii) Do not expect me to be fresh and cheerful as always and laugh with him	25 cases
	Meeting financial and material expectations	(i) Provide the necessary expenses for the delivery and the needs of the child (ii) Pay attention to my and my baby's nutrition in terms of nutrients	23 cases
	Companionship during childbirth	(i) When I leave the operating room, accompany me immediately (ii) Be with me so that I can bear the pain of childbirth more easily	19 cases
	Getting help from relatives	(i) His family accompany with us to take care of other children (ii) His family should behave in such a way that I feel that my family is with me	15 cases
	Marital fidelity	(i) Treat in a way that I feel comfortable with his loyalty (ii) Tolerate against sexual coldness or impotence during this period	14 cases
	Participation in parenting	(i) Play with other children (ii) Take responsibility for raising children	10 cases
	Creating a more appropriate role pattern	(i) Do not use ugly words in the car or other environments (ii) Respect me and the child in front of others	9 cases
	Well-posedness to his family during infancy	(i) Treat my mother properly so that she may stay in our house (ii) Do not show too much fatigue to my family	3 cases
Cognition	Knowledge in the field of pregnancy	(i) Participate in pregnancy training classes (ii) Share new information about childbirth and pregnancy with me	22 cases
	Ability to resolve conflicts	(i) Do not discuss on any issue and do not confuse me (ii) Instead of fighting, try to control self and solve problems logically in this nine-month period	20 cases

4.1. Strengths and Limitations. There were limitations despite the new results of this study regarding the expectations and participatory performance of husbands to reduce anxiety disorders in pregnant women and finding themes that could open new horizons for perinatal care of pregnant women as well as treatments for mental disorders in pregnancy. The unwillingness of some husbands to participate in the research was one of the research limitations which might have led to biased results. However, the researcher tried to solve this problem by explaining the purposes of research and ensuring the confidentiality of information and interviews to the desired extent. The next limitation was the lack of diagnostic clinical interviews for husbands. If the wife has a mental disorder, the husband's view may be affected regarding expectations and participatory performance. In this study, we did not have a valid psychological test/questionnaire for men, and the authors' own questionnaire was used. It is recommended that diagnostic clinical interviews will be conducted on the husbands of women with mental disorders in future studies.

4.2. Implications for Nursing Practice. Husbands' expectations and participatory performance to reduce the anxiety of pregnant women were produced in three themes of emotion, behavior, and cognition in terms of the men's and women's perspectives. Approximately 70% of subthemes were common among women and men which included emotion (emotional psychological support, strengthening verbal communication, receiving attention and love, and creating a field of entertainment), behavior (following up on the mother and fetus's health, participation in housekeeping, compatibility to mood changes, material and financial provision, and companionship during childbirth), and cognition (increasing the knowledge in the field of pregnancy and the ability to resolve conflict). However, the men's and women's themes had some differences. As men emphasized adjusting communication expectations and making positive changes in lifestyle, anxious women emphasized the themes of receiving attention and love, well-posedness, companionship in childbirth, and loyalty as important factors influencing the improvement of their disease. Thus, more studies are needed to examine the reasons for the commonalities and differences among themes in men and women. It is required to conduct additional studies to specify the facilitators and barriers to use the husband's participatory role to treat mental disorders in pregnant women, both in patients and in physicians and nurses.

The results of this study are greatly applied to maternal health cares and psychiatrists. The findings of this study advise obstetricians, nurses, and midwives to pay more attention to the role of husbands in pregnancy visits. The nurses and midwives should train pregnant women, especially women with anxiety symptoms so that their husbands accompany them during pregnancy visits. Moreover, maternal health cares should hold training classes for pregnant women's husbands to explain how men play a participatory role in improving women's mental health.

The women's and men's common view about the way of husbands' participation to improve anxiety in pregnancy opens a new horizon to treat the mental disorders in pregnancy, especially anxiety disorders. The low gap between men's and women's view indicates that husbands have psychologically initial readiness to participate in treating their wife's mental disorders. This study recommends that psychologist/psychiatrists use the potential of men's participation to treat mental disorders in pregnant women. Moreover, the results of this study could open a new horizon for the treatment of mental disorders in pregnancy. Psychotherapists and pharmacologists can consider "combining husbands' participation in supportive or medicinal therapies as one of the therapeutic components. These findings require designing effective studies on the role of husbands' participation in treating the mental disorders, especially anxiety disorders in pregnancy. It is also suggested that future studies should be conducted to remove barriers to husbands' participation or increase men's desire to participate to treat their wife's mental health.

Data Availability

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

Conflicts of Interest

The authors declare that they have no conflicts of interest.

References

[1] L. S. Leach, C. Poyser, and K. Fairweather-Schmidt, "Maternal perinatal anxiety: a review of prevalence and correlates," *Clinical Psychologist*, vol. 21, no. 1, pp. 4–19, 2017.

[2] K. F. E. van de Loo, R. Vlenterie, S. J. Nikkels et al., "Depression and anxiety during pregnancy: the influence of maternal characteristics," *Birthkit*, vol. 45, no. 4, pp. 478–489, 2018.

[3] C.-L. Dennis, K. Falah-Hassani, and R. Shiri, "Prevalence of antenatal and postnatal anxiety: systematic review and meta-analysis," *British Journal of Psychiatry*, vol. 210, no. 5, pp. 315–323, 2017.

[4] M. Faramarzi, F. Kheirkhah, S. Barat et al., "Prevalence and factors related to psychiatric symptoms in low risk pregnancy," *Caspian Journal of Internal Medicine*, vol. 11, no. 2, pp. 211–218, 2020.

[5] B. J. Kaplan, "Kaplan and sadock's synopsis of psychiatry. Behavioral sciences/clinical psychiatry," *Tijdschrift Voor Psychiatrie*, vol. 58, no. 1, pp. 78-79, 2016.

[6] K. Viswasam, G. D. Eslick, and V. Starcevic, "Prevalence, onset and course of anxiety disorders during pregnancy: a systematic review and meta analysis," *Journal of Affective Disorders*, vol. 255, pp. 27–40, 2019.

[7] L. He, T. Wang, H. Xu et al., "Prevalence of depression and anxiety in women with recurrent pregnancy loss and the associated risk factors," *Archives of Gynecology and Obstetrics*, vol. 300, no. 4, pp. 1061–1066, 2019.

[8] H. Bayrampour, S. McDonald, and S. Tough, "Risk factors of transient and persistent anxiety during pregnancy," *Midwifery*, vol. 31, no. 6, pp. 582–589, 2015.

[9] M. Furtado, C. H. Chow, S. Owais, B. N. Frey, and R. J. Van Lieshout, "Risk factors of new onset anxiety and anxiety exacerbation in the perinatal period: a systematic review and meta-analysis," *Journal of Affective Disorders*, vol. 238, pp. 626–635, 2018.

[10] E. J. Fawcett, N. Fairbrother, M. L. Cox, I. R. White, and J. M. Fawcett, "The prevalence of anxiety disorders during pregnancy and the postpartum period: a multivariate Bayesian meta-analysis," *Journal of Clinical Psychiatry*, vol. 80, no. 4, Article ID 18r12527, 2019.

[11] E. E. Accortt, A. C. D. Cheadle, and C. Dunkel Schetter, "Prenatal depression and adverse birth outcomes: an updated systematic review," *Maternal and Child Health Journal*, vol. 19, no. 6, pp. 1306–1337, 2015.

[12] M. I. van den Heuvel, F. C. L. Donkers, I. Winkler, R. A. Otte, and B. R. H. Van den Bergh, "Maternal mindfulness and anxiety during pregnancy affect infants' neural responses to sounds," *Social Cognitive and Affective Neuroscience*, vol. 10, no. 3, pp. 453–460, 2015.

[13] Z. Shahhosseini, M. Pourasghar, A. Khalilian, and F. Salehi, "A review of the effects of anxiety during pregnancy on children's health," *Materia Socio Medica*, vol. 27, no. 3, p. 200, 2015.

[14] K. Hadfield, S. Akyirem, L. Sartori et al., "Measurement of pregnancy-related anxiety worldwide: a systematic review," *BMC Pregnancy and Childbirth*, vol. 22, no. 1, pp. 331–410, 2022.

[15] S.-Y. Gao, Q.-J. Wu, C. Sun et al., "Selective serotonin reuptake inhibitor use during early pregnancy and congenital malformations: a systematic review and meta-analysis of cohort studies of more than 9 million births," *BMC Medicine*, vol. 16, no. 1, pp. 205–214, 2018.

[16] S. Grigoriadis, L. Graves, M. Peer et al., "Benzodiazepine use during pregnancy alone or in combination with an antidepressant and congenital malformations: systematic review and meta-analysis," *Journal of Clinical Psychiatry*, vol. 80, no. 4, Article ID 18r12412, 2019.

[17] R. Hlongwane and W. N. Phoswa, "Effect of antidepressants in pregnancy outcomes: a protocol for systematic review and meta-analysis," *Medicine (Baltimore)*, vol. 100, no. 50, Article ID e27885, 2021.

[18] K. N. Anderson, J. N. Lind, R. M. Simeone et al., "Maternal use of specific antidepressant medications during early pregnancy and the risk of selected birth defects," *JAMA Psychiatry*, vol. 77, no. 12, pp. 1246–1255, 2020.

[19] N. M. Molenaar, A. M. Kamperman, P. Boyce, and V. Bergink, "Guidelines on treatment of perinatal depression with antidepressants: an international review," *Australian and New Zealand Journal of Psychiatry*, vol. 52, no. 4, pp. 320–327, 2018.

[20] A. Nisar, J. Yin, A. Waqas et al., "Prevalence of perinatal depression and its determinants in Mainland China: a systematic review and meta-analysis," *Journal of Affective Disorders*, vol. 277, pp. 1022–1037, 2020.

[21] B. A. Verma, L. P. Nichols, M. A. Plegue, M. H. Moniz, M. Rai, and T. Chang, "Advice given by community members to pregnant women: a mixed methods study," *BMC Pregnancy and Childbirth*, vol. 16, no. 1, pp. 349–410, 2016.

[22] A. L. Nowak, J. M. Braungart-Rieker, and P. X. Kuo, "Social support moderates the relation between childhood trauma and prenatal depressive symptoms in adolescent mothers," *Journal of Reproductive and Infant Psychology*, vol. 40, no. 6, pp. 644–658, 2021.

[23] D. Ertan, C. Hingray, E. Burlacu, A. Sterlé, and W. El-Hage, "Post-traumatic stress disorder following childbirth," *BMC Psychiatry*, vol. 21, no. 1, pp. 155–159, 2021.

[24] E. O. Çalıkoğlu, B. Bedir, A. Aydın, and S. Yılmaz, "An investigation of the prevalence of depression and related factors in pregnant women living in the province of Erzurum," *The European Research Journal*, vol. 4, no. 4, pp. 381–389, 2018.

[25] F. Cluxton-Keller and M. L. Bruce, "Clinical effectiveness of family therapeutic interventions in the prevention and treatment of perinatal depression: a systematic review and meta-analysis," *PLoS One*, vol. 13, no. 6, Article ID e0198730, 2018.

[26] P. J. Surkan, L. Dong, Y. Ji et al., "Paternal involvement and support and risk of preterm birth: findings from the Boston birth cohort," *Journal of Psychosomatic Obstetrics and Gynecology*, vol. 40, no. 1, pp. 48–56, 2019.

[27] M. B. First, J. B. Williams, L. S. Benjamin, and R. L. Spitzer, "SCID-5-PD: structured clinical interview for DSM-5® personality disorders," *American Psychiatric Association Publishing*, vol. 34, p. 7383, 2016.

[28] F. L. Osório, S. R. Loureiro, J. E. C. Hallak et al., "Clinical validity and intrarater and test–retest reliability of the structured clinical interview for DSM-5–clinician version (SCID-5-CV)," *Psychiatry and Clinical Neurosciences*, vol. 73, no. 12, pp. 754–760, 2019.

[29] S. Matthey, "Anxiety and stress during pregnancy and the postpartum period," *The Oxford handbook of perinatal psychology*, vol. 55, no. 4, p. 3337, 2016.

[30] R. A. Aborigo, D. D. Reidpath, A. R. Oduro, and P. Allotey, "Male involvement in maternal health: perspectives of opinion leaders," *BMC Pregnancy and Childbirth*, vol. 18, no. 1, pp. 3–10, 2018.

[31] A. S. Adeniran, A. P. Aboyeji, A. A. Fawole, O. R. Balogun, K. T. Adesina, and P. I. Adeniran, "Male Partner's role during pregnancy, labour and delivery: expectations of pregnant women in Nigeria," *International Journal of Health Sciences*, vol. 9, no. 3, pp. 301–309, 2015.

[32] V. Firouzan, M. Noroozi, M. Mirghafourvand, and Z. Farajzadegan, "Participation of father in perinatal care: a qualitative study from the perspective of mothers, fathers, caregivers, managers and policymakers in Iran," *BMC Pregnancy and Childbirth*, vol. 18, no. 1, pp. 297–310, 2018.

[33] J. M. Bowman, "Men's roles in families," *Encyclopedia of Family Studies*, pp. 1–3, 2016.

[34] B. Brandth and E. Kvande, "Workplace support of fathers' parental leave use in Norway," *Community, Work & Family*, vol. 22, no. 1, pp. 43–57, 2019.

[35] S. Hajian, N. Mehran, M. Simbar, and H. Alavi Majd, "The barriers and facilitators of Iranian men's involvement in perinatal care: a qualitative study," *Reproductive Health*, vol. 19, no. 1, pp. 48-49, 2022.

[36] V. Chandra-Mouli, J. Svanemyr, A. Amin et al., "Twenty years after International Conference on Population and Development: where are we with adolescent sexual and reproductive health and rights?" *Journal of Adolescent Health*, vol. 56, no. 1, pp. S1–S6, 2015.

[37] S. Nasiri, F. Waseghi, S. Moravveji, and Z. Karimian, "Attitude and participation of men regarding prenatal care, Childbirth, and postpartum care in Kashan City, Iran," *Iranian Journal of Nursing and Midwifery Research*, vol. 26, no. 4, p. 368, 2021.

[38] S. O. Maluka and A. K. Peneza, "Perceptions on male involvement in pregnancy and childbirth in Masasi District, Tanzania: a qualitative study," *Reproductive Health*, vol. 15, no. 1, pp. 68–77, 2018.

[39] Z. B. Mamo, S. S. Kebede, S. D. Agidew, and M. M. Belay, "Determinants of male partner involvement during antenatal care among pregnant women in Gedeo Zone, South Ethiopia: a case-control study," *Annals of Global Health*, vol. 87, no. 1, p. 19, 2021.

[40] E. Vermeulen, A. Solnes Miltenburg, J. Barras, N. Maselle, M. Van Elteren, and J. Van Roosmalen, "Opportunities for male involvement during pregnancy in Magu district, rural Tanzania," *BMC Pregnancy and Childbirth*, vol. 16, no. 1, pp. 66–69, 2016.

[41] F. Soltani, M. Majidi, F. Shobeiri, P. Parsa, and G. Roshanaei, "Knowledge and attitude of men towards participation in their wives' perinatal care," *International Journal of Women's Health and Reproduction Sciences*, vol. 6, no. 3, pp. 356–362, 2017.