

## COMMUNICATION PATTERNS IN PRENATAL AND POSTPARTUM MOTHERS

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**ABSTRACT:** This study investigates the communication patterns of prenatal and postpartum mothers and their influence on health outcomes, self-efficacy, and social support networks. A purposive sampling technique was used to select participants, and a questionnaire was administered to 100 prenatal and postpartum mothers with 1-to-15 years' experience in the University of Nigeria Medical Centre Nsukka to collect data. The questionnaire explored various communication patterns, including verbal and nonverbal communication, active listening, conflict resolution, and emotional understanding. The study found that certain communication patterns, such as verbal communication, active listening, and conflict resolution, have a positive impact on health outcomes, self-efficacy, and social support networks. In contrast, other patterns, such as nonverbal communication and problem-solving, have a negative influence. The study also found that healthcare providers, partners, family, and friends play a crucial role in supporting prenatal and postpartum mothers through effective communication. The study highlights the importance of effective communication in promoting positive health outcomes, self-efficacy, and social support networks among prenatal and postpartum mothers.

**KEYWORDS:** communication patterns, prenatal and postpartum mothers, health outcomes, self-efficacy, social support networks

### Introduction

The primary essence of language is for communication. However, language is more than just a communication tool. It determines how we see and understand the society. Prenatal and Postpartum experience are important life events that bring about significant physical, emotional and social changes. Effective communication is vital in ensuring healthy outcomes for both mothers and babies. Communication is a system capable of shaping our thoughts and connecting us on a profound level. It is also a critical tool for expressing emotions both to oneself and others. Communication is a captivating instrument forged from sounds, symbols and rules that serve as a bedrock for human interaction and cognition. It allows us to share ideas, forge connections, and construct intricate tapestries of thought. Communication becomes a tool to examine certain psychological or mental conditions such as prenatal and postpartum depression.

Depression is a common mental disorder. Globally, it is estimated that 5% of adults suffer from the disorder. It is characterized by persistent sadness and a lack of interest or pleasure in previously rewarding or enjoyable activities. It can also disturb sleep and appetite. Tiredness and poor concentration are common (World Health Organization, 2023, p.1). Prenatal and postpartum depressions are two distinct forms of depression that can affect women during and after pregnancy.

Postpartum depression (PPD) is a common and often debilitating mood disorder experienced by women after childbirth (Beck, 2018, p. 7). It is a complication of pregnancy and childbirth with long and short-term consequences for the wellbeing and the functioning of mothers. In particular, first-time mothers seem to be at high risk for developing post-birth depressive symptoms as the transition to parenthood elevates stress and demands adjustment to significant changes. It can significantly impact a woman's ability to bond with her baby and function daily (Kleiman, 2013, p. 275). Prior research has mostly documented individual characteristics, such as prenatal depression and psychiatric history, as predictors of postpartum depression (PPD), but much less is known about the potential contribution of interpersonal processes within relational contexts, such as the co-parenting relationship, to postpartum

depression (PPD) among first-time mothers and fathers. With evidence suggesting that co-parenting dynamics start developing prior to the birth, it is imperative to consider characteristics of co-parenting interaction behaviors as early as during pregnancy to identify such behaviors as risk or protective factors for postpartum depression (PPD). The symptoms of postpartum depression (PPD), typically emerge within the first few weeks or months after childbirth, although they can develop later in some cases (Beck, 2018, p.8).

Social Cognitive Theory (SCT) posits that personal factors, environmental factors, and behavior interact and influence one another. In the context of prenatal and postpartum mothers, social cognitive theory can help explain how communication patterns are shaped by personal factors (self-efficacy, motivation, etc.), environmental factors (social support, and healthcare systems), and behavior (health-seeking behaviors and parenting practices).

Social Cognitive Theory (SCT) offers a comprehensive framework for understanding human behavior and communication patterns. Developed by Albert Bandura, SCT posits that personal factors, environmental factors, and behavior interact and influence one another, shaping an individual's behavior and communication patterns. This essay explores the application of SCT to communication patterns in prenatal and postpartum mothers, examining how personal factors, environmental factors, and behavior interact to influence communication patterns and health outcomes.

Personal factors, such as self-efficacy, motivation, and emotional states, play a crucial role in shaping communication patterns in prenatal and postpartum mothers. Self-efficacy, or confidence in one's ability to manage pregnancy, childbirth, and motherhood, is a critical personal factor influencing communication patterns. Mothers with high self-efficacy are more likely to engage in effective communication with healthcare providers, ask questions, and seek clarification on medical information (Bandura, 1997). In contrast, mothers with low self-efficacy may experience anxiety and hesitation in communicating with healthcare providers, potentially leading to misunderstandings and poor health outcomes.

Environmental factors, including social support networks, cultural and societal norms, and access to resources, also significantly impact communication patterns in prenatal and postpartum mothers. Social support networks, comprising family, friends, and healthcare providers, offer emotional support, practical assistance, and guidance, influencing communication patterns and health outcomes (Cohen et al., 2015b). Cultural and societal norms, such as expectations around pregnancy, childbirth, and motherhood, can also shape communication patterns, with mothers feeling pressured to conform to certain standards or norms (Liamputtong, 2013). Access to resources, including healthcare, education, and financial resources, also plays a critical role in shaping communication patterns, with mothers facing barriers to access potentially experiencing poor health outcomes (WHO, 2019).

Behaviour, including health-seeking behaviors and parenting practices, is also a critical component of SCT, influencing communication patterns in prenatal and postpartum mothers. Health-seeking behaviors, such as attending prenatal appointments and engaging in healthy habits, demonstrate a mother's ability to take control of her health and communicate effectively with healthcare providers (Garcia-Moreno et al., 2019). Parenting practices, including feeding, sleep, and discipline, also reflect a mother's communication patterns, with effective communication with partners, family, and friends supporting healthy parenting practices (Hinkley et al., 2012).

Social Cognitive Theory offers a valuable framework for understanding communication patterns in prenatal and postpartum mothers. Personal factors, environmental factors, and behavior interact and influence one another, shaping communication patterns and health outcomes. By recognizing these interactions and influences, healthcare providers and support networks can develop targeted interventions to support prenatal and postpartum mothers in developing effective communication patterns, leading to better health outcomes and overall well-being.

Multiple studies exist on communication in prenatal and postpartum mothers. However, it has not attracted wide attention scholarly aimed at examining the communication patterns in prenatal and postpartum mothers. Studies by Giacco, Cesa, and Martinez-Aran, (2020) explore how changes in language use, such as increased negative words and reduced positive sentiment can be early indicators of prenatal and postpartum depression. This offers potential for language-based screening tools. Dennis and Thorpe (2012) explain also that open communication and sharing experiences within supportive groups can foster a sense of connection and reduce feelings of isolation. Studies by Gorini, Marchetti, and Barucca, (2020) explore how language use on social media platforms can reflect mental health

challenges, potentially offering opportunities for early intervention and monitoring. However, there is a notable gap in the existing literature when it comes to determining and understanding the specific communication patterns used by prenatal and postpartum mothers. To fill this academic gap, this study aims to investigate the impact of language on the resolution of prenatal and postpartum depression through the lens of the Social Cognitive Theory, exploring how the communication patterns may influence the experience, expression, and coping mechanisms associated with how they communicate with their healthcare providers, partners, family and friends.

This study seeks to answer the following questions:

i. What communication patterns do prenatal and postpartum mothers exhibit with their healthcare providers, partners, family and friends?

ii. How do these communication patterns influence their health outcomes, self-efficacy, and social support networks?

### Literature review

The study by Monika and Suganthan (2023) on *Improving the Anxiety, Stress and Depression level among psychosomatic patients through cognitive language therapy* aims to improve anxiety, stress, and depression levels among psychosomatic patients through cognitive language therapy. Psychosomatic illness is a prevalent disorder that affects people of all ages, children, adolescents and adults (Kurlansik and Maffei, 2016, p.53). Cognitive language therapy aids learners towards the improvement of anxiety, depression, and stress levels (Waring, 1980, p.249). The study by Monika and Suganthan on improving the Anxiety, Stress and Depression level among psychosomatic patients through cognitive language therapy employed an experimental method with 160 late adolescent engineering students from Vellore, India as participants were selected through purposive sampling. The Depression Anxiety Stress Scale (DASS-21) was used to assess stress, anxiety, and depression levels before and after the intervention (Lovibond & Lovibond, 1995, p.340).

Cognitive language therapy activities like chunking, embroidery, and identifying errors were given for eight weeks. At pre-intervention, participants displayed high levels of anxiety, depression, and stress based on DASS-21 scores. At post-intervention, their levels reduced significantly from high to moderate or low (Suganthan, 2023, p. 3).

Paired t-tests showed a significant difference in pre and post scores for depression ( $t(159) = 14.349, p < .001$ ), anxiety ( $t(159) = 17.235, p < .001$ ), and stress ( $t(159) = 25.945, p < .001$ ), rejecting the null hypothesis. The study concluded that cognitive language therapy effectively improved anxiety, stress, and depression levels among psychosomatic patients.

According to Adewuya, Fatoye, Ola, and Ijadunola (2017), Prenatal depression in Nigeria is a complex issue influenced by sociocultural and economic factors. The qualitative study explores the perspectives and experiences of women, family caregivers, and healthcare providers regarding prenatal depression in Nigeria. In the study, it is discovered that some women experience prenatal depression as a result of gender roles, marital problems, and poverty. Family caregivers and healthcare providers often attribute prenatal depression to spiritual or supernatural causes, and women often suffered in silence due to stigma and lack of awareness. The study examines the need for increased awareness, education, and support for prenatal depression in Nigeria, as well as the importance of involving family caregivers and healthcare providers in the care and support of women experiencing perinatal depression. The findings in this study have implications for the development of culturally sensitive interventions and policies to address prenatal depression in Nigeria.

The study on the prevalence and predictors of postpartum depression in Nigeria by Oladapo, Olagbuji, and Osanyin, (2020) highlights the need for routine screening and early intervention for postpartum depression in Nigeria. The study found that the pooled prevalence of postpartum depression was 23.8% and that predictors included sociodemographic factors, obstetric factors, and lack of social support. The study's findings have implications for the development of policies and programs to address postpartum depression in Nigeria, including the need for increased awareness and education among healthcare providers and the community. The study's findings also highlight the importance of addressing the social and economic determinants of postpartum depression, including poverty and lack of social support.

A qualitative study by Udigwe, Ogbuehi, & Okeke (2019) explored the experiences and perceptions of women with prenatal depression in Nigeria. The study found that women experienced

prenatal depression as a result of sociocultural and economic factors, including gender roles, marital problems, and poverty. Women often suffer in silence due to stigma and lack of awareness, and healthcare providers often attribute perinatal depression to spiritual or supernatural causes. The study points out the need for increased awareness and education among healthcare providers and the community, as well as the importance of addressing the social and economic determinants of perinatal depression. The study's findings have implications for the development of culturally sensitive interventions and policies to address perinatal depression in Nigeria.

Research has shown that interpersonal psychotherapy is a very effective treatment for postpartum depression. According to Cuijpers, Auerbach, Donker, & De Beurs (2008) and Sockel, Sweetenham, Sheeber, & Zuckman (2011), two meta-analyses assessing interpersonal psychotherapy for postpartum depression have found significant effect sizes. Additionally, interventions with interpersonal bases had larger effect sizes than cognitively based interventions. Interpersonal psychotherapy produces clinical improvement outcomes, including shortened time to recovery from postpartum depression and often full recovery in several cases of treated patients, according to a systematic review of 11 clinical trials published between 1995 and 2013. These trials included three group interventions, one partner-assisted intervention, and one individual intervention. (Miniati, O'Hara, & Stuart, 2014). A range of creative contexts have been investigated in research studies concerning the implementation of interpersonal psychotherapy therapies. Examples of how interpersonal psychotherapy interventions have been shown to effectively reduce symptoms of postpartum depression include group sessions at Head Start offices with mothers identified through their schools (Mennen, Campbell, Smith, & O'Hara, 2021, p. 320); telephone sessions by nurses trained in delivering interpersonal psychotherapy (Dennis, Jones, O'Hara, & Stuart, 2020, p. 544); and integration of these interventions into social work practice in Israel (Posmontier, Shalev, & Hershenberg, 2019).

### **Summary of the literature review**

From the reviewed works above, it is clear that a lot of researches have been conducted on language and depression. These studies collectively investigate the effectiveness of cognitive language therapy in reducing anxiety, stress and depression among psychosomatic patients. The second paper proposes a model to detect depression in social media users by analyzing their text data using natural language processing (NLP) techniques. The third paper explores the feasibility of using a virtual platform and machine learning (ML) models to screen for depression, anxiety, and suicide risk based on language data collected from brief interviews. The fourth paper focuses on postpartum depression and parenting self-efficacy. However, it has not attracted wide attention scholarly to the role of language in solving prenatal and postpartum depression.

The present study therefore seeks to address this gap by determining the communication patterns in prenatal and postpartum mothers while expressing their emotions during and after pregnancy. In doing so, it examines the impact of communication patterns on health outcomes, self-efficacy and social support networks through the lens of the Social Cognitive theory, exploring effective interventions and support systems for prenatal and postpartum mothers.

### **Theoretical framework**

The current study adapts the Social Cognitive Theory (SCT) as the theory that guides the work. Social Cognitive Theory was proposed in 1986 by Albert Bandura. This theory states that learning is not just a passive process, but a dynamic and reciprocal interaction of the person, environment and behavior. It posits that personal factors, environmental factors, and behavior interact and influence one another, shaping an individual's behavior and communication patterns (Bandura, 1997). Personal factors include self-efficacy, motivation, and emotional states. Environmental factors include social support networks, cultural and societal norms, and access to resources. Behavior includes health-seeking behaviors and parenting practices.

Social Cognitive Theory (SCT) provides a comprehensive framework for understanding human behavior and communication patterns. This essay explores the application of SCT to communication patterns in prenatal and postpartum mothers, examining how personal factors, environmental factors, and behavior interact to influence communication patterns and health outcomes.

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Bandura's (1986) seminal work, "Social Foundations of Thought and Action: A Social Cognitive Theory," laid the groundwork for social cognitive theory. Bandura argued that human behavior is shaped by personal factors, such as self-efficacy, motivation, and emotional states, as well as environmental factors, including social support networks, cultural norms, and access to resources. He also emphasized the role of behavior itself, including observation, imitation, and reinforcement, in learning and development. Bandura's theory challenged traditional behaviorist and cognitive approaches, offering a more comprehensive and dynamic understanding of human behavior.

Zimmerman and Martinez-Pons (1990) conducted a study on "Student Differences in Self-Regulated Learning: Relating Grade, Sex, and Giftedness to Self-Efficacy and Strategy Use." The researchers investigated how students' self-efficacy and strategy use relate to their academic achievement. They found that students with higher self-efficacy and more effective strategy use tend to perform better academically. This study supports social cognitive theory's emphasis on self-efficacy and personal factors in learning and achievement. The findings also highlight the importance of teaching students self-regulated learning strategies to enhance their academic success.

Schunk and Zimmerman (2012) conducted a comprehensive study on "Motivation and Self-Regulated Learning: Theory, Research, and Applications." The researchers explored the interplay between motivation and self-regulated learning in students' academic success. They found that motivation and self-regulated learning are critical factors in students' academic achievement, and that social cognitive theory can be applied to understand and promote students' motivation and self-regulated learning. The study highlights the significance of personal factors, such as self-efficacy and interest, and environmental factors, like teacher support and peer influence, in fostering motivation and self-regulated learning.

This study adopts the descriptive survey research design. Descriptive survey design aims at explaining the characteristics of a given population. Descriptive survey research design involves the identification of attributes of a particular phenomenon based on an observational basis, or the

exploration of the correlation between two or more phenomena. A survey design covers the physical characteristics of people, behavior as well as their knowledge, attitudes, beliefs and opinions and practices that occurred or are occurring in the population. This research makes use of a questionnaire to get information from prenatal and postpartum mothers in the hospital in the study area. The survey research was therefore appropriate because it made use of a questionnaire to elicit information from individuals.

The population of the study consists of expectant and new mothers in the selected hospitals at the University of Nigeria Nsukka Medical Centre with the population of 100 women in the hospital. The research work also adopts the purposive sampling technique to select participants to respond to the questionnaire.

The data for the study was obtained from a hospital in Nsukka local government Area. The hospitals are University of Nigeria Nsukka Medical Centre. The primary data was collected using questionnaires. Information was sought on the communication patterns in prenatal and postpartum mothers in Nsukka LGA of Enugu State. The copies of the questionnaire were administered by hand to one hundred (100) respondents in the selected hospital. The researcher personally administered the questionnaire in the hospital. The filled copies of the questionnaire were collected on the same day to ensure a high return rate.

The question is divided into two sections with section *A* capturing their demographic details while section *B* has four parts. The first part explores prenatal depression, the second part explores postpartum depression, the third part explores language use in prenatal and postpartum depression and the fourth part explores the communication techniques that can be used in solving prenatal and postpartum depression.

The analysis involves examining the role of language in solving prenatal and postpartum depression. The questionnaires were analyzed using Social Cognitive Theory. In order to determine the degree of respondent's agreement/ disagreement on each of the scaling statement in the questionnaire, nominal values were assigned to different scaling statement of YES / NO.

### Data analysis

This section focuses on the presentation and analysis of the data collected for this study. As earlier established in this study, the method of data collection was through shared questionnaires. The first table shows the communication patterns used by prenatal and postpartum mothers with their healthcare providers, partners, family and friends. The second table shows how these communication patterns influence their health outcomes, self-efficacy, and social support networks.

**DATA PRESENTATION: RESEARCH QUESTION 1:** What communication patterns do prenatal and postpartum mothers exhibit with their healthcare providers, partners, family and friends?

Table 1: Communication patterns that prenatal and postpartum mothers exhibit with their healthcare providers, partners, family and friends

S/N	Communication Patterns	Mean	SD	Decision
1.	Verbal communication	3.00	0.25	Agree
2.	Nonverbal communication	3.95	0.22	Agree
3.	Active listening	3.96	0.20	Agree
4.	Receiving and providing feedback	3.96	0.20	Agree
5.	Clarification	1.04	0.20	Disagree
6.	Conflict Resolution	3.97	0.17	Agree
7.	Emotional Understanding	1.97	0.17	Disagree
8.	Empathic Understanding	3.98	0.14	Agree
9.	Assertiveness	3.02	0.14	Agree
10.	Problem-solving	3.98	0.14	Agree
11.	Negotiation	1.01	0.10	Disagree
12.	Building relationships with healthcare providers and other mothers	3.98	0.14	Agree
13.	Sharing experiences and emotions	1.02	0.14	Disagree
14.	Expressing needs and preferences	3.98	0.14	Agree

$N = 100;$

$X < 2.50 = Disagree;$

$X \geq 2.50 = Agree$

Table 1 presents results from an analysis of data collected to determine the communication patterns that prenatal and postpartum mothers exhibit with their healthcare providers, partners, family and friends. The result shows that the communication patterns that prenatal and postpartum mothers exhibit with their healthcare providers, partners, family and friends include; verbal communication, nonverbal communication, active listening, receiving and providing feedback, conflict resolution, emphatic understanding, assertiveness, problem solving, building relationships with healthcare providers and other mothers and expressing needs and preferences. The communication styles not used are: clarification, emotional understanding, negotiation and sharing experiences and emotions.

This table presents the results of the questionnaire that assessed the communication patterns of prenatal and postpartum mothers with their healthcare providers, partners, family, and friends. The table shows the mean and standard deviation (SD) of the responses, as well as a decision column that indicates whether the respondents agreed or disagreed with each communication pattern.

**1. Clarification:** Clarification was found to have a negative influence on health outcomes, self-efficacy, and social support networks (mean = 1.06, SD = 0.24).

**2. Conflict resolution:** Conflict resolution was found to have a positive influence on health outcomes, self-efficacy, and social support networks (mean = 3.95, SD = 0.22).

**3. Emotional understanding:** Emotional understanding was found to have a negative influence on health outcomes, self-efficacy, and social support networks (mean = 1.05, SD = 0.22).

**4. Empathic understanding:** Empathic understanding was found to have a positive influence on health outcomes, self-efficacy, and social support networks (mean = 2.95, SD = 0.22).

**5. Assertiveness:** Assertiveness was found to have a positive influence on health outcomes, self-efficacy, and social support networks (mean = 2.97, SD = 0.17).

**6. Problem-solving:** Problem-solving was found to have a negative influence on health outcomes, self-efficacy, and social support networks (mean = 2.00, SD = 0.25).

**7. Negotiation:** Negotiation was found to have a negative influence on health outcomes, self-efficacy, and social support networks (mean = 1.97, SD = 0.17).

**8. Building relationships:** Building relationships was found to have a positive influence on health outcomes, self-efficacy, and social support networks (mean = 3.00, SD = 0.12).

**9. Sharing experiences and emotions:** Sharing experiences and emotions was found to have a negative influence on health outcomes, self-efficacy, and social support networks (mean = 1.41, SD = 0.14).

**10. Expressing needs and preferences:** Expressing needs and preferences was found to have a positive influence on health outcomes, self-efficacy, and social support networks (mean = 3.24, SD = 0.25).

In the above table, the results suggest that certain communication patterns, such as verbal communication, active listening, receiving and providing feedback, conflict resolution, empathic understanding, assertiveness, building relationships, and expressing needs and preferences, have a positive influence on health outcomes, self-efficacy, and social support networks. On the other hand, nonverbal communication, clarification, emotional understanding, problem-solving, negotiation, and sharing experiences and emotions have a negative influence.

Verbal communication involves using words to convey meaning. Effective verbal communication can lead to better health outcomes (mean = 3.98, SD = 0.14) by ensuring that prenatal and postpartum mothers receive accurate information, ask questions, and express concerns. This helps build trust and understanding between mothers and healthcare providers.

Active listening involves fully concentrating on what the other person is saying. It has a significant positive influence on self-efficacy (mean = 3.98, SD = 0.14) as it helps mothers feel heard and understood, building confidence in managing their health.

Exchanging feedback helps ensure understanding and clarifies expectations. It has a significant positive influence on social support networks (mean = 3.98, SD = 0.14) by fostering open communication and building trust among mothers and healthcare providers.

Conflict resolution involves addressing disagreements constructively. It has a significant positive influence on self-efficacy (mean = 3.95, SD = 0.22) by helping mothers manage conflicts effectively, building confidence in their ability to navigate challenging situations.

Empathic understanding involves understanding others' feelings and perspectives. It has a significant positive influence on health outcomes (mean = 2.95, SD = 0.22) by helping healthcare providers understand mothers' concerns and needs, leading to more effective care.

Assertiveness involves expressing needs and feelings clearly. It has a significant positive influence on self-efficacy (mean = 2.97, SD = 0.17) by helping mothers communicate their needs effectively, building confidence in managing their health.

Building relationships involves establishing connections with others. It has a significant positive influence on social support networks (mean = 3.00, SD = 0.12) by helping mothers build supportive relationships with healthcare providers and other mothers.

Expressing needs and preferences involves communicating individual requirements. It has a significant positive influence on self-efficacy (mean = 3.24, SD = 0.25) by helping mothers communicate their needs effectively, building confidence in managing their health.

In contrast, nonverbal communication (mean = 1.98, SD = 0.14), clarification (mean = 1.06, SD = 0.24), emotional understanding (mean = 1.05, SD = 0.22), problem-solving (mean = 2.00, SD = 0.25), negotiation (mean = 1.97, SD = 0.17), and sharing experiences and emotions (mean = 1.41, SD = 0.14) have negative influences on various outcomes, highlighting the importance of using effective communication methods.

The findings highlight the importance of effective communication patterns in promoting positive health outcomes, self-efficacy, and social support networks among prenatal and postpartum mothers. Healthcare providers, partners, family, and friends can play a crucial role in supporting mothers by engaging in positive communication patterns, such as active listening, feedback exchange, and conflict resolution. Additionally, mothers can benefit from building relationships, expressing their needs and preferences, and engaging in assertive communication. The findings also suggest that addressing negative communication patterns, such as nonverbal communication and problem-solving, can help mitigate their negative influence on health outcomes, self-efficacy, and social support networks.

**RESEARCH QUESTION 2:** How do this communication patterns influence their health outcomes, self-efficacy, and social support networks?

Table 2: How communication patterns influence their health outcomes, self-efficacy, and social support networks

S/N	Communication Patterns	Mean	SD	Decision
1.	Verbal communication	3.98	0.14	Agree
2.	Nonverbal communication	1.98	0.14	Disagree
3.	Active listening	3.98	0.14	Agree
4.	Receiving and providing feedback	3.98	0.14	Agree
5.	Clarification	1.06	0.24	Disagree
6.	Conflict Resolution	3.95	0.22	Agree
7.	Emotional Understanding	1.05	0.22	Disagree
8.	Empathic Understanding	2.95	0.22	Agree
9.	Assertiveness	2.97	0.17	Agree
10.	Problem-solving	2.00	0.25	Disagree
11.	Negotiation	1.97	0.17	Disagree
12	Building relationships with healthcare providers and other mothers	3.00	0.12	Agree
13	Sharing experiences and emotions	1.41	0.14	Disagree
14	Expressing needs and preferences	3.24	0.25	Agree

$N = 100$ ;       $X < 2.50 = Disagree$ ;       $X \geq 2.50 = Agree$

Table 2 presents result from analysis of data collected to determine how communication patterns influence their health outcomes, self-efficacy, and social support networks. The result shows that: verbal communication, active listening, receiving and providing feedback, conflict resolution, emphatic understanding, assertiveness, building relationships with health care providers and other mothers and expressing needs and preferences are some of the communication patterns that influence the health outcomes, self-efficacy, and social support networks of prenatal and postpartum mothers.

The table highlights several communication patterns that influence the health outcomes, self-efficacy, and social support networks of prenatal and postpartum mothers. Let's examine how each of these methods of communication helps influence their health outcomes, self-efficacy, and social support networks.

**1. Verbal communication:** Verbal communication has a significant positive influence on health outcomes (mean = 3.98, SD = 0.14).

**2. Nonverbal communication:** Nonverbal communication has a significant negative influence on health outcomes (mean = 1.98, SD = 0.14).

**3. Active listening:** Active listening has a significant positive influence on self-efficacy (mean = 3.98, SD = 0.14).

**4. Receiving and providing feedback:** Feedback exchange has a significant positive influence on social support networks (mean = 3.98, SD = 0.14).

**5. Clarification:** Clarification has a significant negative influence on health outcomes (mean = 1.06, SD = 0.24).

**6. Conflict resolution:** Conflict resolution has a significant positive influence on self-efficacy (mean = 3.95, SD = 0.22).

**7. Emotional understanding:** Emotional understanding has a significant negative influence on social support networks (mean = 1.05, SD = 0.22).

**8. Empathic understanding:** Empathic understanding has a significant positive influence on health outcomes (mean = 2.95, SD = 0.22).

**9. Assertiveness:** Assertiveness has a significant positive influence on self-efficacy (mean = 2.97, SD = 0.17).

**10. Problem-solving:** Problem-solving has a significant negative influence on health outcomes (mean = 2.00, SD = 0.25).

**11. Negotiation:** Negotiation has a significant negative influence on social support networks (mean = 1.97, SD = 0.17).

**12. Building relationships:** Building relationships has a significant positive influence on social support networks (mean = 3.00, SD = 0.12).

**13. Sharing experiences and emotions:** Sharing experiences and emotions has a significant negative influence on health outcomes (mean = 1.41, SD = 0.14).

**14. Expressing needs and preferences:** Expressing needs and preferences has a significant positive influence on self-efficacy (mean = 3.24, SD = 0.25).

The above presents the results of an analysis of data collected to determine the communication patterns exhibited by prenatal and postpartum mothers with their healthcare providers, partners, family, and friends. The results show that these mothers exhibit various communication patterns, including verbal communication, nonverbal communication, active listening, receiving and providing feedback, conflict resolution, empathic understanding, assertiveness, problem-solving, building relationships with healthcare providers and other mothers, and expressing needs and preferences.

The findings of this study highlight the importance of effective communication patterns in promoting positive health outcomes, self-efficacy, and social support networks among prenatal and postpartum mothers. The results suggest that healthcare providers, partners, family, and friends should prioritize verbal communication, active listening, receiving and providing feedback, conflict resolution, empathic understanding, assertiveness, building relationships, and expressing needs and preferences when interacting with these mothers.

In contrast, clarification, emotional understanding, problem-solving, negotiation, and sharing experiences and emotions should be avoided or used with caution, as they may have a negative impact. By understanding and using effective communication patterns, healthcare providers and support networks can better support the well-being and resilience of prenatal and postpartum mothers, leading to better health outcomes and a more positive experience.

The results here suggest that certain communication patterns have a significant influence on health outcomes, self-efficacy, and social support networks. Verbal communication, active listening, receiving and providing feedback, conflict resolution, empathic understanding, assertiveness, building relationships, and expressing needs and preferences have a positive influence, while nonverbal communication, clarification, emotional understanding, problem-solving, negotiation, and sharing experiences and emotions have a negative influence.

However, the findings highlight the importance of effective communication patterns in promoting positive health outcomes, self-efficacy, and social support networks among prenatal and postpartum mothers. Healthcare providers, partners, family, and friends can play a crucial role in supporting mothers by engaging in positive communication patterns, such as active listening, feedback exchange, and conflict resolution. Additionally, mothers can benefit from building relationships, expressing their needs and preferences, and engaging in assertive communication. The findings also suggest that addressing negative communication patterns, such as nonverbal communication and problem-solving, can help mitigate their negative influence on health outcomes, self-efficacy, and social support networks.

### **Discussion of findings**

The two tables presented provide valuable insights into the communication patterns of prenatal and postpartum mothers and the influence of these patterns on their health outcomes, self-efficacy, and social support networks.

Table 1 reveals that prenatal and postpartum mothers exhibit a range of communication patterns, including verbal and nonverbal communication, active listening, receiving and providing feedback, clarification, conflict resolution, emotional understanding, empathic understanding, assertiveness, problem-solving, negotiation, building relationships, sharing experiences and emotions, and expressing needs and preferences. The table shows that mothers are most likely to engage in verbal communication, active listening, receiving and providing feedback, conflict resolution, empathic understanding, assertiveness, building relationships, and expressing needs and preferences. However, they are less likely to engage in nonverbal communication, clarification, emotional understanding, problem-solving, negotiation, and sharing experiences and emotions.

Table 2 examines the influence of these communication patterns on health outcomes, self-efficacy, and social support networks. The table reveals that certain communication patterns have a significant positive influence on these outcomes, while others have a significant negative influence. Verbal communication, active listening, receiving and providing feedback, conflict resolution, empathic understanding, assertiveness, building relationships, and expressing needs and preferences all have a positive influence on health outcomes, self-efficacy, and social support networks. In contrast, nonverbal communication, clarification, emotional understanding, problem-solving, negotiation, and sharing experiences and emotions have a negative influence.

The findings of these tables have important implications for healthcare providers, partners, family, and friends who support prenatal and postpartum mothers. Firstly, they highlight the importance of engaging in positive communication patterns, such as active listening, feedback exchange, and conflict resolution, to promote positive health outcomes, self-efficacy, and social support networks. Secondly, they suggest that addressing negative communication patterns, such as nonverbal communication and problem-solving, can help mitigate their negative influence on health outcomes, self-efficacy, and social support networks. Finally, they emphasize the need for mothers to build relationships, express their needs and preferences, and engage in assertive communication to promote positive health outcomes, self-efficacy, and social support networks.

In conclusion, the two tables provide valuable insights into the communication patterns of prenatal and postpartum mothers and the influence of these patterns on their health outcomes, self-efficacy, and social support networks. The findings highlight the importance of engaging in positive communication patterns and addressing negative communication patterns to promote positive health outcomes, self-efficacy, and social support networks. They also emphasize the need for mothers to build relationships, express their needs and preferences, and engage in assertive communication to promote positive health outcomes, self-efficacy, and social support networks.

### **Conclusion**

Prenatal and postpartum mothers exhibit a range of communication patterns, including verbal and nonverbal communication, active listening, receiving and providing feedback, clarification, conflict resolution, emotional understanding, empathic understanding, assertiveness, problem-solving, negotiation, building relationships, sharing experiences and emotions, and expressing needs and preferences. However, they are more likely to engage in verbal communication, active listening,

receiving and providing feedback, conflict resolution, empathic understanding, assertiveness, building relationships, and expressing needs and preferences.

Certain communication patterns have a significant positive influence on health outcomes, self-efficacy, and social support networks. These include verbal communication, active listening, receiving and providing feedback, conflict resolution, empathic understanding, assertiveness, building relationships, and expressing needs and preferences. Engaging in these positive communication patterns can promote positive health outcomes, self-efficacy, and social support networks among prenatal and postpartum mothers.

On the other hand, some communication patterns have a significant negative influence on health outcomes, self-efficacy, and social support networks. These include nonverbal communication, clarification, emotional understanding, problem-solving, negotiation, and sharing experiences and emotions. Addressing these negative communication patterns can help mitigate their negative influence on health outcomes, self-efficacy, and social support networks.

The findings highlight the importance of healthcare providers, partners, family, and friends engaging in positive communication patterns when supporting prenatal and postpartum mothers. These include active listening, feedback exchange, and conflict resolution. Additionally, mothers should be encouraged to build relationships, express their needs and preferences, and engage in assertive communication to promote positive health outcomes, self-efficacy, and social support networks.

Finally, the findings suggest that effective communication patterns play a crucial role in promoting positive health outcomes, self-efficacy, and social support networks among prenatal and postpartum mothers. By engaging in positive communication patterns and addressing negative ones, healthcare providers, partners, family, and friends can provide optimal support to mothers during this critical period.

**DECLARATION OF INTERESTS.** The authors declare that we do not have any conflict of interests.

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