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Effectiveness of self-instructional module on selected alternative approaches to pain relief during labour among staff nurses at selected maternity hospitals, Bengaluru

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Abstract

Introduction: Labor pain is the rhythmic pain of increasing severity and frequency due to contraction of the uterus at childbirth. Even though, delivery is a natural phenomenon, it has been demonstrated that the accompanying pain is considered severe/extreme in more than half of the cases. Supported labour by midwives without using pharmacological pain relief plays a vital role in managing labour pain. To aid in providing information to the mothers, the health care professionals such as nurses and midwives must have adequate knowledge regarding these alternative methods.

Materials and Methods: A quasi experimental approach - one group pre-test post-test design was used in this study. 50 staff nurses who met with inclusion criteria were selected using non-probability purposive sampling technique. Informed consent was obtained from all the participants. The data was collected using self-administered questionnaire comprised of demographic variables and knowledge questionnaire. After pretest the self-instructional module on selected alternative approaches to labour pain relief was given and posttest was conducted after a week using same questionnaire tool.

Result and Conclusion: The improvement mean score for overall knowledge score was 7.38 with the 't' value of 9.6840 and found to be significant in the level of $p < 0.05$. Hence it is evident that the self-instructional module is effective in improving the knowledge of staff nurses.

Keywords: Effectiveness, self-instructional module, alternative approaches, labour

Introduction

Labor pain is a subjective experience involving a complex interaction of physiologic, psychosocial, cultural, and environmental influences. Cultural values, methods of labour pain relief and learned behaviours influence perception and response to acute pain. Anxiety and fear of pain correlate with a higher reported experience of pain. A woman's confidence in her ability to cope with labour is of prime importance. Women being encouraged and supported to labour without using pharmacological pain relief by midwives with whom they developed a trusting relationship throughout pregnancy. Evidences shown that complementary therapies used for pain management in labour can be categorized into manual healing methods (e.g. massage, reflexology), mind-body interventions (e.g. music therapy, patterned breathing, hypnosis, relaxation therapies), alternative medical practice (e.g. homoeopathy, traditional Chinese medicine), Bio electromagnetic applications (e.g. Magnets) and Herbal medicines. Hence, Alternative methods to relieve labor pain can be initiated by nurses, midwives, or physicians with the potential benefits of improved labor progress, reduction in use of riskier medications patient satisfaction and lower costs.

Materials and Methods

The study is based on quasi experimental approach; one group pre-test post-test design. After obtaining formal permission from the administrator, Live 100 hospital, Bengaluru, the study was conducted among 50 staff nurses who are selected by non-probability purposive sampling technique. The investigator gave self-introduction, explained the purpose of the study, subject's willingness to participate in the study was ascertained. The subjects were assured anonymity and confidentiality of the information provided by them and written informed consent was obtained. Ethical clearance was obtained from the institutional ethics

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committee. The pre-test was conducted by administering structured knowledge questionnaire followed by self-instructional module on selected alternative approaches to labour pain relief. On the 8th day post-test was conducted by administering the same knowledge questionnaire. The average time taken by each participant for the completion of the post-test questionnaire was 20 minutes. The structured knowledge questionnaire consists of two sections part I and part II. Part-I consists of items on demographic variables like age, sex, educational qualification, religion, clinical experience, income, marital status and exposure to in-service education and Part- II Consist of knowledge items related to selected alternative approaches including (9) items related to general information regarding labour, (9) items related to massage therapy, (10) items related to patterned breathing, (8) items related to intracutaneous sterile water injections, (4) items related to music therapy. Descriptive and inferential statistics was used to analysis and interpret data collected.

Intervention - Self-Instructional Module (SIM)

The objectives of SIM were to explain the general information regarding labour, describe massage therapy, explain in detail regarding patterned breathing, describe intracutaneous sterile water injections and enlist the key points regarding music therapy. The module explains in detail about General information regarding labour, Massage

therapy, Patterned breathing, Intracutaneous sterile water injections and Music therapy.

Result and Discussion

The present study unveiled that the overall mean knowledge score obtained by the subject in pre-test was 22.28 with standard deviation 6.7855 and the overall mean knowledge score obtained by the subject in post-test was 32.62 with standard deviation 4.5072. The improvement mean score for overall knowledge score was 7.38 with the ‘t’ value of 9.6840 and found to be significant in the level of $P < 0.05$. Hence it is evident that the self- instructional module is effective in improving the knowledge of staff nurses regarding selected alternative approaches to reduce labour pain. It was also evident that there was no statistically significant association found between the post test scores and the demographic variables such as age, religion, gender, marital status, educational status, years of experience, in-service education, source of information, monthly income.

Table 1: Comparison of pretest and posttest knowledge scores n=50

Test	Mean	SD	‘t’ Value	P Value
Pretest	22.28	6.7855	9.6840	$p < 0.05$
posttest	32.62	4.5072		

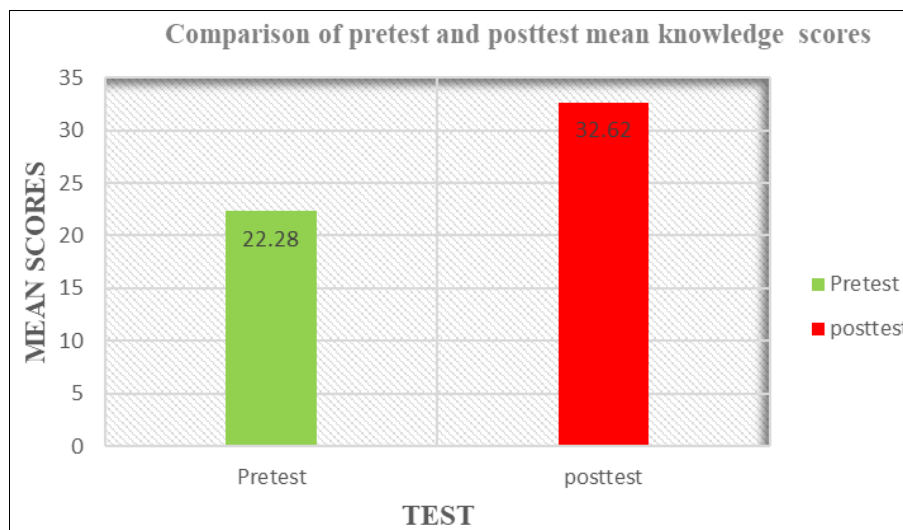


Fig 1: Comparison of pretest and posttest mean knowledge scores.

In concordance with present study Martensson (2010) [17] conducted a randomized controlled trial on “Acupuncture versus subcutaneous injections of sterile water as treatment for labour pain. 128 pregnant women at term were randomly assigned to receive acupuncture (n=62) or sterile water injections (n=66). The outcome showed that women in the sterile water group had a higher degree of relaxation ($p < 0.001$) compared to the acupuncture group. It was concluded that women given sterile water injection experience less labour pain compared to women given acupuncture. A study was conducted to determine the effect of breathing techniques and nurse-administered massage on the pain perception of pregnant woman during labor. The Study results demonstrated that nursing support and patient-directed education concerning labor and non-pharmacological pain control methods (breathing and

cutaneous stimulation techniques) were effective in reducing the perception of pain by pregnant women (When provided in the latent labor phase before delivery), leading to a more satisfactory birth experience. Kimber (2008) [20] conducted a Comparative study was conducted to compare the effects of massage and music therapies on the severity of labor pain. The samples recruited were 101 prim gravidae they were randomly stratified into two groups of either massage (n=51) or music (n=50) therapies. Pain was measured using visual analog scale and the two groups were compared in terms of pain severity before and after the interventions. The results were mothers in the massage therapy group had a lower level of pain compared with those in the music therapy group ($p = 0.009$). Thomas Elizabeth (2011) [23] conducted an evaluative quasi experimental study was conducted to assess the

effectiveness of Patterned Breathing Technique in reduction of Pain during first stage of labour among primigravida's admitted in labour units of selected hospitals of Pune city. 60 primigravida women in the first stage of labour in selected hospitals of Pune city were selected and then the subjects were assigned to the experimental group (30) and control group (30). An Observation Checklist for assessment of progress of labour was also recorded. Therefore, it was concluded from the statistical tests that practicing selected Patterned breathing technique was effective in reduction of pain among primigravida women during first stage of labour. Girijamma (2006) conducted a study to assess the effectiveness of self-instructional module. The mean posttest knowledge score 93.65 was significantly higher than the mean pretest knowledge score 37.96 at $p < 0.05$ level of significance.

Conclusion

Labour presents a physiological and psychological challenge for women. Effective and satisfactory pain management need to be individualized for each woman. Many women would like to avoid pharmacological or invasive methods of pain relief in labour and this contributed towards the popularity of complementary methods of pain management. So, to promote these effective alternative methods, the nurses must have adequate knowledge about these methods such as massage therapy, patterned breathing, intracutaneous sterile water injections, music therapy and on several other methods. Hence, this study was done to improve the staff nurse's knowledge on certain selected methods to relieve labour pain.

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Conflicts of Interest: The authors declared no competing interests.

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