

August 2021

## Effect of empowered female labour companion on anxiety, birth outcome, and maternal satisfaction among primiparturients

Jisha C

Government Nursing College, Kannur, Kerala, India, jishavanaja77@gmail.com

Sreeja G. Pillai

Government Nursing College, Kannur, Kerala, India, sreejanavaneeth@gmail.com

Follow this and additional works at: <https://impressions.manipal.edu/mjnhs>



Part of the [Maternal, Child Health and Neonatal Nursing Commons](#), and the [Nursing Midwifery Commons](#)

---

### Recommended Citation

C, Jisha and Pillai, Sreeja G. (2021) "Effect of empowered female labour companion on anxiety, birth outcome, and maternal satisfaction among primiparturients," *Manipal Journal of Nursing and Health Sciences*: Vol. 7 : Iss. 1 , Article 8.

Available at: <https://impressions.manipal.edu/mjnhs/vol7/iss1/8>

This Original Article is brought to you for free and open access by the MAHE Journals at Impressions@MAHE. It has been accepted for inclusion in Manipal Journal of Nursing and Health Sciences by an authorized editor of Impressions@MAHE. For more information, please contact [impressions@manipal.edu](mailto:impressions@manipal.edu).

# Effect of empowered female labour companion on anxiety, birth outcome, and maternal satisfaction among primiparturients

Jisha C\*, Sreeja G Pillai, Ashalatha P K

Email: jishavanaja77@gmail.com

## Abstract

**Introduction:** Labour companionship is a core element of care for improving maternal and infant health outcomes and providing respectful maternity care for a positive childbirth experience. **Objective:** Evaluate the effect of empowered female labour companion on anxiety, birth outcome and maternal satisfaction among primiparturients. **Methods:** Quantitative approach with Quasi-experimental non-equivalent control group post-test only design was used to collect data from 34 (Experimental group-17, Control group-17) primiparturients selected by consecutive sampling technique from the labour room of Govt. Medical College Hospital, Kannur. Data was collected using an interview schedule, labour specific anxiety scale, maternal satisfaction scale and birth outcome observation record, and WHO modified partograph. Companions were also selected as per criteria. Companions of the experimental group were empowered by using educational intervention regarding dimensions of supportive care during labour and delivery. **Results:** The findings showed a significant difference in anxiety ( $U=80$ ,  $Z=2.225$ ,  $p<.05$ ), maternal satisfaction ( $U=3.500$ ,  $Z=4.867$ ,  $p<.001$ ) and birth outcome – duration of labour ( $p=.026$ ) but there is no significant difference in Apgar score ( $U=144.500$ ,  $Z=0.000$ ,  $p=1.000$ ), mode of delivery and complications ( $p=.310$ ) in labour and postpartum among primiparturients. **Conclusion:** The study concluded that the presence of an empowered female labour companion has a significant effect in reducing anxiety, improved birth outcome- duration of labour and increased maternal satisfaction among primiparturients. The majority of the primiparturients in both groups were very much satisfied with labour and birth irrespective of labour companion receiving education. Labour companion need to be trained regarding labour supportive measures and women also to be given information and measures to make an informed decision during antenatal care visit so that each woman has sufficient time to prepare for companionship.

**Keywords:** Anxiety; birth outcome; effect; empowered; labour companion; maternal satisfaction; primiparturients

## Introduction

Labour is the intense expression of pregnancy and presents a physical and physiological challenge for women. Labour and delivery are anxious, fearful and stressful situations in women's life. Primigravid women need concrete support, companionship and empathy as

they may have a limited understanding of the labour and delivery process (Ebirim et al., 2012; Xavier & Viswanath, 2016). Labour companionship refers to support provided by the partner, family member, doula or health care professionals to a woman during labour and childbirth (Boheren et al., 2017).

World Health Organization (WHO) recommends the presence of a companion for woman during labour and childbirth (Bruggemann et al., 2001; Munkhondya et al., 2020). Companionship during childbirth is reported as a safe and effective intervention in improving maternal labour experience (Langer et al., 1998).

Two complementary theories are helpful to understand the effects of labour support on childbirth outcome. The

Jisha C<sup>1</sup>, Sreeja G Pillai<sup>2</sup>, Ashalatha P K<sup>3</sup>

<sup>1</sup> MSc Nursing student, Government Nursing College, Kannur, Kerala, India

<sup>2</sup> Professor, Government Nursing College, Kannur, Kerala, India.

<sup>3</sup> Assistant Professor, Government Nursing College, Kannur, Kerala, India.

Manuscript received: 16 January 2021

Revision accepted: 22 February 2021

\*Corresponding Author

**How to cite this article:** Jisha C, Pillai S G, Ashalatha P K. (2021). Effect of empowered female labour companion on anxiety, birth outcome, and maternal satisfaction among primiparturients. *Manipal Journal of Nursing and Health Sciences*, 7 (1). 47-53.

first theoretical explanation considers the presence of a companion during labour in stressful, threatening and disempowering clinical birthing environments. Labour room environment is a plethora of equipment's, used by professionals and the medical jargons, procedures, interventions, lack of privacy and unfamiliar persons, professionals may lead to increased maternal fear and anxiety. The second explanation focused on labour pain. Labour pain is a central and universal part of women's childbirth experience. Both explanations highlight the labour physiology and the mother's feelings of control and competence, reducing reliance on medical interventions (Hodnett et al., 2013). A birth companion is a person who experienced the labour process and provides one-to-one support to other women who experience labour and childbirth. Common elements of support include emotional support, informational support, comfort measures, advocacy, and instrumental support (WHO, 2019).

Labour can be a very frightening experience especially first birth and fear and anxiety can affect the labour process. The prevalence of childbirth anxiety was 94% among nulliparous women in Kerala. This may affect the unfavourable labour outcomes such as prolonged labour, unplanned caesarean section, preterm labour and the birth of a low birth weight baby (Diniz et al., 2014).

Primigravid women are found to experience more fear related to childbirth and may experience more adverse pregnancy outcomes than multigravida woman (Kabakian-Khasholian & Portela, 2017). A satisfying birth environment with a companion can support physiologic birth and minimize maternal stress and anxiety during labour and delivery (Diniz et al., 2014).

Companion of choice at birth is defined as the continuous presence of a support person during labour and birth. The companionship is part of low-cost interventions initiated by the government to meet the sustainable development goals and is expected to help expectant mothers by easing the delivery process. The idea is to make childbirth a more natural process through emotional and moral support, comforting measures and healing touches (WHO, 2018).

It is proposed that labour support will be more adequate if given by a known person and selected based on the preference of the woman. This support person needs to stay with her preferably from early labour until after the birth. This support will help the women in having a greater chance of spontaneous birth, optimal newborn health, and satisfaction with the childbirth experience (Hodnett et.al. 2013). WHO considers labour companionship as a key component of providing respectful maternity care and has been recommended during intrapartum care for a positive childbirth experience. This is also included as one of the WHO standards for improving the quality of maternal and newborn care (WHO, 2018).

Evidence to randomized control trial showed that labour support has a considerable impact on the mother, which persists into the postpartum period. This has important application for the primary prevention of postpartum psychosis (Manizheh & Leila, 2009).

A study on the experiences of primiparous women with the support they received from their birth companions during labour and delivery reported the need to train the companion regarding support to the women during labour and delivery. The antenatal care education for the primiparous women should include the role of birth companion (Kungwimba et al., 2013).

This study was done to evaluate the effectiveness of empowered female labour companion on anxiety, birth outcome and maternal satisfaction among primiparturients admitted in the labour room.

Objective of the study is to evaluate the effect of empowered female labour companion on anxiety, birth outcome and maternal satisfaction among primiparturients.

## **Materials and methods:**

The research approach is quantitative, and the research design used is a quasi-experimental non-equivalent control group post-test only design. The present study was conducted in the Labour Room of Govt. Medical College Hospital, Kannur. Approval was obtained from the Institutional Ethics Committee Govt. Nursing College, Kannur.. The confidentiality of the collected

data was maintained. Thirty-four primiparturients (17 each in the experimental and control group) were selected by consecutive sampling selected based on the inclusion criteria. Primiparturients who had a normal course of pregnancy, between 37- 40 weeks of gestation, who were willing to participate in the study and able to comprehend instruction and were willing to allow a non-professional female labour companion were selected for the study. Companions were also selected based on criteria such as a companion to be a female relative (mother/mother-in-law/sister/sister-in-law/any other close female relative), able to understand Malayalam and follow instruction, undergone normal vaginal delivery, age less than 60 years, and who were willing to stay with pregnant women in first and fourth stages of labour. Both the experimental and control group were allowed to have a female labour companion in the first and fourth stages of labour. After obtaining informed written consent from female labour companions of both groups, female labour companion of the experimental group were empowered by educational intervention regarding stages, signs and symptoms of labour, physical and comfort measures (walking, oral fluid management, bladder care, bowel care, ambulation, general hygiene, positioning, counter pressure, back massage, touch and breathing), emotional support (continuous presence and giving reassurance and praise) instrumental support (assisting with needs), and warning signs of labour. The session was conducted as one to one sessions for 30 minutes. The methodology included lecture, discussion, PowerPoint Presentation, demonstration of back massage and video-assisted presentation on breathing exercise. Breathing exercise adopted in this intervention was Indian breathing technique, cleansing breathing technique and panting breath. Companions of the control group were not given education but they were free to support the women in labour. The companions were told about the basic rules to be followed in the labour room. After obtaining consent, data were collected from primiparturients using an interview schedule (Obstetrical and socio personal variables) from the labour room. The tools were administered to each mother individually at the bedside and it took 25-30 minutes for data collection. The level of anxiety and maternal satisfaction of primiparturients

were assessed within 48 hrs of delivery using the Labour specific anxiety scale and Maternal satisfaction scale. Birth outcome – duration of labour, Apgar score, mode of delivery and complications in labour were assessed immediately after delivery and complications in immediate postpartum were assessed within 24 hrs of delivery by using Birth Outcome Observation Record and WHO Modified Partograph. The reliability of the tool was tested by the Coefficient of Alpha (Labour specific anxiety scale- 0.98 and Maternal satisfaction scale- 0.95) and content validity of the tools were also tested.

## Results

### *Sociopersonal and obstetrical variables*

In the experimental group, 58.82% primiparturients belonged to the age group 18-22 years and among the control group, 47.05% belonged to the age group 23-27 years. The majority of primiparturients in both groups belonged to the nuclear family. The majority of primiparturients in the experimental group (58.12%) and control group (76.47%) belonged to the Hindu religion. Most of the primiparturients in the experimental group (41.17%) had completed secondary education and the control group (52.94%) had completed higher secondary education. The majority of primiparturients in the experimental group (64.70%) and the control group (58.82%) were homemakers. Primiparturients in the experimental group (29.41%) belonged to the income category of Rs 5000-15000 and in the control group, 58.82% were having a monthly income of more than Rs15000. Primiparturients (100%) in both the experimental and control group were residing in Panchayat. Most of the primiparturients in the experimental (58.82%) and 76.47% of the control group had exposure to the source of information regarding companion in the program. Most of the primiparturients in the experimental group (50%) and a majority in the control group (92%) reported media as their source of information.

All primiparturients in both experimental and control group had a regular antenatal check-up and had taken two doses of Tetanus Toxoid injection. Of 34 primiparturients, 29.41% in the experimental and

23.52% of primiparturients in the control group had complications during the antenatal period such as pregnancy-induced hypertension, gestational diabetes mellitus and hypothyroidism during second and third trimesters. Among five primiparturients in the experimental group, two had pregnancy-induced hypertension and two had gestational diabetes mellitus and of the four primiparturients in the control group, two had gestational diabetes mellitus. One primiparturient in both the experimental and control group had hypothyroidism. The majority of the primiparturients in both the experimental (76.47%) and control group (70.58%) were supported by their mothers as labour companion.

*Analysis of birth outcome of primiparturients*

Eleven newborns (100%) had a normal Apgar score. All primiparturients had undergone normal vaginal delivery. Among 17 primiparturients in the control group, one (5.88%) developed pelvic haematoma as a complication. Among the experimental group, none of the primiparturients had developed a complication in labour and immediate postpartum.

*Birth outcome- Mode of delivery*

All primiparturients in the experimental and control group had a normal vaginal delivery. No statistics were computed because the mode of delivery was constant.

*Birth outcome- complications in labour and immediate postpartum*

A Chi-square test was used to assess the significance of the difference in complications in labour and immediate postpartum. The computed value of  $\chi^2$

= 1.030 was less than the critical value (table value  $\chi^2 (1) = 3.84$ ) at  $p > 0.05$  level of significance, hence statistically not significant. Hence, it is interpreted that there is no significant difference in complications observed in labour and immediate postpartum among primiparturients with and without empowered female labour companion.

Distribution of primiparturients based on maternal satisfaction



Figure 2: Distribution of primiparturients based on maternal satisfaction N=34

Fig 2 shows that all primiparturients (100%) from the experimental and 88.23% from the control group were very much satisfied with labour and childbirth.

Distribution of primiparturients based on duration of labour

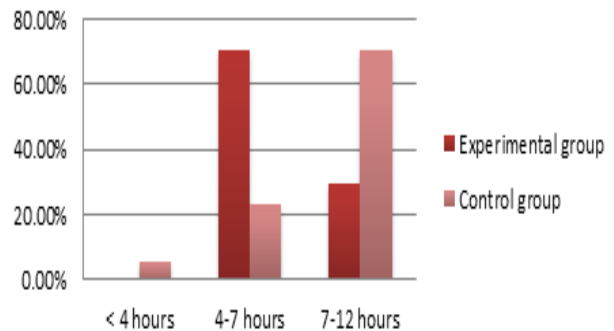


Figure 3: Distribution of primiparturients based on duration of labour

Fig 3 shows that the majority of primiparturients in the experimental group (70.58%) had 4-7 hrs of the duration of labour and in the control group (70.58%) had a duration of 7-12 hrs.

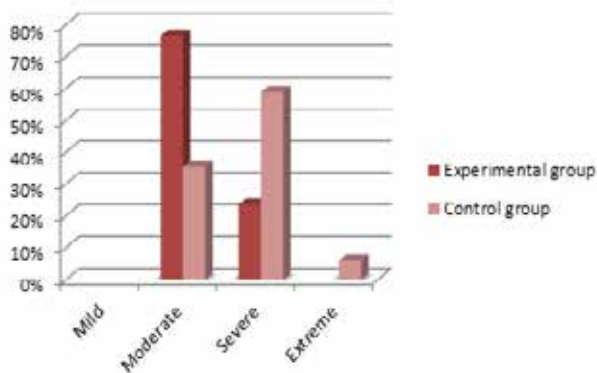


Fig 1 shows that the majority of primiparturients in the experimental group (76.47%) and 35.29% primiparturients in the control group have moderate anxiety and 58.82% primiparturients in the control group have severe anxiety and 5.88% have extreme anxiety.



**Table 1:** Significance of Difference in Anxiety Score among Primiparturients with and without Empowered Female Labour Companion

N=34

	Mean ±SD	Median	Mean Rank	Mann Whitney U	Z-value	p-value
Experimental group (N=17)	23.65±5.92	23	13.71	80.000	2.225	.026*
Control group (N=17)	28.59±7.16	28	21.29			

Mann Whitney U table value-87

\*significant (p<.05 level of significance)

Mann Whitney U test was used to assess the significant difference in anxiety score among primiparturients with and without empowered female labour companion. The calculated value of Mann Whitney U test is 80 which is less than the critical value (table value U=87) and the Z-value of 2.225 is larger than the critical value of Z=1.96 at p<.05 level of significance and 95% confidence interval. It is interpreted that there is a significant difference in anxiety score among primiparturients with and without empowered female labour companion (Table 1).

**Table 2:** Significance Difference in Maternal Satisfaction Score among Primiparturients with and Without Empowered Female Labour Companion

N=34

	Mean ±SD	Median	Mean Rank	Mann Whitney U	Z-value	p-value
Experimental group (N=17)	132.06 ± 3.11	133	25.79	3.500	4.867	<.001***
Control group (N=17)	112.77 ± 11.92	116	9.21			

Table value of Mann Whitney U =87

\*\*\* Highly significant as p<.001

Mann Whitney U test was used to assess the significance of the difference in maternal satisfaction among primiparturients with and without empowered female labour companion. The data from Table 2, it is evident that the calculated value of Mann Whitney U test is 3.5 which is less than the critical value and the

Z-value of 4.867 is larger than the critical value of Z= 1.96 at p<.05 level of significance and 95% confidence interval. The test is found to be statistically significant. It is inferred that there is a significant difference in maternal satisfaction score among primiparturients with and without empowered female labour companion.

**Table 3:** Significance Difference in Duration of Labour among Primiparturients with and without Empowered Female Labour Companion

N=34

	Mean	SD	Mean difference	t-value	p-value
Experimental group (N=17)	385.53	80.66	86.29	2.194	.026*
Control group (N=17)	471.82	129.87			

T (32) =1.697 at 0.05 level of significance

\* Significant p<.05

An independent sample t-test was used to assess the significance of the difference in the duration of labour among primiparturients with and without empowered female labour companion. Table 3 shows that the calculated t-value of 2.194 is greater than the critical value (table value, t (31) = 1.697) at p<.05 level of significance. The test is found to be statistically significant. A significant difference was found in the mean duration of labour among primiparturients with and without empowered female labour companion.

**Table 4:** Significance Difference in AppgarScore among Primiparturients with and without Empowered Female Labour Companion

	Mean Rank	Sum of ranks	Mann Whitney U	Z-value	p-value
Experimental group (N=17)	17.50	297.50	144.500	0.000	1.000
Control group (N=17)	17.50	297.50			

N=34

Mann Whitney U (table value =87)

Not significant as P>.05 level of significance

Mann Whitney U test was used to assess the significance of the difference in Apgar score among primiparturients with and without empowered female labour companion. Table 4 shows that the calculated value of Mann Whitney U is 144.500 which is greater than the critical value (U=87) and the Z-value of 0.000 is smaller than the critical value of Z=1.96 at P>.05 level of significance and 95% confidence interval. The test was not found to be statistically significant. A significant difference was not found in the Apgar score among primiparturients with and without empowered female labour companion.

## Discussion

The study result showed a significant difference in anxiety, maternal satisfaction and birth outcome-duration of labour but there was no significant difference in Apgar score, mode of delivery and complications in labour and immediate postpartum.

The present study was supported by the study conducted on the effect of a support person in labour among 60 primiparturients, which reported a significant difference in anxiety between experimental and control group with a support person in labour (p<.05) (Jayalakshmi, 2011). The study finding is similar to the study on assessing the companionship during labour to promote vaginal delivery and enhance maternal satisfaction among 416 pregnant women. The result showed that the experimental group was more satisfied with the compassionate care and emotional support during their childbirth experience (p=.04) (Vivian et al., 2013).

The study is incongruent with the study to assess the efficacy of Companion – Integrated Childbirth Preparation for childbirth fear, self-efficacy and maternal support in 70 primigravid women. The result shows that there are no statistically significant differences regarding the duration of labour and the present study is supported by the same study in which there is no significant difference in Apgar score and mode of delivery between the two groups of primigravid women (Munkhondya et al., 2020).

The study recommends the use of a large sample with a probability sampling technique and a qualitative study to explore the perception and experience of the women regarding labour companionship. Limitation: Due to the COVID outbreak and as the Government Medical College Kannur was a dedicated COVID hospital, to contain the infection, the companionship program had temporarily stopped in the labour room and because of the unavailability of the required sample, the sample size was reduced to 34.

## Conclusion:

The presence of an empowered female labour companion has a significant effect in reducing anxiety, the improved birth outcome – duration of labour and increased maternal satisfaction score among primiparturients. Labour companions need to be trained regarding labour supportive measures and women also to be given information and measures to make an informed decision during antenatal care visit so that each woman has sufficient time to prepare for companionship. Integration of a close female relative to the care of women during labour and childbirth is a safe and effective midwifery intervention to provide appropriate care to women and their family.

Source of support: None

Conflict of interest: None declared

Source of support in the form of grants: None

## References

- Boheren, M. A., Hofmeyr, G. J., Sakala, C., Fukuzawa, R. K., & Cuthbert, A. (2017). Continuous support for women during childbirth: Summary of the findings for the main comparison. *Cochrane Database of Systematic Reviews*.

- Systematic Reviews, 7, 1–173. 10.1002/14651858.CD003766.pub6.www.cochranelibrary.com
- Bruggemann, O. M., Parpinelli, M. A., Osis, M. J. D., Cecatti, J. G., & Neto, A. S. C. (2007). Support to woman by a companion of her choice during childbirth: A randomized controlled trial. *Reproductive Health*, 4, 1–7. <https://doi.org/10.1186/1742-4755-4-5>
- Diniz, C. S., d’Orsi, E., Domingues, R. M., et al, (2014). Implementation of the presence of companions during hospital admission for childbirth: Data from the Birth in Brazil national survey. *Cadernos de saude publica*, 30 Suppl 1, S1–S14. <https://doi.org/10.1590/0102-311x00127013>
- Ebirim, L.N., Buowari, O. Y., and Ghosh, S., (2012). Physical and Psychological Aspects of Pain in Obstetrics, *Pain in Perspective*, IntechOpen, DOI: 10.5772/53923. Available from: <https://www.intechopen.com/books/pain-in-perspective/physical-and-psychological-aspects-of-pain-in-obstetrics>
- Hodnett, E. D., Gates, S., Hofmeyr, G. J., & Sakala, C. (2013). Continuous support for women during childbirth. *Cochrane Database of Systematic Reviews*, 2013 (7). <https://doi.org/10.1002/14651858.CD003766.pub5>
- Kabakian-Khasholian, T., & Portela, A. (2017). Companion of choice at birth: Factors affecting implementation. *BMC Pregnancy and Childbirth*, 17(1), 1–13. <https://doi.org/10.1186/s12884-017-1447-9>
- Kungwimba, E., Malata, A., Maluwa, A., & Chirwa, E. (2013). Experiences of women with the support they received from their birth companions during labour and delivery in Malawi. *Health*, 05(01), 45–52. <https://doi.org/10.4236/health.2013.51007>
- Langer, A., Campero, L., Garcia, C., & Reynoso, S. (1998). Effects of psychosocial support during labour and childbirth on breastfeeding, medical interventions, and mothers’ wellbeing in a Mexican public hospital: A randomised clinical trial. *BJOG: An International Journal of Obstetrics and Gynaecology*, 105(10), 1056–1063. <https://doi.org/10.1111/j.1471-0528.1998.tb09936.x>
- Manizheh, P., & Leila, P. (2009). Perceived environmental stressors and pain perception during labour among primiparous and multiparous women. *Journal of Reproduction & Infertility*, 10(3), 217–223.
- Munkhondya, B. M. J., Munkhondya, T. E., Chirwa, E., & Wang, H. (2020). Efficacy of companion-integrated childbirth preparation for childbirth fear, self-efficacy, and maternal support in primigravid women in Malawi. *BMC Pregnancy and Childbirth*, 20(1), 1–12. <https://doi.org/10.1186/s12884-019-2717-5>
- Vivian WH., Mbchb, C., Fhkam, O., et al, (2013). Companionship during Labour Promotes Vaginal Delivery and Enhances Maternal Satisfaction. *Hong Kong J Gynaecol Obstet Midwifery*, 17(1), 12-7
- WorldHealthOrganization(2018). Intrapartum care for a positive childbirth experience. <http://apps.who.int/iris/bitstream/10665/260178/1/9789241550215-eng.pdf?ua=1%0Ahttp://www.who.int/reproductivehealth/publications/intrapartum-care-guidelines/en/>
- World Health Organization (2019). Why having a companion during labour and childbirth may be better for you. <https://www.who.int/reproductivehealth/companion-during-labour-childbirth/en/#:~:text=Companions%20act%20as%20advocates%20for,reassurance%2C%20and%20continuous%20physical%20presence.>
- Xavier, T., & Viswanath, L. (2016). Effect of Music therapy on Labor Pain among Women in Active Labour Admitted in Tertiary Care Hospital Kochi. *International Journal of Integrative Medical Sciences*, 3(11), 444–453. <https://doi.org/10.16965/ijims.2016.145>