



Impact of Support Person's Presence on Labor Outcomes among Primiparous Mothers in a Selected Hospital in Nadiad, Gujarat, India

Mansi Patel ^{a++*}, Janki Patel ^{b#}, Janu Patel ^{b#}, Isha Rana ^{b#},
Isha Patel ^{b#} and Isva Patel ^{b#}

^a Department of Obstetrics and Gynecology, Dinsha Patel College of Nursing, Sardar Patel University, Nadiad-387001, India.

^b Dinsha Patel College of Nursing, Sardar Patel University, Nadiad-387001, India.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: <https://doi.org/10.9734/ajrn/2024/v7i1176>

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/127833>

Original Research Article

Received: 25/11/2024

Accepted: 16/12/2024

Published: 18/12/2024

ABSTRACT

Background: All pregnant women seek a comforting, encouraging companion during labour to assist them in managing the various difficulties of childbirth, such as pain, anxiety, exhaustion and ambiguity. The concept of “**companion of choice at birth**” entails having a supportive individual present continuously during labour and delivery. A birthing companion is essential for providing

⁺⁺ Assistant Professor;

[#] Final Year B.Sc. Nursing and Researcher;

^{*}Corresponding author: Email: mancpatel3113@gmail.com;

Cite as: Patel, Mansi, Janki Patel, Janu Patel, Isha Rana, Isha Patel, and Isva Patel. 2024. “Impact of Support Person’s Presence on Labor Outcomes Among Primiparous Mothers in a Selected Hospital in Nadiad, Gujarat, India”. *Asian Journal of Research in Nursing and Health* 7 (1):246-53. <https://doi.org/10.9734/ajrn/2024/v7i1176>.

expectant mothers with vital information, procedural techniques and emotional support during labor. They facilitate communication between the medical staff and the mother, help keep her calm, mobile, hydrated and promote a positive environment. Additionally, they assist with Lamaze breathing techniques, guiding the mother through contractions and pushing with less physical tension, ultimately making the labor process smoother and more manageable.

Objective: 1. To evaluate the effectiveness of presence of support person on labour outcome among primi-parturient women in experimental and control group.

2. To find out the association between labour outcome among primi-parturient women in experimental group and their selected demographic variable.

3. To find out the association between labour outcome among primi-parturient women in control group and their selected demographic variables.

Methodology: The quantitative research approach with post-test only control group design was used in this study with the sample size 30 in both experimental and control group in the selected Maternal hospital of Nadiad. Convenient sampling technique used for control and experimental group. Self-structured labour progress record to assess the labour progress, Visual analog scale to measure the level of pain and Modified HAM-A to assess the level of anxiety. The inferential and descriptive statistics was used.

Results: The results indicate significant differences between the experimental and control groups in labor progress, pain levels, and anxiety. Labor progress scores, ranging from 0–7 (with lower scores indicating better progress), were significantly lower in the experimental group, indicating better labor progress ($p < 0.05$). Pain levels assessed using the Visual Analog Scale showed that 10% of the experimental group reported mild pain, 70% moderate, and 20% severe, compared to 0% mild, 20% moderate, and 80% severe in the control group, highlighting less severe pain in the experimental group. Anxiety levels, measured using the modified Hamilton Anxiety Scale, revealed that 73.34% of the experimental group reported mild anxiety, 23.33% moderate, and 3.33% severe, while the control group reported 17.67% mild, 36.66% moderate, and 46.67% severe anxiety, demonstrating significantly lower severe anxiety and higher mild anxiety in the experimental group. These findings suggest that the experimental group experienced better outcomes overall, with improved pain and anxiety management compared to the control group.

Conclusion: The study highlights that having a birth companion during labor significantly improves labor progress and maternal outcomes. Companions provide crucial emotional support, reduce stress, and enhance comfort, leading to better childbirth experiences. Given these benefits, hospitals nationwide should adopt a birth companion policy to ensure continuous support for all birthing individuals, ultimately improving maternal and neonatal health outcomes.

Keywords: Support person; labour outcome; primi parturient mother; birth companion.

1. INTRODUCTION

In every nation and society across the globe, pregnancy and childbirth mark significant milestones in the lives of women and families, embodying a period of profound vulnerability [1].

Labor can be an intimidating experience for women, particularly during their first childbirth, as they may encounter a wide range of physical sensations, from mild discomfort to intense pain. However, ensuring that the woman feels as relaxed and informed as possible can help alleviate both the physical and emotional challenges of labor and delivery. This can be achieved through providing adequate care, timely updates, comfort, support and reassurance throughout the process [2-4].

In traditional labour practices, women are typically supported by another woman. The concept of “**safe motherhood**” has traditionally focused solely on physical well-being. However, it is imperative to broaden the scope of safe motherhood beyond merely preventing illness or death to include upholding women’s fundamental human rights. This encompasses respecting women’s autonomy, dignity, emotions, choices and preferences including the provision of companionship during maternity care [5].

All pregnant women seek a comforting, encouraging companion during labour to assist them in managing the various difficulties of childbirth, such as pain, anxiety, exhaustion and ambiguity. The concept of “**companion of choice at birth**” entails having a supportive individual present continuously during labour and

delivery. A “**Doula**”, derived from the Greek term for a female caregiver, can fulfil these requirements and the continuous support provided by a doula labour can enhance childbirth experiences and outcomes [6].

Labour companionship involves providing support to a woman during labour and childbirth, which can come from various sources like partners, family members, friends, doulas or health care professionals. It has been a traditional practice for women to have companions during childbirth however some healthcare initiatives have overlooked this tradition, leaving women to give birth alone in health facilities [7].

2. OBJECTIVES OF THE STUDY

1. To evaluate the effectiveness of presence of support person on labour outcome among primi-parturient women in experimental and control group.
2. To find out the association between labour outcome among primi-parturient women in experimental group and their selected demographic variable.
3. To find out the association between labour outcome among primi-parturient women in control group and their selected demographic variables.

3. REVIEW OF LITERATURE

Berlington M. J. Munkhondya et al. (2020), conducted a quasi-experimental study in Malawi, involving 70 primigravid women, to evaluate the effectiveness of Companion-Integrated Childbirth Preparation (C-ICP). The intervention group, receiving two sessions of C-ICP, demonstrated significant reductions in childbirth fear ($p < .001$), along with notable enhancements in self-efficacy ($p < .001$) and maternal support ($p < .001$) compared to the control group receiving routine care. Data analysis utilized simple linear regression. The intervention group experienced a significant decrease in childbirth fears by approximately 86.6%, a significant increase in childbirth self-efficacy by approximately 90.3%, and an increase in birth companion support by approximately 78.1% compared to the control group. However, there were no significant differences in pregnancy outcomes between the two groups [8].

Ylva Vladic Stjernholm et al. (2021), conducted a randomized controlled study at a Swedish university hospital from 2015 to 2017, finding that continuous support during labor significantly

shortened active labor duration (11.0 ± 5.7 hours vs. 13.7 ± 3.9 hours, $p = 0.001$) and led to lower cortisol levels. This support also increased spontaneous vaginal deliveries (73% vs. 62%) and the use of combined analgesic methods ($p = 0.04$), highlighting its benefits for improving birth outcomes in primiparous women [9].

Almutawtah, M (Nov 2023), Examined social support experiences during pregnancy among women worldwide. They conducted a search across PubMed, CINAHL, MEDLINE, APA PsycINFO, and Scopus databases, identifying 14 relevant studies involving 571 participants. Data collection methods varied, with two studies employing focus groups and 12 using interviews. The analysis revealed four main themes and six sub-themes regarding social support during pregnancy. Notably, 14% of participants reported dissatisfaction with relationships, while 30% highlighted the importance of financial support from spouses and family. These findings underscore the diverse aspects of social support pregnant women encounter, emphasizing the significance of interpersonal connections and tangible assistance during this critical life stage [10].

4. MATERIALS AND METHODS

4.1 Research approach

Quantitative research approach

4.2 Research Design

Post test only control group

4.3 Research Variable

Independent Variable: Presence of support person

Dependent Variable: Labour outcome

Demographic Variables: Age, Religion, Residential status, Family type, Regular exercise, Education, Occupation, Monthly family income, Support person present during labour.

Target Population: Consists of all the primiparous mothers between the age group of 20-30 years living in Nadiad.

Research Setting: Maternal hospitals of Nadiad

Sampling Technique: Convenient sampling technique

Sample Size: Sample size for this study is 60 primiparous mothers, 30 samples for experimental group and 30 samples for control group.

4.4 Sampling Criteria

➤ **Inclusion criteria:**

1. Primi-Parturient mothers who have completed 37 weeks of gestational age. 2.20-30 years of age group
2. True labour pain and admitted to labour ward.
3. Vaginal delivery

➤ **Exclusion criteria:**

1. High risk mothers
2. Critical labour
3. 19 years of age
4. 31 years of age
5. Preterm and post-term deliveries
6. Lower Segment Cesarean Section (planned)

4.5 Tool for Data Collection

Section- A: Demographic data Section-B: Labour progress record Section-C: Visual analog pain scale Section-D: Modified Hamilton Anxiety Assessment Scale (HAM-A)

5. RESULTS AND DISCUSSION

Section I: Description of the demographic variables of primi-parous mothers:

The frequency and percentage distribution of the samples by their personal data in experimental

and control group. The data shows that in **experimental group**, the largest age group consists of participants aged 23-25 years 10(33.33%). The majority identify as Hindu 16(53.34%). A significant portion of participants reside in rural areas 17(56.67%) and come from joint families 21(70%). Most participants do not engage in regular exercise 19(63.33%). Regarding education, the majority have completed primary school 16(53.33%). In terms of occupation, most participants are housewives 21(70%). The largest group of participants has a monthly family income of less than ₹20,000 13(43.33%). Lastly, most participants receive support from relatives 18(60%).

In the **control group**, the majority of participants are aged 20-22 years 15(50%). Most identify as Hindu 26(86.7%) and live in rural areas 27(90%). A large portion come from joint families 25(83.33%). Most participants do not engage in regular exercise 25(83.33%). The majority have completed primary school education 23(76.66%). Most are housewives 24(80%), and a significant portion has a monthly family income of less than ₹20,000 20(66.67%). All participants in this group reported having no support person present 30(100%).

Section II: Description of the labour progressing variables of primi-parous mothers:

Table 1. Frequency and Percentage distribution of labour progress [N=30]

Sr. No.	Criteria for Labour Observation	Experimental Group		Control Group	
		Frequency	Percentage	Frequency	Percentage
1.	Mode of Delivery				
	a) Vaginal Delivery with or without episiotomy	25	83.33	29	96.67
	b) Assisted delivery (Forceps, Vacuum)	05	16.67	01	3.33
2.	Duration of 1st stage of labour.				
	a) ≤ 12 hours	23	76.67	17	56.67
	b) > 12 hours	07	23.33	13	43.33
3.	Duration of 2nd stage of labour.				
	a) ≤ 2 hours	27	90	27	90
	b) > 2 hours	03	10	03	10
4.	Duration of 3rd stage of labour.				
	a) ≤ 30 minutes	26	86.67	25	83.33
	b) > 30 minutes	04	13.33	05	16.67
5.	Total duration of labour.				
	a) ≤ 18 hours	29	96.67	26	86.67
	b) > 18 hours	01	3.33	04	13.33
6.	APGAR score at 1 minute.				
	a) ≥ 7	19	63.33	09	30
	b) ≤ 6	11	36.67	21	70
7.	APGAR score at 5 minutes.				
	a) ≥ 7	26	86.67	11	36.67
	b) ≤ 6	04	13.33	19	63.33

Section III: Effectiveness of presence of support person on labour outcome among primi-parturient women in experimental and control group:

Table 2. Comparison between experimental and control group among the variables of level of pain, level of anxiety and labour progress [N=30]

Sr. No.	Variables	Maximum Score	Experimental Group		Control Group		t- value
			Mean	SD	Mean	SD	
1.	Level of Pain	10	6.56	1.47	8.73	1.52	2.0017
2.	Level of Anxiety	40	12.07	8.93	28.07	7.62	2.0025
3.	Labour Progress	07	1.16	1.36	2.2	1.14	2.0167

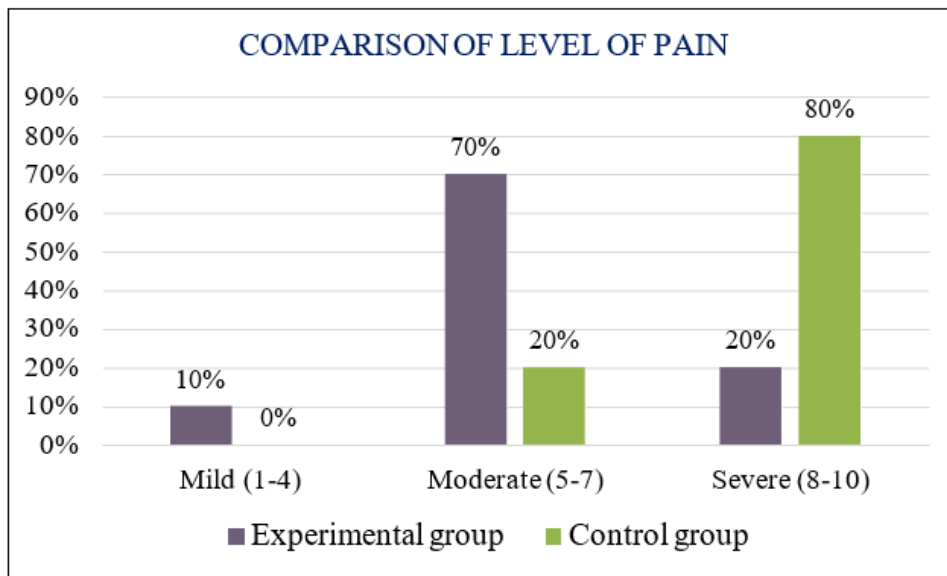


Fig. 1. Percentage distribution of pain levels among primi-parous mothers in the experimental and control groups

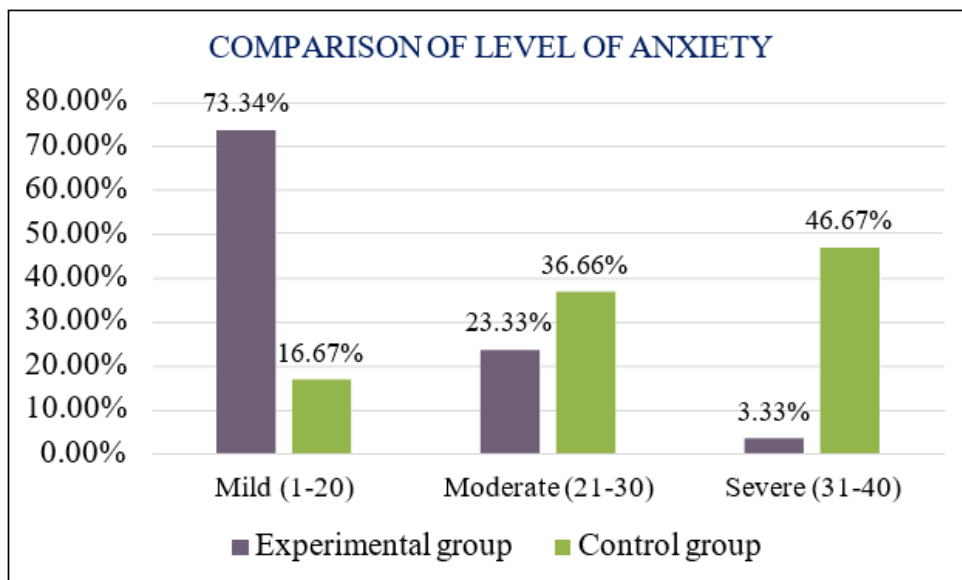


Fig. 2. Percentage distribution of anxiety levels among primi-parous mothers in the experimental and control groups

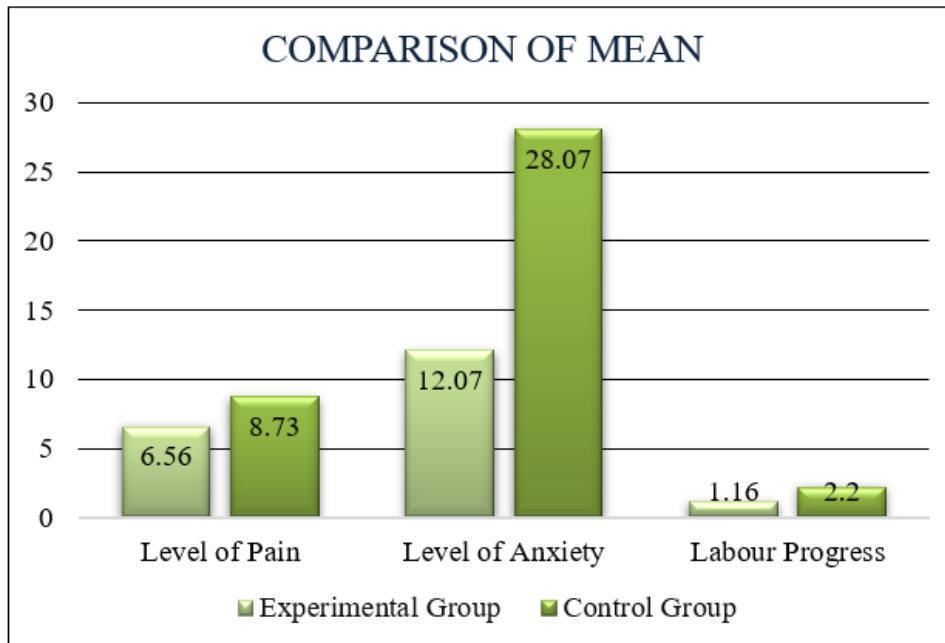


Fig. 3. Comparison of the means between the experimental and control groups for the variables of pain, anxiety and labour progress

The bar graph compares mean difference of the experimental and control groups for three variables: level of pain, level of anxiety, and labor progress. The experimental group reported lower pain and anxiety levels compared to the control group, indicating better outcomes. For labor progress, lower mean scores in the experimental group suggest better progress, as lower scores reflect more favorable labor conditions. These findings highlight the positive impact of the intervention on reducing pain and anxiety and improving labor progress.

Section IV: Association between labour outcome among primi- parturient women in experimental group and their selected demographic variable:

Association of selected demographic variables to the level of pain regarding presence of support person among primi-parous mothers in experimental group:

Association of selected demographic variables to the level of pain (classified as mild, moderate, or severe) regarding presence of support person among primi-parous mothers in experimental group. For each demographic variable, the number of individuals in each pain category is provided, along with the chi-square (χ^2) value and its corresponding degrees of freedom (df)

and p-value. The chi-square tests assess the association between demographic factors and pain levels. Notably, significant associations are indicated by higher chi-square values and corresponding p-values (e.g., age, religion, and occupation), suggesting that certain demographic factors may influence the severity of pain experienced by individuals.

Association of selected demographic variables to the level of anxiety regarding presence of support person among primi-parous mothers in experimental group:

Association of selected demographic variables to the level of anxiety (classified as mild, moderate, or severe) regarding presence of support person among primi-parous mothers in experimental group. For each variable, the distribution of individuals in each anxiety category is provided, along with the chi-square (χ^2) value, degrees of freedom (df), and p-value, which assess the association between demographic factors and anxiety levels. Significant associations are indicated by higher chi-square values and p-values (e.g., age, religion, family type, occupation), suggesting that these demographic factors have an impact on the level of anxiety experienced by individuals. Notably, variables such as occupation, family income, and support person present show strong associations with anxiety levels.

Section V. Association between labour outcome among primi- parturient women in control group with their selected demographic variable:

Association of selected demographic variables to the level of pain regarding presence of support person among primiparous mothers in control group: Association of selected demographic variables to the level of pain (classified as mild, moderate, or severe) regarding presence of support person among primiparous mothers in control group. For each demographic category, the number of individuals in each pain level is shown, alongside the chi-square (χ^2) value, degrees of freedom (df), and p-value. These statistics help assess whether there is a significant association between demographic factors and pain severity. The Table 2 indicates that certain factors, such as age, education, family income, and occupation, show significant associations with pain levels, particularly higher pain severity among individuals from certain age groups, education levels, and income brackets. However, variables like support person presence and religion exhibit no significant relationship with pain severity, as indicated by low or zero chi-square values.

Association of selected demographic variables to the level of anxiety regarding presence of support person among primiparous mothers in control group: Association of selected demographic variables to the level of anxiety (classified as mild, moderate, or severe) regarding presence of support person among primiparous mothers in control group. The chi-square (χ^2) values, along with degrees of freedom (df) and p-values, are provided to assess the significance of these associations. Notable findings include significant associations between age, family type, education, and occupation with anxiety levels, particularly showing higher anxiety in certain age groups, family structures, and education levels. For instance, individuals in the "Joint" family type experienced higher anxiety levels. However, variables like support person presence, religion, and residential status show weak or no significant associations, as indicated by low or zero chi-square values.

6. CONCLUSION

The study highlights that having a birth companion during labor significantly improves labor progress and maternal outcomes.

Companions provide crucial emotional support, reduce stress, and enhance comfort, leading to better childbirth experiences. The results suggest that demographic factors such as age and family type may have a considerable impact on the severity of anxiety experienced by individuals.

7. RECOMMENDATION

1. Hospitals and maternity care centers should adopt policies that encourage or mandate the presence of a support person during labor to improve maternal outcomes.
2. To conduct awareness sessions for pregnant women and their families about the benefits of having a support person during labor to reduce anxiety and pain and enhance labor progress.
3. To develop training programs for potential support persons (partners, family members, or friends) to provide emotional and physical assistance during labor effectively.
4. Integrate the concept of support persons into routine midwifery and nursing care to promote a holistic and patient-centered approach to childbirth.
5. The additional studies can be conducted with larger sample sizes and in different geographic regions to generalize findings and identify any cultural or regional variations in outcomes.
6. Investigate the long-term psychological impact of support person presence on both mothers and their support persons to enhance the understanding of this intervention's full benefits.
7. To ensure that labor rooms are designed to accommodate support persons comfortably, maintaining privacy and promoting a conducive environment for effective support.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of this manuscript.

CONSENT AND ETHICAL APPROVAL

The study was approved by the institutional ethical committee (IEC) of Dinsha Patel College of Nursing, Nadiad. There is a total 15 members in committee from various departments. The

Ethical Approval Reference number is MAM Uni/IECHR/2024/51 And a formal written consent was gathered from the samples prior to data collection.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Hodnett ED, Lowe NK, Hannah ME, Willan AR, Stevens B, Weston JA, Ohlsson A, Gafni A, Muir HA, Myhr TL, Stremler R. Nursing supportive care in labour trial group. Effectiveness of nurses as providers of birth labour support in North American hospitals: A randomized controlled trial. PMID: 12234231
2. World Health Organization. Counselling for Maternal and Newborn Health Care: A Handbook for Building Skills; 2013.
3. Fathi Najafi T, Latifnejad Roudsari R, Ebrahimipour H. The best encouraging persons in labor: A content analysis of Iranian mothers' experiences of labor support. Plos One. 2017;12(7):e0179702.
4. Ip WY. Relationships between partner's support during labour and maternal outcomes. Journal of Clinical Nursing. 2000;9(2):265-72.
5. Bowser D, Hill K. Exploring evidence for disrespect and abuse in facility-based childbirth: report of a landscape analysis. Bethesda, MD: USAID-TRAction Project, University Research Corporation, LLC, and Harvard School of Public Health. ii The Charter borrows heavily from the framework of the International Planned Parenthood Federation Charter on Sexual and Reproductive Rights;1996.
6. American College of Obstetricians and Gynecologists (College); Society for Maternal- Fetal Medicine, Caughey AB, Cahill AG, Guise JM, Rouse DJ. Safe prevention of the primary cesarean delivery. Am J Obstetric Gynecol; 2014; PMID: 24565430
7. Swapna Healthcare. The benefits of having the support of a birthing Companion during Childbirth"; 2024.
8. Munkhondya BM, Munkhondya TE, Chirwa E, Wang H. Efficacy of companion-integrated childbirth preparation for childbirth fear, self-efficacy, and maternal support in primigravid women in Malawi. BMC Pregnancy and Childbirth. 2020;20:1-2.
9. Stjernholm YV, Charvalho PD, Bergdahl O, Vladic T, Petersson M. Continuous support promotes obstetric labor progress and vaginal delivery in primiparous women—a randomized controlled study. Frontiers in Psychology. 2021;12:582823.
10. Al-Mutawtah, Mona, et al. Women's experiences of social support during pregnancy: A qualitative systematic review. BMC Pregnancy and Childbirth. 2023;23 (1).

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of the publisher and/or the editor(s). This publisher and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.

© Copyright (2024): Author(s). The licensee is the journal publisher. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:

<https://www.sdiarticle5.com/review-history/127833>