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EFFECTIVENESS OF MED METHOD (MATERNAL POSITIONS, EFFLEURAGE, DICK READ METHOD) ON PAIN DURING FIRST STAGE OF LABOUR AMONG PRIMIGRAVID WOMEN

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Abstract
Background and objectives: Labour pain is a universal incident. Many women would like to want labour by finding alternative techniques to manage pain. Laying in different positions, Effleurage in sacral region and Dick read method as abdominal breathing administered at the time of labour helps in reducing the pain intensity and promotes relaxation. The objective of this study was to evaluate the effectiveness of MED method (Maternal positions, Effleurage, Dick read method) on pain during first stage of labor among primigravid women. Methods: In this study, a randomized controlled trial employing a two-group pretest-posttest design was conducted with primigravid women in the first stage of labor as the population. A total of 60 samples were chosen through consecutive sampling, with randomization achieved using Block Randomization Technique (Permuted Block Method), resulting in 30 participants allocated to each group. Group I received the MED method, while Group II received routine care. Pre-test measurements were conducted using a structured questionnaire and the Numerical Pain Rating Scale. Following the MED method, post-test pain levels were assessed. Results: The results indicated significant differences between the experimental and control groups. The Mann-Whitney U test revealed pre-post test differences of 422 and 21.5 respectively for the experimental and control groups, with p-values of 0.632 and 0.001 respectively. These differences were highly significant at $p < 0.001$. Interpretation & Conclusion: The study suggest that the MED method (Maternal positions, Effleurage, Dick read method) had a positive effect in reducing pain during first stage of labour among primigravid women.
Keyword: Dick read method, Effectiveness, Effleurage, First stage of labor, Maternal positions, Primigravid women.

INTRODUCTION

Labour pain is a universal incident and can be intensive with tension, nervousness and panic making it worse. Women are said to suffer labour pain on a universal basis; it is a very painful feeling that cannot be shared with others[1]. Every woman has a physical and psychological battle during labour. It manifests as cramping in the stomach, groin, leg, and back, and the mother feels exhausted and achy throughout her entire body as a result of her uterus contracting and the foetus pressing down on the cervix[2].All women experience pain, but the amount, severity, frequency, and timing of it vary depending on their physical and emotional changes[3].

The hazardous adventure a mother makes is giving birth. India had a birth rate of 17.4 per 1000 inhabitants in 2020. Labor pain varies significantly around the world depending on the stage of pregnancy. Evidence suggests that between 60% and 70% of nulliparous parturients and 35% to 40% of multiparous ones undergo excruciating agony, whereas just around 10% have pleasant labour[4].

One of complementary strategies is the non-pharmacological method utilised in labour[5]. Different positions when lying down during labour can alter the pelvis' spatial structure and improve the fetus's ability to align with the labour canal. Most of the time, less pain is experienced when the foetus is fitted by the mother's pelvis[6]. Effleurage may provide advantages such as lessening the severity of pain, encouraging relaxation, speeding up labour, and lowering tension and anxiety[7]. The Grandly Dick Read Method is based on an idea he put out. The idea is that stress produces anxiety, which breeds pain. Focusing on abdominal breathing during contractions helps women overcome fear and experience less discomfort[8]. Therefore, this study was designed to evaluate the effectiveness of Med Method on pain during first stage of labour among primigravid women.

Objectives:

- In the labour ward, assessing primigravid women's pain levels during the early stage of labour.
- Determine the efficacy of the MED technique in relieving pain during the initial stage of labour in primigravid women.
- Investigate the relationship between the pain levels felt by primigravid women during the initial stage of labour and various socio-demographic characteristics.

MATERIALS AND METHODS

Study primer: The randomized controlled trial, two-group pretest-posttest design study was conducted in labour ward of Mahatma Gandhi Medical College and Research Institute, Puducherry, India, after approval by the Institutional Human Ethics Committee.

Inclusion and exclusion criteria: The study comprised primigravid women with a gestational age of 37 weeks, women experiencing genuine labour pain with a 3 cm cervical dilation, women who were willing to take part in the study, and primigravid women carrying a single term pregnancy. The study excluded primigravid women with obstetric and medical difficulties, women experiencing false labour pain, women admitted for elective Lower Segment Caesarean Section, women receiving epidural analgesia and entonox.

Randomization and Data collection: Sixty samples were selected by consecutive sampling technique. Subjects were randomized using block randomization technique (Permuted Block Method) with 30 in each group. After obtaining informed consent from primigravid women, a pre-test was conducted using a structured questionnaire and the Numerical Pain Rating Scale. Following this, Group I underwent the MED method (Maternal positions, Effleurage, Dick read method) administered during contractions for 30 minutes, repeated at 2-hour intervals for a total of 3 times. Group II received standard routine care. Subsequent to the administration of the MED method, the post-test pain level was evaluated using the Numerical Pain Rating Scale.

Statistical analysis: - done according to established test for both parametric and non parametric data

RESULTS AND DISCUSSION

The demographic characteristics of primigravid women in both the experimental and control groups were analyzed in terms of age, educational status, religion, occupational status, residential area, type of family, dietary pattern, weeks of gestation, duration of uterine contraction, and fetal heart rate. Out of the total 60 samples, the majority of participants in both groups fell within the age range of 21-25 years, comprising 53.3% in the experimental group and 56.7% in the control group. Regarding educational status, 63.3% of subjects in the experimental group and 56.7% in the control group were classified as graduate and above.

In terms of religion, a significant proportion of participants identified as Hindu, constituting 96.7% in the experimental group and 65.7% in the control group. Additionally, the majority of subjects were homemakers, with 83.3% in the experimental group and 90.0% in the control group. When considering residential areas, 50.0% of participants in the experimental group and 53.3% in the control group hailed from rural areas.

Furthermore, most participants resided in nuclear families, accounting for 80.0% in the experimental group and 46.7% in the control group. As for dietary patterns, the majority were non-vegetarians, with 90.0% in the experimental group and 96.7% in the control group adhering to this diet. In terms of weeks of gestation, 40.0% of participants in both groups were at 39 weeks. Regarding the duration of uterine contractions and fetal heart rate, the distribution was uniform across both groups, with 100% of participants exhibiting similar patterns. These findings provide a comprehensive overview of the demographic characteristics of primigravid women in the experimental and control groups, offering valuable insights for further analysis and interpretation within the study context.

The distribution of the clinical variables of primigravid women with labour pain. With regards to body temperature, mean and standard deviation of experimental and control group was (98.18±0.49) and (98.2±0.48) respectively. Pulse mean and standard deviation of experimental and control group was (82.3±2.52) and (82.47±2.5) respectively. Respiration mean and standard deviation of experimental and control group was (20.53± 1.96) and (20.87±1.94) respectively. Systolic blood pressure mean and standard deviation of experimental and control group was (117.67±8.98) and (119.33±8.68) respectively. Diastolic blood pressure mean and standard deviation of experimental and control group was (79±7.59) and (80.33±7.18) respectively.

Table I shows frequency and percentage distribution of level of pain among primigravid women in experimental and control group during Pretest and Posttest

LEVEL OF PAIN	EXPERIMENTAL GROUP				CONTROL GROUP			
	PRE TEST- 3		POST TEST -3		PRE TEST- 3		POST TEST- 3	
	N	%	n	%	n	%	n	%
No pain	0	0	0	0	0	0	0	0
Mild pain	0	0	0	0	0	0	0	0
Moderate pain	0	0	26	86.7	0	0	0	0
Severe pain	30	100	4	13.30	30	100	26	86.70
Worst pain	0	0	0	0	0	0	4	13.30
Total	30	100	30	100	30	100	30	100

Table I presents the frequency and percentage distribution of pain levels among primigravid women in both the experimental and control groups during pre-test and post-test. In pre-test 3, all 30 samples (100%) in the experimental group reported severe pain, with none experiencing the worst pain. Similarly, in the control group, all 30 samples (100%) also reported severe pain, with none reporting the worst pain.

Following the intervention, during post-test 3, changes in pain levels were observed. In the experimental group, out of the 30 samples, 26 (86.70%) reported a reduction in pain level to moderate, while 4 (13.30%) continued to experience severe pain, and none reported the worst pain. Conversely, in the

control group, although 26 (86.70%) still reported severe pain, there was a shift, with 4 (13.30%) now experiencing the worst pain.

These findings indicate a noteworthy reduction in pain levels among primigravid women in the experimental group after the intervention compared to the control group. Statistical analysis can further elucidate the significance of these observations. Chi-square tests or Fisher's exact tests can be conducted to determine if the differences in pain levels between the experimental and control groups during pre-test and post-test are statistically significant.

The results of such analyses can provide valuable insights into the effectiveness of the intervention (MED method) in alleviating pain during the first stage of labor among primigravid women. Moreover, these findings can contribute to the body of knowledge regarding pain management strategies in obstetrics, potentially informing clinical practice guidelines and enhancing the quality of care provided to pregnant women during labor

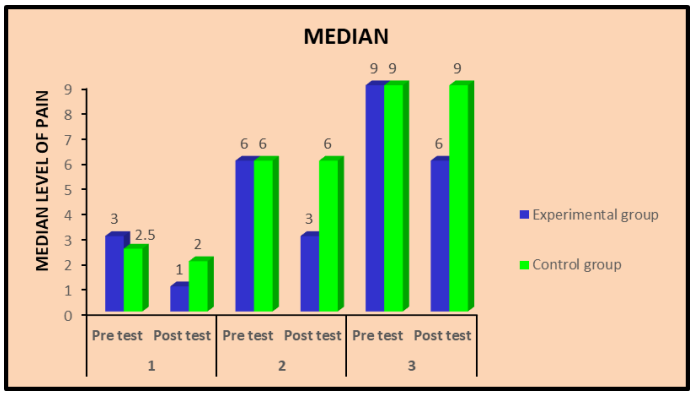

Figure 1: shows the effectiveness of MED method on pain during first stage of labour among primigravid women in pre-test and post-test.

Figure I illustrates the impact of the MED method on pain levels during the first stage of labor among primigravid women, utilizing median values for pre-test and post-test assessments. In the experimental group, the median pain score decreased from 3 to 1 between pre-test and post-test 1, from 6 to 3 between pre-test and post-test 2, and from 9 to 6 between pre-test and post-test 3. Conversely, in the control group, the median pain scores remained relatively stable, with values of 2.5 and 2 for pre-test and post-test 1, 6 for both pre-test and post-test 2, and 9 for both pre-test and post-test 3. Statistical analysis using the Mann-Whitney test revealed significant differences between pre-test and post-test pain levels in both groups, with a p-value of 0.632 for the experimental group and 0.001 for the control group. These findings indicate a notable reduction in pain levels among women in the experimental group compared to the control group, suggesting the effectiveness of the MED method in alleviating pain during the first stage of labor. The results underscore the potential of the MED method as a valuable pain management strategy in obstetric care, highlighting its importance in enhancing the birthing experience for primigravid women.

In the intricate tapestry of birthing experiences, the association between the level of pain encountered during the first stage of labor among primigravid women and various socio-demographic variables was meticulously examined. With a discerning eye, the study sought to unravel any potential correlations between the intensity of pain and a myriad of socio-demographic factors, including age, educational attainment, religious affiliation, occupation, residential locality, family structure, dietary habits, duration of uterine contractions, gestational age, fetal heart rate, and maternal vital signs. Amidst this vast array of variables, the study's findings gracefully revealed a gentle dance devoid of significant associations. Like petals drifting on a tranquil stream, age in years, educational status, religion, occupation, and residential area failed to intertwine with the level of pain experienced by primigravid women. Similarly, the intricate threads of familial structure, dietary preferences, and physiological markers such as duration of uterine contractions, weeks of gestation, fetal heart rate, and maternal vital signs remained detached from the tapestry of pain intensity. Though the study's gaze traversed through the diverse socio-demographic landscape with an eager curiosity, it found no distinct patterns or correlations that would tie these variables to the level of pain encountered during labor's initial stage. Rather, it seemed that each woman's journey through labor, rich with its own unique nuances and intricacies, unfolded independently of these external factors. While the absence of significant associations may at first glance appear to dim the study's findings, it instead sheds light on the resilience and universality of the birthing experience. Regardless of age, education, religion, or other socio-demographic characteristics, each woman's passage through labor remains a deeply personal and individualized odyssey, impervious to the influences of external variables. In this delicate symphony of birth, the study's revelations offer a poignant reminder of the profound and intrinsic nature of the birthing process, wherein the essence of pain transcends the boundaries of socio-demographic constructs, uniting women in a shared journey of strength, resilience, and ultimately, new beginnings.The limitations of the study was limited to 45 days, sample size was limited to 30 samples in each group, and study population was limited to primigravid women in first stage of labour.

CONCLUSION

At the heart of the study's discovery lies a profound revelation: the unanimous expression of discomfort among primigravid women before the implementation of any intervention. However, amidst this sea of discomfort, a beacon of hope emerged in the form of the MED method (Maternal positions, Effleurage, Dick read method). Like a gentle breeze soothing the turbulent waters, this holistic approach proved to be a steadfast ally in alleviating the pain experienced by primigravid women during the inaugural moments of labor. Through its careful orchestration of maternal positions, tender effleurage, and the nurturing essence of the Dick read method, a palpable sense of relief enveloped these women, transforming their laborious journey into one imbued with newfound comfort and resilience.

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CONFLICTS OF INTERESTS

None

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