

Effective Nursing Interventions on Pain during Labour among Primi Mothers

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During labour, the woman experiences some degree of stress as her system responds to the physical changes that prepare her to give birth. Nearly every woman in labour experiences some degree of discomfort. Perception of pain is highly unique and differs from one individual to another though the intensity of pain stimuli is same. An appreciation of each woman's unique experience of pain is possible when perinatal nurses understand the physiological basis of pain, physiological responses to pain, and psychosocial factors influencing pain perception.

The basis of childbirth preparation is the belief that pain during childbirth is a vicious cycle. As fear and anxiety heighten, muscle tension increases, inhibiting the effectiveness of contractions, increasing discomfort and further heightening fear and anxiety. Non-pharmacological and pharmacological pain management strategies provide women with specific techniques they can use to cope with the discomfort of labour, thereby increasing their feelings of control.

Studies have revealed that there are a number of non-pharmacological methods which can help a woman to relax during contractions. The breathing techniques,

massage, and positioning are also widely used ways of handling the discomfort.

Objectives

This study sought to: (1) Assess and compare the pre-assessment level of pain perception during first stage of labour between experimental and control groups, (2) Assess and compare the post-assessment level of the pain perception of experimental group after selected nursing interventions and control group with routine hospital measures, and (3) Associate the post-assessment level of pain perception of experimental and control groups with their selected demographic variables.

Research Hypotheses

- H1: There will be a significant difference in the pre-assessment level of pain perception between experimental and control group.
- H2: There will be a significant difference in the post-assessment level of pain perception between experimental and control group.
- H3: There will be a significant association of post-assessment level of pain perception of experimental and control group with their selected demographic variables.

Conceptual Framework

The investigator adopted the Wiedenbach's Helping Art of

Clinical Nursing Theory (1964) as a base for developing the conceptual framework. Ernestin Wiedenbach proposed helping art of clinical nursing theory in 1964 for nursing, which describes a desired situation and way to attain it. It directs action towards the explicit goal.

Methodology

The research design used in this study was True experimental - Basic Experimental Design - Before and After Only Design.

Selected Nursing interventions such as massage, breathing exercises and positions were given to primi mothers in experimental group. The routine hospital measures were followed for control group.

The independent variable selected was nursing interventions such as massage, breathing exercise and positions and the dependent variable was perception of labour pain by primi mothers.

The study population comprised of all primi gravida mothers admitted to the labour room of selected hospitals. The sample size for the study was 60 primi mothers, 30 in the experimental group and 30 in control groups.

Probability

Simple random sampling technique was followed to allot the samples to experimental and control groups. The tool was developed after exten-

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sive review of literature, internet search and experts' advice. It was decided that the combined numerical categorical scale could be an appropriate tool to assess the pain of the mothers. The tool for the data collection consisted of two sections.

Section A : Structured Questionnaire for assessing demographic variables, Part I: General Information, Part II: Obstetrical Information

Section B: Visual analog scale (0-10), Combined Numerical Categorical pain Assessment scale.

Findings of the Study

- The frequency and percentage distribution of demographic variables of primi mothers in experimental group revealed that majority of mothers (n=21, 70%) belonged to Hindu religion, 9 (30%) of them studied up to elementary school and most of them (n=17, 56.67%) were doing moderate work. Majority of the them (n=18, 60%) were from rural areas and most of mothers (n=21, 70%) lived in joint family. Half (50%) of mothers belonged to the age of 26 - 30 years.
- The frequency and percentage distribution of demographic variables of primi mothers in control group revealed that majority of mothers (n=16, 53.33%) belonged to the age group of 20-25 years, 16 (53.33%) belonged to Hindu religion. Regarding the type of family, most of them (n=19, 63.33%) live in joint family. Most of mothers (n=12, 40%) were educated upto elementary school, majority of mothers (n=20, 66.67%) were from rural areas and 16 (53.33%) were doing moderate work.
- The pre-assessment level of labour pain showed a mean value of 5.66 with standard deviation (SD) value of 2.23 in experimental group and mean value of 5.75 with standard deviation value of 2.43 in control group. The comparison of pre-assessment level of pain perception between experimental and control groups revealed that unpaired 't' test value was 0.158 which did not show any statistical significance.
- The post-assessment level of labour pain perception of primi mothers showed a mean value of 3.33 with SD of 1.86 in experimental group and mean value of 5.69 with SD of 2.59 in control group. The comparison of post-assessment level of pain perception of primi mothers showed that unpaired 't' test value was 4.384 which was statistically highly significant at $p < 0.001$ level.
- No statistical significant association was found in post-assessment level of labour pain perception of experimental and control groups with selected demographic variables such as age, religion, type of family, education, work pattern and area of residence and also with

obstetrical information such as gestational age and cervical dilatation.

Conclusion

Selected nursing interventions (massage, breathing exercise and positions) to the primi mothers were effective in reducing their labour pain perception. Therefore, more importance should be given to the assessment of labour pain using standard scale after which selected nursing interventions can be given as a non-pharmacological measures to mitigate labour pain.

Implications for Nursing Practice

The midwives have a vital role in providing safe and effective nursing care to enhance reduction of labour pain perception. This can be done by motivating the nurse midwives to: (a) have an in-depth knowledge on physiological changes during labour, (b) understand the importance of reduction of pain perception during labour, and (c) develop skill in providing efficient nursing care for effective pain management during labour.

For Nursing Education

(a) Make use of available literature and studies related to non-pharmacological measures for pain relief during labour, (b) Educate the students about various complementary and alternative therapies for pain management in labour, (c) Encourage the students for effective utilisation of research-based practice.

Nursing Administration

- (a) Collaborate with governing bodies to formulate standard policies and protocols to emphasise nursing care during labour;
- (b) Arrange and conduct workshops, conferences, seminars on non-pharmacological methods to reduce labour pain perception;
- (c) Provide opportunities for nurse midwives to attend training programmes on complementary and alternative therapies for pain management in labour.

For Nursing Research

- (a) As a nurse researcher, promote more research on effective pain management during labour;
- (b) Promote effective utilization of research findings on labour pain management.

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Recommendations

Similar studies can be conducted (i) with larger samples for better generalisation, (ii) to assess the comparative labour pain perception between primi and multi mothers, (iii) to assess the knowledge and attitude of nurse midwives on complementary and alternative therapies for labour pain management, and (iv) to assess the effectiveness of other nursing measures such as music therapy, warm water bath, and labour support for effective pain management during labour.

References

1. Biancuzzo M (1993). Six myths of maternal position during labour. *Journal of Maternal and Child Health Nursing*, 18, pp 267
2. Burns and Blarney C et al. (2000). An investigation into the use of aromatherapy in intrapartum midwifery practice. *Journal of Alternative Complementary Medicine*, 6(2), pp 141-47
3. Chang MY et al. (2002). Effect of massage on pain and anxiety during labour. *Journal of Advanced Nursing*, 38(1), pp 68-73
4. Field T, Hernandez Reif et al. (1997). Labour pain. *Journal of Psycho Somatic Obstetrics and Gynaecology*, 18, pp 286-329
5. Hanna Leena Liukkonen (2003). Pain relief during labour in Finland. *Indian Journal of Continuing Nursing Education*, 4(1), pp 538
6. Hasson, Hill, Bahal (1987). Breathing techniques during labour. *American Journal of Nursing*, 26, pp 4-8



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