



Received: 2025.11.25

Accepted: 2026.03.24

Available online: 2026.04.20

Published: 2026.XX.XX

Couple Relationships and Interaction During Pregnancy: A Comprehensive Review of Key Relational Dynamics

Authors' Contribution:

Study Design A
 Data Collection B
 Statistical Analysis C
 Data Interpretation D
 Manuscript Preparation E
 Literature Search F
 Funds Collection G

AEF 1 Yujia Huang
EF 1 Xueni Xiao
EF 2,3 Chaojun Shan
AEF 2,3 Chuanya Huang

1 Department of Nursing, West China Hospital, Sichuan University/West China School of Nursing, Sichuan University, Chengdu, Sichuan, PR China
 2 Department of Obstetrics and Gynecology Nursing, West China Second University Hospital, Sichuan University, Chengdu, Sichuan, PR China
 3 Key Laboratory of Birth Defects and Related Diseases of Women and Children (Sichuan University), Ministry of Education, Chengdu, Sichuan, PR China

Corresponding Author: Chuanya Huang, e-mail: huangchuanya@scu.edu.cn
Financial support: None declared
Conflict of interest: None declared

APPROVED GALLEY PROOF

Pregnancy is a transformative period that profoundly affects couple relationships and interactions. While this phase may strengthen intimacy and mutual understanding between partners, it also introduces significant physiological, psychological, and social stressors that can challenge relationship satisfaction and overall well-being. The dynamics of couple relationships during pregnancy affect not only the partners' emotional and mental health but also pregnancy outcomes, family functioning, and postnatal adaptation. A growing body of research has examined various aspects of couple relationships during this period, yet a comprehensive synthesis of the key factors influencing these dynamics remains limited. This review synthesizes current research on couple relationships during pregnancy, focusing on factors such as emotional intimacy, communication patterns, role transitions, and male involvement. A literature search was conducted in PubMed, Web of Science, and CNKI databases for studies published from December 2003 to December 2023. A total of 71 articles were included in this review after screening. The article aims to review both facilitators and barriers to positive couple interactions, emphasizing the need for targeted interventions to foster healthy relationship dynamics. By identifying gaps in existing research and suggesting directions for future studies, this review offers valuable insights for healthcare professionals, policymakers, and researchers aiming to improve relationship quality and better support pregnant women and their partners.

Keywords: **Pregnancy • Women's Health • Communication • Review**

Full-text PDF: <https://www.medscimonit.com/abstract/index/idArt/952218>

4719 — — 72



Publisher's note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher

Introduction

Pregnancy is a unique and transformative period in a couple's life, characterized by significant physiological, psychological, and social changes. During this time, both partners undergo shifts in roles and responsibilities, which may strengthen their emotional bond but also introduce new stressors and challenges to their relationship [1]. Anticipation of parenthood, lifestyle changes, and concerns about the health and well-being of the mother and baby can lead to fluctuations in relationship dynamics. Effective couple interactions during pregnancy are crucial for fostering mutual understanding, emotional support, and adaptive coping strategies [2]. Positive interactions can strengthen intimacy and reinforce relationship satisfaction, while negative interactions can lead to increased conflict, emotional distress, and even adverse maternal and fetal health outcomes.

Research on couple relationships during pregnancy has gained increasing attention in recent years due to its crucial role in maternal mental health, birth outcomes, and the long-term well-being of both partners [3]. Studies show that strong partner support during pregnancy can reduce maternal anxiety and depression, improve adherence to prenatal care, and contribute to healthier infant development [4]. Additionally, active male involvement in pregnancy-related activities is linked to better relationship satisfaction and increased engagement in co-parenting after childbirth. However, existing studies also identify barriers to effective couple interactions during pregnancy, including traditional gender roles, communication difficulties, and external stressors such as financial pressures and work-life balance issues [5].

Despite the growing body of literature on this topic, a comprehensive synthesis of the factors influencing couple relationships and interactions during pregnancy is still necessary. This review aims to synthesize current research on couple relationships during pregnancy, with a particular focus on 4 key domains: emotional intimacy, communication patterns, role transitions, and male involvement. By exploring both the facilitators and barriers to healthy couple interactions, we aim to provide valuable insights for healthcare professionals, policymakers, and researchers. This review also highlights the need for targeted interventions to encourage male involvement in pregnancy-related activities and to enhance the overall quality of couple relationships during this critical period.

It should be noted that the scope of this review is limited to heterosexual couple relationships during pregnancy. This focus was determined by the current state of the literature, as the vast majority of existing research on couple dynamics and partner involvement during pregnancy has been conducted on heterosexual couples with male partners. Studies

examining same-sex female couples during pregnancy remain scarce and represent a distinct body of literature with unique dynamics and considerations. Therefore, this review specifically examines male partner involvement and its implications for maternal and family health and does not include studies on same-sex couples.

Search Strategy

A literature search was conducted in PubMed, Web of Science, and the China National Knowledge Infrastructure (CNKI) databases to identify studies on couple relationships during pregnancy. The search focused on literature published up to December 2023, with search terms including "pregnancy", "couple relationship", "partner support", "male involvement", and "communication". The reference lists of relevant articles were also manually screened for additional eligible studies.

Inclusion Criteria

Studies were included if they (1) focused on couple relationships, partner interactions, or male involvement during pregnancy; (2) were original research or review articles; and (3) were published in English or Chinese. No restrictions were placed on study design.

Exclusion Criteria

Studies were excluded if they (1) examined same-sex female couples; (2) were conference abstracts, editorials, commentaries, or case reports; (3) focused primarily on postpartum relationships without substantial data on the pregnancy period; and (4) were not available in full text.

After screening, 71 articles in total were included in this review [1-4,6-72].

Overview of Research Related to Couple Relationships During Pregnancy

Impact of Pregnancy on Couple Relationships

Although creating a new life can enrich a couple's life, the impact of the transition to parenthood on the marital relationship remains controversial [6-8]. Pregnancy is a period of role reorganization for couples, often accompanied by conflicts and unmet expectations, leading to more negative emotions and interactions between partners, compared with previous periods of the relationship [9]. Mitnick et al conducted a meta-analysis of 37

studies on marital satisfaction from pregnancy to the postpartum period [10]. The results showed that both men and women experienced a significant decline in marital satisfaction during this period. Similarly, another systematic review found that the tremendous stress from pregnancy to postpartum can negatively affect the relationship between couples [11]. Although these studies addressed couple dynamics during pregnancy, they primarily focused on relationship changes throughout the entire transition from pregnancy to postpartum. A longitudinal study by Leonhardt et al found that many couples maintain high marital satisfaction during pregnancy [12]. This could be attributed to couples engaging in more discussions and decision-making regarding pregnancy, childbirth, and parenting during this period, fostering communication, collaboration, and mutual understanding. Lindblom et al pointed out that many postpartum conflicts, relationship distancing, and ideological differences already emerge during pregnancy [13]. Hence, they advocated for early identification of at-risk relationships during pregnancy. If couples establish shared goals during pregnancy, this period can serve as an opportunity to strengthen their relationship. Studies show that couples with positive relationships during pregnancy are more likely to maintain or even enhance their marital quality after childbirth, whereas couples experiencing relationship problems during pregnancy may see further deterioration in marital quality after childbirth [14,15]. Given the ongoing debate regarding the impact of pregnancy on couples, the effect of pregnancy on couple relationships remains a topic warranting further in-depth investigation.

Association Between Couple Relationships During Pregnancy and Family Functioning

Previous studies have shown a mutual influence between couple relationships during pregnancy and family functioning. The formation of new roles, shared experiences, and added responsibilities during pregnancy may either foster the growth of couple relationships or lead to decreased relationship satisfaction and family dysfunction [16]. According to family life cycle theory, families with more stable functioning in previous stages tend to have stronger couple relationships and transition more smoothly into subsequent phases [17]. A study by Ozcan et al showed that families with better adaptability tend to exhibit stronger couple relationships during pregnancy and healthier mother-infant bonds after birth [18]. This suggests that in families with stronger overall functioning, couples are more likely to maintain positive relationships during pregnancy. A survey across multiple European countries indicated that low well-being during pregnancy, along with tense couple relationships, may lead to decreased family closeness both postpartum and in the long term [19]. These factors were also closely associated with disruptive behaviors, such as restlessness and temper tantrums, exhibited by 2-year-old children [19]. Therefore, the relationship between husband and wife during pregnancy

can also affect family functioning. Overall, couples with stronger family functions, particularly in areas such as emotional support, intimacy, conflict management, and stress handling, are better equipped to adapt to new roles and challenges during pregnancy, resulting in stronger couple relationships [20].

Association Between Couple Relationships and Mental Health During Pregnancy

Pregnancy brings new roles and responsibilities, requiring couples to gradually accept the reality of becoming parents. These changes can affect their mental health. However, there is ongoing debate about whether pregnancy should be considered a stressful life event for couples. Some researchers argue that pregnancy causes changes or restructuring in the couple relationship, leading to stress for both partners [21,22]. Pregnancy-related stress, due to marital conflict, financial strain, or fear of childbirth, can significantly affect both parents, increasing the risk of anxiety and depression. A systematic review by Antoniou et al found that most studies have shown a correlation between partner support and prenatal depression and anxiety, with supportive partner relationships serving as a protective factor against perinatal mental disorders [23]. Furthermore, a subsequent literature review by the same team emphasized that support provided by partners is a very important protective factor in reducing mental health disorders in both the prenatal and postnatal periods [24]. This can result in adverse outcomes, including preterm birth, low birth weight, and postpartum depression. Partners of pregnant women can also experience increased stress, reduced emotional bonding with the baby, and impaired partner relationships [23,24]. Ye et al conducted a study on stress and anxiety in couples during pregnancy [25], using the actor-partner interdependence model approach to analyze the mutual impact of stress and anxiety between couples. The results showed that stress levels during pregnancy were correlated not only with an individual's own pregnancy-related anxiety but also with their partner's anxiety levels. In a second part of the same study, the author used a phenomenological approach to explore the sources of stress for couples during pregnancy [25]. The findings identified 3 primary stressors for pregnant women: workplace conflict, physical discomfort, and identity issues. For the pregnant women's partners, 4 key stressors were identified: beliefs about pregnancy, concerns about the woman's health, responsibility for caring for the pregnant women, and coping strategies. The stressors during pregnancy, which affect the psychological health of couples, may further lead to a decline in the quality of their relationship. Generally, lower marital satisfaction and poorer relationship quality during pregnancy can increase the risk of mental health issues for both partners, potentially leading to anxiety and/or depression. These negative emotions and mental health conditions can, in turn, contribute to further decline in marital satisfaction [26]. A grounded theory study by Donovan in

Australia, which focused on male experiences during pregnancy, found that couples who understand that increased stress, anxiety, and tension are common experiences in early pregnancy are more likely to cope effectively with these changes. As a result, couples are more likely to experience higher relationship satisfaction during pregnancy [27]. Therefore, it is important to design targeted interventions centered on pregnant women and their partners to reduce stress and anxiety, thereby improving relationship quality and satisfaction during pregnancy.

Association Between Couple Relationships and Interaction Patterns During Pregnancy

The interaction pattern between couples during pregnancy is critical. Previous studies have shown that pregnant women often expect more affection and support from their husbands during this period [28]. However, inappropriate interaction patterns can prevent both partners from perceiving the love and support they expect, negatively impacting their relationship [29]. Donovan's grounded theory study also revealed that pregnant women want their husbands to participate more in pregnancy-related activities and offer support [27]. However, they rarely communicate their needs directly, leading to husbands having uncertainty in how they should respond. This lack of clarity may create tension in the couple's relationship [27]. Ramsdell et al pointed out that a husband's ability to meet his wife's increasing expectations during pregnancy may significantly affect how the couple adapts to the new family phase [30]. However, a study on first-time parents found that some husbands were worried about their wives' physical burdens during pregnancy, childbirth, and postpartum childcare, but their wives were unaware of these concerns [31]. This suggests a cognitive gap between the husband and wife, and problems with the interaction pattern, causing some of the husbands' verbal and behavioral participation to be perceived as unsupportive by their wives.

If couples engage in frank and direct communication, these cognitive differences could be resolved, preventing misunderstandings. Therefore, interaction patterns during pregnancy can significantly affect couple relationships. Medical professionals could implement interventions to improve communication between couples during pregnancy, which could, in turn, enhance the overall quality of their relationship.

Overview of Research on Couple Interaction During Pregnancy

Male Involvement in Pregnancy-Related Activities

The 1994 International Conference on Population and Development in Cairo marked the first widespread recognition

of the importance of men's roles in reproductive health and maternal and child healthcare [3]. Since then, research on male involvement in maternal and child healthcare has steadily increased worldwide, aiming to improve maternal and neonatal outcomes. Studies show that active male involvement in pregnancy-related activities can benefit maternal and child health, family harmony, and social development. During pregnancy, men are often seen as the primary source of psychosocial support for women [3,32-34]. A growing body of evidence highlights the protective role of male partner support against perinatal mental health problems. A longitudinal study by Henshaw et al showed that maternal perceptions of partner infant support significantly predicted maternal depressive symptoms in the early postpartum period, underscoring the importance of male partner support for maternal mental health [35]. Additionally, research indicates that support from male partners during pregnancy may reduce the risk of prenatal depression [36] and fear of childbirth [37].

Several intervention studies have shown that male involvement in nutrition management and other health practices helps maintain a healthy weight during pregnancy and reduces the risk of complications such as gestational hypertension and gestational diabetes mellitus [38-40]. For newborns, male involvement during pregnancy can indirectly improve neonatal health by enhancing maternal health. Domestic and international studies indicate that male support during pregnancy is linked to a lower risk of preterm birth, macrosomia, and low birth weight [41,42]. Moreover, male involvement in pregnancy-related activities increases their knowledge of childbirth and postpartum care, which can improve breastfeeding rates and exclusive breastfeeding rates [43,44].

Active male involvement during pregnancy also facilitates the transition into the fatherhood role. A smooth role transition encourages men to participate more actively in child-rearing and enhances emotional bonding between fathers and their children, contributing to fathers' well-being [45]. In the long term, the father-child relationship influences children's health behaviors, socio-emotional development, and temperament [1,46]. Furthermore, surveys indicated that negative pregnancy experiences significantly reduce women's willingness to have more children [28,47]. Therefore, insufficient male involvement during pregnancy may negatively affect the pregnancy experience, potentially reducing couples' desire for subsequent pregnancies.

Tools for Assessing Male Involvement in Pregnancy-Related Activities

Male involvement in pregnancy-related activities is a broad, subjective concept with no universally accepted definition in the literature. Consequently, the tools used to evaluate male

involvement during pregnancy vary across studies, with a notable lack of widely accepted assessment instruments.

Many studies have employed limited definitions of male involvement, often focusing solely on whether men accompany their wives to antenatal care visits or participate in HIV-related testing. For instance, studies conducted by Bello et al in Kenya [48] and Mohammed et al in Ghana [49] used attendance at antenatal visits as the sole criterion for evaluating male involvement. However, such narrow definitions are problematic because they overlook other forms of involvement. Some men may be unable to attend antenatal care visits due to work commitments or other constraints, but they may provide support in other ways, such as financial assistance, nutritional care, or household responsibilities. Relying on a single criterion, such as antenatal visit attendance, to measure male involvement risks overlooking these important contributions and leads to a biased evaluation. Some studies have adopted more comprehensive approaches to assess male involvement by considering different types of support. For example, a study by Gibore et al in Tanzania [50], which surveyed 966 men, used a scoring system with 4 criteria: whether the men accompanied their wives to antenatal care visits, provided physical assistance during pregnancy, participated in planning antenatal care visits, and discussed their wives' health with healthcare professionals. Each criterion was scored between 0 and 1, with 1 point for participation and 0 for non-participation. The total score ranged from 0 to 4, with scores of 0 to 2 indicating low involvement and 3 to 4 indicating high involvement. This method provides a more balanced evaluation of male involvement in pregnancy-related activities. However, the indicators used in this study remain limited and fail to capture the full range of male contributions.

A review by Galle et al [51] on male involvement assessment tools highlighted that the core elements of male involvement, such as emotional, behavioral, and physical support, are relatively consistent across different countries. Developing an inclusive, multi-dimensional assessment tool will improve the accuracy of evaluating male involvement and provide valuable insights for healthcare providers in designing interventions to enhance male involvement in maternal care. Therefore, developing a comprehensive and widely applicable tool to evaluate male involvement during pregnancy is a crucial direction for future research.

Evaluation Period and Perspective of Male Involvement in Pregnancy-Related Activities

The timing of assessments and the perspectives from which male involvement during pregnancy is evaluated are crucial for research results. Most studies have evaluated male involvement either during pregnancy or within the first 0 to 6 months postpartum [3,52,53]. However, both timing choices

have certain limitations. When assessments are conducted during pregnancy, there is a risk of an incomplete evaluation, as the full course of pregnancy has not concluded. Conversely, conducting assessments long after childbirth introduces recall bias. Therefore, conducting assessments in the early postpartum period is more reasonable, as it allows for a comprehensive evaluation while minimizing recall bias.

Most studies assessing male involvement have relied on reports from either the husband or the wife alone [34,54,55]. However, evaluating male involvement from a single-gender perspective can introduce significant limitations. For instance, wives may fail to perceive certain forms of support from their husbands, especially if the support does not meet their needs or expectations. As a result, they may rate their husbands' involvement lower than it actually is. These differing perspectives may lead to discrepancies in the evaluation of male involvement. Studies relying on only one partner's viewpoint risk producing biased results that fail to capture the full scope of male involvement during pregnancy. A dual-perspective approach, in which both the men and women are surveyed, offers a more comprehensive evaluation. By comparing both partners' perceptions, researchers can identify discrepancies in how involvement is perceived and experienced, pinpoint areas of misunderstanding or unmet expectations, and design targeted interventions to improve communication and strengthen male involvement in ways that meet both partners' needs. For example, studies by Rahayu et al and Rahman et al included men and women in their assessments, providing richer insights into the dynamics of male involvement [56,57]. These studies revealed that while men may perceive themselves as supportive, their actions are sometimes misinterpreted or go unnoticed by their wives, highlighting the need for better communication and shared understanding during pregnancy. Hence, comprehensive evaluation may enable healthcare providers to develop more effective interventions aimed at enhancing male involvement, improving maternal experiences, and fostering healthier family relationships.

Male Involvement in Pregnancy-Related Activities in Different Countries

Research on male involvement in pregnancy-related activities vary across countries and regions. A systematic review by Galle et al found that North American and European countries focus more on the role of men in improving maternal psychosocial health [3]. In contrast, African studies mainly emphasize male involvement in preventing mother-to-child transmission of HIV [3]. Meanwhile, studies from Asian countries pay more attention to the role of men in preventing malnutrition among pregnant women and infants [3]. Additionally, countries adopt different approaches to promoting male involvement in pregnancy-related activities. African studies focus on utilizing networks and phone-based interventions to encourage men to participate in

HIV testing during pregnancy, thereby better protecting maternal and child health. In North America and Europe, the focus is on addressing gender role issues [3]. In China, research primarily centers on the benefits of husbands attending prenatal courses and receiving prenatal education [58]. Some studies have also designed interventions to engage husbands in managing the blood sugar and weight of pregnant women with gestational diabetes mellitus [39,40]. However, Zhang et al noted that Chinese studies lack surveys on the current status of male involvement in pregnancy-related activities [59]. Implementing interventions without a clear understanding of the current situation lacks precision and may not yield the desired outcomes. A meta-analysis showed that couple-centered interventions have limited effects on improving communication skills and relationship quality during pregnancy [60]. In response, Trillingsgaard et al suggested that the weaker impact of these interventions on pregnant women and their partners compared with general couples may be due to directly adopting intervention strategies from other countries without considering specific social, cultural, and familial contexts [61]. Therefore, while international research provides valuable insights into understanding male involvement and designing intervention strategies, it may not be directly applicable to other countries. It is essential to first understand the current situation and then design culturally appropriate interventions to promote active male involvement in pregnancy-related activities. These regional differences underscore the importance of cultural context in shaping couple dynamics – a point further explored in the theoretical discussion below.

Factors Influencing Male Involvement in Pregnancy-Related Activities

Studies have shown that sociodemographic factors, family factors, and health factors can affect the extent of male involvement in pregnancy-related activities. Sociodemographic factors, such as age, education level, ethnicity, income, occupation, place of residence, and the number of children, have been found to be associated with male involvement in pregnancy-related activities [2,50,62,63]. Family factors also play a role. Xue et al found that male involvement in pregnancy-related activities is positively correlated with marital satisfaction and relationship intimacy during pregnancy [2]. A qualitative study by Kaye et al showed that men's perceptions and understanding of their relationship with their partner could influence their participation in pregnancy-related activities [64]. Regarding health factors, men are more likely to increase their involvement during pregnancy if they perceive potential threats to maternal or neonatal outcomes [62]. Additionally, Aarnio et al [65] and Falade-Fatila and Adebayo [66] noted that the presence of maternal complications or pregnancy-related comorbidities could also affect the level of male involvement in pregnancy-related activities.

Theoretical Research on Couple Interaction During Pregnancy

Theoretical research on couple interactions during pregnancy is currently limited. Most theories focus on the transition to parenthood phase, often examining couple interactions from the perspective of relationship science. Bowen's Family Systems Theory suggests that the family functions as a unit, in which the expectations, behaviors, and emotions of family members are interdependent [67]. Seefeld et al suggested that childbearing can be a source of stress for both partners, and their reactions to stress (including emotions and behaviors) influence one another [68]. For example, positive emotions from one partner during pregnancy can predict higher relationship satisfaction after childbirth, highlighting the interdependence between partners [6].

Attachment Theory is also frequently used to understand couple relationships during this period [69]. It posits that individuals develop mental models of their attachment figures and interaction patterns based on previous relationships and experiences, known as attachment styles [70]. During the transition to parenthood phase, the influence of attachment styles on family relationships becomes more apparent than at other times [71]. For instance, one partner may expect high levels of support from the other but may neglect to provide support in return, leading to lower relationship satisfaction [68]. However, while the transition to parenthood covers the entire period from pregnancy to postpartum, the family structure changes after childbirth with the addition of a new family member, differentiating it from the pregnancy phase. Therefore, theoretical perspectives used to interpret couple interactions during the transition to parenthood may not fully apply to pregnancy interactions.

While viewing couple interactions from a relationship science perspective can deepen the understanding of the driving forces behind family relationship changes during the transition to parenthood, Kuersten-Hogan et al [69] pointed out that scholars studying relationship science often overlook the broader social and cultural contexts in which couples experience pregnancy. In this regard, Eddy et al [4] conducted a grounded theory study in the United States to explore the effect of husbands' active involvement in supporting their pregnant wives on postnatal couple relationships. The study found that husbands' active involvement during pregnancy strengthened postnatal relationships. Their involvement included 4 interconnected elements: providing support with a positive attitude, instrumental support, emotional support, and responding during critical moments. Couples in the study described 5 ways in which husbands' active involvement during pregnancy improved their relationships: increased trust, more mature relationships, greater love, enhanced communication, and ongoing

support. However, the cultural specificity of couple interaction processes has been highlighted by recent research. Mayer's study of couples from 14 cultural backgrounds demonstrated that cultural differences in values, norms, and communication create unique challenges for couples, necessitating culturally tailored coping strategies [72]. This suggests that theories developed within a single cultural framework may have limited relevance in other cultural settings. Given the significant differences in culture, social norms, and healthcare services across countries, the grounded theory developed by Eddy et al may not be suitable for explaining couple interactions during pregnancy in other countries. Therefore, it is necessary to explore couple interaction processes during pregnancy within different cultural contexts and to construct relevant theories accordingly.

Future Directions

Future research on couple relationships and interactions during pregnancy may consider addressing several key gaps identified in the existing literature. First, while many studies have explored the effect of pregnancy on couple relationships, most focus on the transition to parenthood as a whole, rather than exploring relationship dynamics specifically during pregnancy. More longitudinal studies are needed to track changes in couple interactions from early pregnancy to the postpartum period, identifying critical periods for intervention and support. Second, cultural and contextual variations in couple interactions during pregnancy are still underexplored. Current research predominantly focuses on Western and African populations, with few studies from Asian cultural contexts. Future research should incorporate diverse sociocultural perspectives to understand how gender norms, family expectations, and healthcare systems influence couple relationships and male involvement during pregnancy. This will enable the development of culturally tailored interventions. Third, refined assessment tools are needed to evaluate male involvement in pregnancy-related activities. Many existing studies rely on limited indicators, such as antenatal care visit attendance, which may not fully capture the various ways men support their partners during pregnancy. Future research should develop comprehensive, multidimensional assessment tools that consider emotional, financial, and practical support, along with communication and decision-making involvement. Fourth, studies on couple interactions during pregnancy often adopt a single-gender perspective, focusing on the experience of either the man or woman. However, relationship dynamics are inherently dyadic, and research should incorporate both partners' perspectives for a more holistic understanding. Methods such as dyadic analysis or couple-centered qualitative studies could offer richer insights into relationship expectations, communication patterns, and support needs. Finally, intervention-based

research is needed to explore strategies for improving couple interactions and male involvement during pregnancy. While some studies have examined the benefits of prenatal education and counseling, the effectiveness of couple-focused interventions remains unclear. Future studies should evaluate targeted programs that enhance communication, emotional intimacy, and collaborative decision-making between partners. Additionally, digital health interventions, such as mobile apps or telehealth counseling, could be explored as accessible tools for supporting couples throughout pregnancy.

Conclusions

Couple relationships and interactions during pregnancy play a crucial role in shaping family dynamics, psychological well-being, and postnatal adaptation. A positive relationship during pregnancy not only enhances emotional intimacy and communication but also contributes to better maternal mental health, increased male involvement, and improved family functioning. Conversely, relationship challenges during pregnancy can lead to increased stress, dissatisfaction, and even negative impacts on maternal and infant health outcomes.

This review highlights the complexities of couple relationships during pregnancy by examining key influencing factors, including emotional support, communication patterns, role transitions, and male involvement. Unlike previous reviews that broadly focused on the transition to parenthood, this review specifically examines the pregnancy period as a distinct phase and provides a comprehensive synthesis of male involvement research across different cultural contexts. Although existing studies have provided valuable insights, significant gaps remain in understanding the cultural variations, assessment methods, and effective intervention strategies for improving couple interactions during pregnancy. Research on this topic has largely been concentrated in Western and African contexts, with limited exploration in Asian populations, where cultural and societal norms may influence relationship dynamics differently. Additionally, current tools for measuring male involvement in pregnancy-related activities often fail to capture the full spectrum of support that men provide. Therefore, there is a need for a more comprehensive and context-specific understanding of couple relationships during pregnancy. Developing refined assessment frameworks, incorporating diverse cultural perspectives, and designing effective couple-centered interventions will be essential for strengthening relationship quality during this critical life stage. By deepening our understanding of the interplay between couple interactions and pregnancy outcomes, future research can provide valuable insights for healthcare providers and policymakers, ultimately contributing to better support systems for expectant couples and improved maternal, paternal, and infant well-being.

Acknowledgements

During the preparation of this work, the author used ChatGPT to assist with language refinement and paraphrasing. After using this tool, the author reviewed and edited the content as needed and takes full responsibility for the content of the publication.

References:

- Pinto TM, Míguez MC, Figueiredo B. Couple's relationship during the transition to parenthood and toddler's emotional and behavioral problems. *Int J Environ Res Public Health*. 2023;20(1):882
- Xue WL, He H-G, Chua YJ, et al. Factors influencing first-time fathers' involvement in their wives' pregnancy and childbirth: A correlational study. *Midwifery*. 2018;62:20-28
- Galle A, Plaieser G, Van Steenstraeten T, et al. Systematic review of the concept 'male involvement in maternal health' by natural language processing and descriptive analysis. *BMJ Glob Health*. 2021;6(4):e004909
- Eddy BP, Fife ST. Active husband involvement during pregnancy: A grounded theory. *Fam Rel*. 2020;70(4):1222-37
- Madden SK, Blewitt CA, Ahuja KD, et al. Workplace healthy lifestyle determinants and wellbeing needs across the preconception and pregnancy periods: A qualitative study informed by the Com-B model. *Int J Environ Res Public Health*. 2021;18(8):4154
- Don BP, Eller J, Simpson JA, et al. New parental positivity: The role of positive emotions in promoting relational adjustment during the transition to parenthood. *J Pers Soc Psychol*. 2022;123(1):1-76
- Gamgam Leanderz Å, Hallgren J, Henricson M, et al. Parental-couple separation during the transition to parenthood. *Nurs Open*. 2021;8(5):2622-36
- Huss B, Pollmann-Schult M. Relationship satisfaction across the transition to parenthood: The impact of conflict behavior. *J Fam Issues*. 2020;41(3):383-411
- Van Scheppingen MA, Denissen J, Chung JM, et al. Self-esteem and relationship satisfaction during the transition to motherhood. *J Pers Soc Psychol*. 2018;114(6):1-71
- Mitnick DM, Heyman RE, Smith Slep AM. Changes in relationship satisfaction across the transition to parenthood: A meta-analysis. *J Fam Psychol*. 2009;23(6):848-52
- Doss BD, Rhoades GK. The transition to parenthood: impact on couples' romantic relationships. *Curr Opin Psychol*. 2017;13:25-28
- Leonhardt ND, Rosen NO, Dawson SJ, et al. Relationship satisfaction and commitment in the transition to parenthood: A couple-centered approach. *J Marriage Fam*. 2022;84(1):80-100
- Lindblom J, Flykt M, Tolvanen A, et al. Dynamic family system trajectories from pregnancy to child's first year. *J Marriage Fam*. 2014;76(4):796-807
- Gallegos MI, Jacobvitz DB, Hazen NL. Marital interaction quality over the transition to parenthood: The role of parents' perceptions of spouses' parenting. *J Fam Psychol*. 2020;34(6):1-18
- Bogdan I, Turlic MN, Candel OS. Transition to parenthood and marital satisfaction: A meta-analysis. *Front Psychol*. 2022;13:901362
- Chong A, Mickelson KD. Perceived fairness and relationship satisfaction during the transition to parenthood: The mediating role of spousal support. *J Fam Issues*. 2016;37(1):3-28
- Hwai ERK. Relationship between family life cycle and marital satisfaction among individuals married in the catholic church in Guadalupe Parish, Archdiocese of Nairobi, Kenya. *Tangaza University College*; 2022
- Ozcan H, Ustundag MF, Yilmaz M, et al. The relationships between prenatal attachment, basic personality traits, styles of coping with stress, depression, and anxiety, and marital adjustment among women in the third trimester of pregnancy. *Eurasian J Med*. 2019;51(3):232-36
- Hughes C, Devine RT, Mesman J, Blair C. Parental well-being, couple relationship quality, and children's behavioral problems in the first 2 years of life. *Dev Psychopathol*. 2020;32(3):935-44
- McKechnie AC, Pridham K, Tluczek A. Preparing heart and mind for becoming a parent following a diagnosis of fetal anomaly. *Qual Health Res*. 2015;25(9):1182-98
- Wesselink AK, Hatch EE, Rothman KJ, et al. Perceived stress and fecundability: A preconception cohort study of North American couples. *Am J Epidemiol*. 2018;187(12):2662-71
- Zhou FJ, Cai YN, Dong YZ. Stress increases the risk of pregnancy failure in couples undergoing IVF. *Stress*. 2019;22(4):414-20
- Antoniou E, Stamoulou P, Tzanoulinou MD, Orovou E. Perinatal mental health: The role and the effect of the partner: A systematic review. *Healthcare (Basel)*. 2021;9(11):1572
- Antoniou E, Tzanoulinou MD, Stamoulou P, Orovou E. The important role of partner support in women's mental disorders during the perinatal period. A literature review. *Maedica (Bucur)*. 2022;17(1):194-200
- Ye Z. Interaction and variation of pregnancy stress in couples [dissertation]. Shanghai: East China Normal University; 2022. Chinese. Available from: <https://link.cnki.net/doi/10.27149/d.cnki.ghdsu.2022.002816>
- Bedaso A, Adams J, Peng W, Sibbritt D. The relationship between social support and mental health problems during pregnancy: A systematic review and meta-analysis. *Reprod Health*. 2021;18(1):1-23
- Donovan J. The Process of analysis during a grounded theory study of men during their partners' pregnancies. *J Adv Nurs*. 1995;21(4):708-15
- Xue WL, Shorey S, Wang W, He H-G. Fathers' involvement during pregnancy and childbirth: An integrative literature review. *Midwifery*. 2018;62(1):135-45
- Lavner JA, Karney BR, Bradbury TN. Does couples' communication predict marital satisfaction, or does marital satisfaction predict communication? *J Marriage Fam*. 2016;78(3):680-94
- Ramsdell EL, Brock RL. Interparental relationship quality during pregnancy: Implications for early parent-infant bonding and infant socioemotional development. *Fam Process*. 2021;60(3):966-83
- Nakajima K, Usui A, Hayakawa Y. Feelings of older Japanese primiparous couples and satisfaction of older primiparous wives with their husbands' support during pregnancy: Focus on the perceptions of pregnant couples. *Nurs Open*. 2020;7(5):1379-87
- Ishak SH, Yaacob LH, Ishak A. Knowledge of pre-pregnancy care among men attending the outpatient clinics of Hospital Universiti Sains Malaysia. *Malays J Med Sci*. 2021;28(2):119-27
- Singh R, Kumar A, Kansal S. Involvement of male spouse in care during pregnancy in rural areas of District Varanasi. *J Family Med Prim Care*. 2021;10(6):2177-83
- Zakaria M, Khan A, Ahmad MS, et al. Women's perception of male involvement in antenatal, childbirth and postnatal care in urban slum areas in Bangladesh: A community-based cross-sectional study. *Healthcare*. 2021;9(4):1-11
- Henshaw EJ, Cooper M, Wood T et al. Psychosocial predictors of early postpartum depressive and anxious symptoms in primiparous women and their partners. *BMC Pregnancy Childbirth*. 2023;23(1):209
- Drysdale RE, Slemming W, Makusha T, Richter LM. Father involvement, maternal depression and child nutritional outcomes in Soweto, South Africa. *Matern Child Nutr*. 2021;17(S1):e13177
- Ibrahim HA, Alshahrani MS, Elgzar WTI. Determinants of prenatal childbirth fear during the third trimester among low-risk expectant mothers: A cross-sectional study. *Healthcare (Basel)*. 2023;12(1):50
- Fu M. Effect of husband's participation in self-management education in patients with pregnancy-induced hypertension. *Lab Med and Clinic*. 2015;12:3589-91
- Lai X, Pan S. [Effects of husband's participation in self-management education on blood sugar and self-care ability in patients with gestational diabetes mellitus.] *Chi Nurs Res*. 2015;29:286-89 [in Chinese]

Department and Institution Where Work Was Done

This study was conducted at the Department of Nursing, West China Hospital, Sichuan University/West China School of Nursing, Sichuan University, Chengdu, Sichuan, PR China.

40. Xia L, Lyu W, Wang X, et al. [Effects of husbands' participation in collective sex education during pregnancy on pregnant women's exercise compliance and weight during pregnancy.] *Chi J Soci Med.* 2017;34:259-62 [in Chinese]
41. Comrie-Thomson L, Tokhi M, Ampt F, et al. Challenging gender inequity through male involvement in maternal and newborn health: Critical assessment of an emerging evidence base. *Cult Health Sex.* 2015;17(Suppl. 2):177-89
42. Gopal P, Fisher D, Seruwagi G, Taddese HB. Male Involvement in reproductive, maternal, newborn, and child health: Evaluating gaps between policy and practice in Uganda. *Reprod Health.* 2020;17:1-9
43. Ayebare E, Mwebaza E, Mwizerwa J, et al. Interventions for male involvement in pregnancy and labour: A systematic review. *Afr J Midwifery and Women's Health.* 2015;9(1):23-28
44. Wang X, Zeng T, Yuan M, et al. [Current status and influencing factors of maternal spouse's support for breastfeeding.] *Nurs J Chi People's Lib Army.* 2021;38(5):9-12 [in Chinese]
45. Meleagrou-Hitchens L-A, Willig C. Men's experience of their transition to first-time fatherhood during their partner's pregnancy: An interpretative phenomenological analysis. *J Men's Health.* 2022;18(1):1-11
46. Kuljanić K, Martinac Dorčić T, Ljubičić Bistrovčić I, Brnčić-Fischer A. Prospective fathers: Psychosocial adaptation and involvement in the last trimester of pregnancy. *Psychiatr Danub.* 2016;28(4):386-94
47. Zeng T, Li B, Zhang K, et al. The association between childbirth-related fear, childbirth readiness, and fertility intentions, and childbirth readiness as the mediator. *Reprod Health.* 2023;20(1):1-9
48. Bello FO, Musoke P, Kwena Z, et al. The role of women's empowerment and male engagement in pregnancy healthcare seeking behaviors in Western Kenya. *Women Health.* 2019;59(8):892-906
49. Mohammed S, Yakubu I, Awal I. Sociodemographic factors associated with women's perspectives on male involvement in antenatal care, labour, and childbirth. *J Pregnancy.* 2020;2020:6421617
50. Gibore NS, Bali TAL, Kibusi SM. Factors influencing men's involvement in antenatal care services: A cross-sectional study in a low resource setting, Central Tanzania. *Reprod Health.* 2019;16(1):1-10
51. Galle A, Griffin S, Osman N, et al. Towards a global framework for assessing male involvement in maternal health: Results of an International Delphi Study. *BMJ Open.* 2021;11(9):e051361
52. Dehshiri M, Ghorashi Z, Lotfipour SM. Effects of husband involvement in prenatal care on couples' intimacy and postpartum blues in primiparous women: A quasi-experimental study. *Int J Community Based Nurs Midwifery.* 2023;11(3):179-89
53. Walsh TB, Carpenter E, Costanzo MA, et al. Present as a partner and a parent: Mothers' and fathers' perspectives on father participation in prenatal care. *Infant Ment Health J.* 2021;42(3):386-99
54. Jungari S, Paswan B. Supported motherhood? An examination of the cultural context of male participation in maternal health care among tribal communities in India. *J Biosoc Sci.* 2020;52(3):452-71
55. Unawari PN, Faanye MS-A, Amalba C, et al. Male involvement in the maternal health care: expectations of pregnant women in bolgatanga municipality in the Upper East Region of Ghana. *Open J Nurs.* 2023;13(1):1-21
56. Rahayu S, Romadlona NA, Utomo B, et al. Reassessing the level and implications of male involvement in family planning in Indonesia. *BMC Womens Health.* 2023;23(1):1-14
57. Rahman AE, Perkins J, Islam S, et al. Knowledge and involvement of husbands in maternal and newborn health in rural Bangladesh. *BMC Pregnancy Childbirth.* 2018;18(1):1-12
58. Xiong Yi ZL, Hu Qiqi, et al. [Meta-integration of maternal spouse's participation in perinatal health care experience research.] *Chi Nurs Educ.* 2023;20(10):1237-44 [in Chinese]
59. Zhang M, Liao B, Wang L. [Research progress on male participation in maternal and child health care.] *J Nurs Cont Educ.* 2021;36:344-48 [in Chinese]
60. Petch J, Halford WK. Psycho-education to enhance couples' transition to parenthood. *Clin Psychol Rev.* 2008;28(7):1125-37
61. Trillingsgaard T, Baucom KJ, Heyman RE. Predictors of change in relationship satisfaction during the transition to parenthood. *Fam Rel.* 2014;63(5):667-79
62. Mwila K. Factors associated with male involvement in antenatal care in Lusaka Urban District, Zambia. The University of Zambia; 2019
63. Rumaseuw R, Berliana SM, Nursalam N, et al. Factors Affecting husband participation in antenatal care attendance and delivery. *IOP Conf Ser: Earth Environ Sci.* 2017;116(1): Article 012012
64. Kaye DK, Kakaie O, Nakimuli A, et al. Male involvement during pregnancy and childbirth: Men's perceptions, practices and experiences during the care for women who developed childbirth complications in Mulago Hospital, Uganda. *BMC Pregnancy Childbirth.* 2014;14:1-8
65. Aarnio P, Kulmala T, Olsson P. Husband's role in handling pregnancy complications in Mangochi District, Malawi: A call for increased focus on community level male involvement. *Sex Reprod Healthc.* 2018;16(1):61-66
66. Falade-Fatila O, Adebayo AM. Male partners' involvement in pregnancy related care among married men in Ibadan, Nigeria. *Reprod Health.* 2020;17(14):1-12
67. Calatrava M, Martins MV, Schweer-Collins M, et al. Differentiation of self: A scoping review of Bowen family systems theory's core construct. *Clin Psychol Rev.* 2022;91:102101
68. Seefeld L, Buyukcan-Tetik A, Garthus-Niegel S. The transition to parenthood: Perspectives of relationship science theories and methods. *J Reprod Infant Psychol.* 2022;40(2):105-7
69. Kuersten-Hogan R, McHale JP. The transition to parenthood: A theoretical and empirical overview. *German: Springer;* 2021;3-21
70. Brandão T, Matias M, Ferreira T, et al. Attachment, emotion regulation, and well-being in couples: Intrapersonal and interpersonal associations. *J Pers.* 2020;88(4):748-61
71. Rholes WS, Paetzold RL. Attachment and the transition to parenthood. In: Taubman-Ben-Ari O, editor. Pathways and barriers to parenthood: existential concerns regarding fertility, pregnancy, and early parenthood. *Cham: Springer;* 2019;291-303
72. Mayer CH. Challenges and coping of couples in intercultural romantic love relationships. *Int Rev Psychiatry.* 2023;35(1):4-15