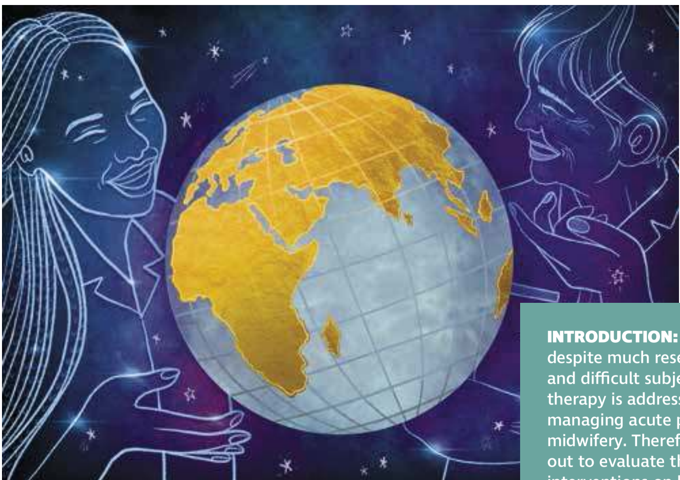
EFFECTIVENESS OF MINDFULNESS

ON LABOUR PAIN AMONG NULLIPAROUS WOMEN



INTRODUCTION: The management of labour pain, despite much research in its regard, remains a complex and difficult subject. Mindfulness-based cognitive therapy is addressed as a relatively new method of managing acute pain; however, it is less often used in midwifery. Therefore, the present study was carried out to evaluate the effectiveness of mindfulness-based interventions on labour pain.

METHODS: This is a clinical trial study in which 158 women, who referred to childbirth preparation classes, were allocated to two groups using simple randomisation. The intervention group was trained in mindfulness techniques during eight sessions by a trained midwife. Women in the control group received routine pregnancy care. On the day of delivery, the pain intensity and the immediate pregnancy outcomes in both groups were assessed. Data were collected using the Visual Analogue Scale and the delivery checklist. Collected data were then analysed using SPSS (a software package used for statistical analysis) and a Mann-Whitney U test.

RESULTS: During admission to the labour ward, the pain intensity among participants in both groups was moderate, and there was no significant difference (0.10). At the beginning of the active phase (4-6 cm of dilation), and 7-8 cm of dilatation and 9-10 cm of dilatation, the pain intensity was significantly lower in women in the intervention group (p=0.001). No difference regarding the maternal and fetal complications in pregnancy was observed between participants in the intervention and control groups. In addition, the need to apply other pain relief methods in participants in the intervention group was significantly less than participants in the control group (p=0.001).

CONCLUSIONS: According to the findings of this study, it can be concluded that mindfulness is a successful and uncomplicated method to reduce labour pain. These findings could be used by midwives to provide holistic care to pregnant women.

> AUTHORS

Nezal Azh
Midwife Educator at School of Nursing and Midwifery, Qazvin University of Medical Sciences, Qazvin, Iran

Zainab Hasanimotlagh
MSc in Midwifery, Student Research Committee, Qazvin University of Medical Sciences, Qazvin, Iran

Fatemeh Ranjkesh
MSc in Midwifery, Department of Midwifery, School of Nursing and Midwifery, Qazvin University of Medical Sciences, Qazvin, Iran

Abdullah Omidi
Postdoctoral of Psychosomatic Medicine and Psychotherapy, Kashan University of Medical Sciences, Kashan, Iran

Amir Javadi
Assistant Professor of Medical Informatics, Department of Social Medicine, School of Medicine, Qazvin University of Medical Sciences, Qazvin, Iran

INTRODUCTION

Pain is a common and inevitable phenomenon during labour.[1] In terms of midwifery, labour pain is a complex, personal, mental and multifaceted phenomenon that is influenced by economic, social, cultural, biological and psychological factors, and adaptation to pain is effective in the intensity and the extent of pain experienced by expectant parents.[2,3]
Labour pain is accompanied by several adverse effects on the mother and the fetus's physiological condition, as well as the delivery process.[4] Therefore, the goal of all obstetric care units is to reduce pain and turn labour into a pleasant experience with the least possible pain.[5] Considering the fact that labour pain is acute, and includes sensory and affective components, various measures are taken to relieve it.[2] The three fundamental principles in relieving labour pain are simplicity, safety and maintaining fetal homeostasis.[6] In recent years, researchers have come to believe that in order to reduce the intensity of pain, safe methods for the mother and the fetus should be considered.[7] Not only should these methods disrupt the delivery process, maternal consciousness, the fetal ejection reflex, and the mother's physiological functions, but they should also be effective in relieving labour pain.[5]

Labour pain relief methods can mainly be divided into two groups of pharmacological and non-pharmacological ones. Almost every drug that is used for labour analgesia in the mother can pass through the placenta, weaken the respiratory system, and cause fetal hypoxia. These drugs can also cause long labour and reflex disorder in the second stage of delivery.[6] Non-pharmacological approaches to the relief of pain include a wide range of techniques used in the clinical area.[8] In order to relieve labour pain, non-pharmacological methods are superior to pharmacological methods, since these methods are cheaper, simple to implement, non-invasive, and able to build confidence as well as to encourage client participation.[5,6] They also have no effect on the course of labour, or on the mother and the fetus.[2]

Currently, psychological methods such as biofeedback, mental imagery, mindfulness-based cognitive therapy are used, both individually and in combination with other medical methods, in the treatment of pain.[9] Mindfulness-based cognitive therapy was first proposed by Jon Kabat-Zinn,[10] and it includes a variety of meditations such as yoga, training on stress, anxiety and depression, and cognitive therapy.[11,12] Mindfulness includes two important components of awareness and non-judgmental orientation to one's moment-by-moment experiences such as thoughts, physical sensations, effects, and the environment.[13] From Baer's perspective, mindfulness is not a method or a technique; yet, many methods and techniques are applied to perform it, which are presented in these groups.[14] Mindfulness acts as both an acute and preventative treatment, and as a stress-adapted strategy, it helps participants cope with the challenges and stressful events in their lives.[15]

On the one hand, although various non-pharmacological methods such as massage,[16] reflexology,[17] aromatherapy,[18] acupressure,[19] yoga,[20] and hypnosis[21] have been used to reduce labour pain, the management of labour pain remains a problem. On the other hand, there is limited information on mindfulness-based cognitive therapy among pregnant women, and the limited previous studies recommend that the effect of this method on labour pain be carefully evaluated. Therefore, this study was carried out to evaluate the effectiveness of mindfulness-based interventions on labour pain.

METHODS

This is a randomised, controlled field trial using a parallel design that was conducted in Iran in 2020. The population of our study were all pregnant women who referred to the childbirth clinic in Kashan. The inclusion criteria were being primiparous; gestational age of 20-22 weeks; age range of 18-35 years; single pregnancy; being literate; and choosing Shahid Beheshti Hospital in Kashan as the place of delivery. The exclusion criteria were high-risk pregnancies; having chronic or acute physical or mental disorders; having experience of yoga or meditation; elective or emergency caesarean section; fetal distress; and choosing other hospitals in Kashan as the place of delivery.

In the first stage, sampling was done through a convenience sampling method, and all eligible women, who participated in childbirth preparation classes in 2019, were recruited to the study. In the second stage, the childbirth preparation classes were allocated to two groups of intervention and control using simple randomisation. According to the sample size of 100 and a maximum number of 10 participants in each course, 13 courses were held, and seven courses were selected for the intervention group. The sample size was calculated 112 using the Chuntharapat study.[22]

Intervention

Before conducting the study, the midwife instructor passed a complete course on mindfulness under the supervision of two clinical psychologists and received the certificate of administration of these classes. Then the sampling was performed, and before the intervention, the aims of the study were explained to participants. After expressing their willingness to participate in the study, the written consent was obtained. After that, the demographic information checklist was completed.

The intervention group was trained in mindfulness techniques during eight one-hour sessions by a trained midwife. In the first session, the concept of mindfulness, the types of techniques, and the benefits of this type of meditation were explained. In the following sessions, the modified yoga during pregnancy and various meditations, including body scan, walking and mindful eating, were trained. 20% of the initial sessions were held under the direct supervision of a clinical psychologist. The control group received routine care. These care and intervention sessions were performed between 20-22 weeks and 36 weeks. On the day of delivery, the pain intensity was assessed in both groups during admission to the labour ward and at the beginning of the active phase (4-6 cm of dilation), 7-8 cm of dilatation, and 9-10 cm of dilatation using the Visual Analogue Scale and McGill pain questionnaire. Other information was obtained from the clients' files through a checklist.