

Effectiveness of Warm Compress on Sacral Region in Reducing Labour Pain during First Stage of Labour among the Primi-Gravida - A Narrative Review

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Abstract: Introduction: The nature of labor pain, particularly its physiologic and psychologic influences, is reviewed in the context of a multidimensional framework of the pain experience and an understanding of the origin of labor pain stimuli, of potential adverse effects of the pain response, and of the concepts of suffering and comfort. Sacral warm compress was found to be effective in reducing labour during first stage of labour. Aim: The aim of this narrative review is to find information on the effectiveness of Sacral Warm Compress on labour to reduce the painful experience of the primigravida. Methodology: Intervention- Sacral Warm Compress. Types of studies- Quasi-experimental – pre- test and post-test control group design. Types of participants- Primigravida. Setting- Labour room of hospital. Outcome- This narrative review result shows that Sacral Warm Compress is effective on reducing labour pain.

Keywords: Sacral Warm Compress, Primigravida

1. Introduction

Pregnancy and childbirth is one of the graceful time in every woman's life which bring physical and emotional changes in the body. Pregnancy is one of the biggest imagination and it changes into a worse dream when labour pain progress.

The sacral warm compression helps to improve cervical dilatation and provides pain relief. As warm compression is easy to use, inexpensive, require no prior practice and have minimal negative side effects. It is popular with labouring women for reduction of pain.

A Randomized, Controlled Trial Study was conducted on Effect of Sacrum- Perineum Heat Therapy on Active Phase Labor Pain and Client Satisfaction. This study aimed to evaluate the effectiveness of heat therapy for pain and woman's satisfaction during physiological labor. Sixty primiparous women aged 18-35 years old were randomly assigned to heat therapy and control groups. Pain and satisfaction scores were measured by visual analog scale. The measurements of satisfaction were accomplished after birth. Data were analyzed by using the t-test and chi-square. Mean pain scores in the heat therapy group were significantly lower than the control group ($P < 0.05$). The mean satisfaction score in the heat therapy group was significantly higher than in the control group ($P < 0.05$). Heat therapy, an inexpensive complementary treatment with low risk, can reduce the intensity of pain and increase mothers' satisfaction with care during the active phase of labor. (Simin, Somayeh, et al, 2013).

A study was conducted in Maternity hospital in Babol, to assess the effectiveness of heat therapy on labour pain severity and delivery outcome in parturient women. The sample consisted of 64 nulliparous women, were randomly divided into 2 groups (heat therapy and routine care group).

The heat therapy group used warm bag for the lower back since the cervix dilated about 3 -4 cm to 10 cm dilatation during the first stage of labour. Severity of pain is measured by Mc Gill pain questionnaire. The result showed that pain severity in cervical dilatation 3-4 cm (before intervention) was the same in both groups and a significant difference between two groups, the mean of the pain severity in the first labour stage in the heat therapy and control groups was (8.144 to .99) and (8.88 to 1.02) respectively ($p < 0.001$). The study concluded that heat affects the intensity of pain in the first stage and second stage of labour and shortens the first and third stage of labour. (Fariba, Fereshteh, et al, 2011).

A quasi experimental study was conducted on Effect of sacral warm compress on the level of pain during first stage of labour among primi gravida mothers in selected hospitals of Pune city. In control group, majority of the primi gravida mothers (70%) are under 18 – 22 years. 26.7% of them are under 23–26 years and 3.3% of them are under 27–30 years. In experimental group, majority of the participant (73.3%) are under 18- 22years, and 26.7% are under 23–26 years. In control group, 13.3% of them were illiterate, 50% of them had primary education, 33.3% of them had secondary education and 3.3% of them had graduation. In experimental group, 60% of them had primary education, 33.3% of them had secondary education and 6.7% of them had graduation. In control group 90% of them were home makers and 10% of them had some other occupation. In experimental group 76.7% of them were home makers and 23.3% of them had some other occupation. In control group, 10% of them had received child birth education. They had received it from doctor. In experimental group, 16.7% of them had received child birth education. 3.3% of them had education from staff, 10% of them had it from doctor and 3.3% of them had education from others. The p-value of post-test 1 in experimental group is less than 0.05 level of significance. As p-value of experimental group in post-test 2 and 3 is lesser

then p-value of posttest 2 and 3 in control group shows that the rate of increase of level of pain is slower in experimental group as compare to control group. (Ritabala, Memchoubi, Sujita, 2017)

A non-randomized controlled clinical trial was conducted on Effect of second stage perineal warm compresses on perineal pain and outcome among primiparae at the labor and delivery unit of National Medical Institution in Damansara, Albehera Governorate, Egypt. Research was carried out from beginning May 2014 till the end of October 2014, with a total of 160 parturients in their second stage of labor. They were equally randomly divided into study (N = 80) and control (N = 80) groups. The results revealed that perineal pain intensity did statistically significantly decrease among the study group after the intervention (P = .000). On the other hand, it was slightly increased among the control group after the intervention (P = .106). The study concluded that second stage perineal warm compresses had better effects on perineal pain and perineal outcome. It resulted in less perineal pain and less genital tract trauma as well as decrease needs to repair. Consequently, it is recommended that perineal warm compresses should be incorporated into pain relief and perineal maintaining options available to women during second stage of labor. (Rasha, Nemat, 2015)

Birth ball or heat therapy? A randomized controlled trial was conducted to compare the effectiveness of birth ball usage with sacrum-perineal heat therapy in labor pain management. This randomized control trial was undertaken on 90 primiparous women aged 18-35 years old who were

randomly assigned to two intervention (birth ball and heat) and control groups. The pain score was recorded by using Visual Analogue Scale (VAS) before the intervention and every 30 min in three groups until cervical dilatation reached 8 cm. The mean pain severity score in the heat therapy group was less than that of in control group at 60 and 90 min after intervention ($p < 0.05$). In addition there were significant differences between the pain scores in the birth ball group after all three investigated times in comparison to control group. Both heat therapy and birth ball can use as inexpensive complementary and low risk treatment for labor pain. (Taavoni, Sheikhan et al, 2016)

A controlled randomized study was conducted on Effect of Heat and Cold Therapy during the First Stage of Labor on Women Perception of Birth Experience at Qasral-Aini, Cairo University maternity hospitals at labor and delivery unit. There were significant statistical differences between both groups after intervention. Mothers in the study group reported lower mean pain score of 5.78 ± 0.73 SD, lower mean anxiety score of 32.92 ± 3.72 SD and higher satisfaction level with mean of 6.40 ± 0.53 SD than mothers in the control group ($P \leq 0.05$). Conclusion & recommendation: Heat and cold therapy is an inexpensive and is particularly empower woman's birth experience. Further randomized controlled trials are needed for best evidence. (Dahlon, Homer, et al, 2007)

2. Material and Method

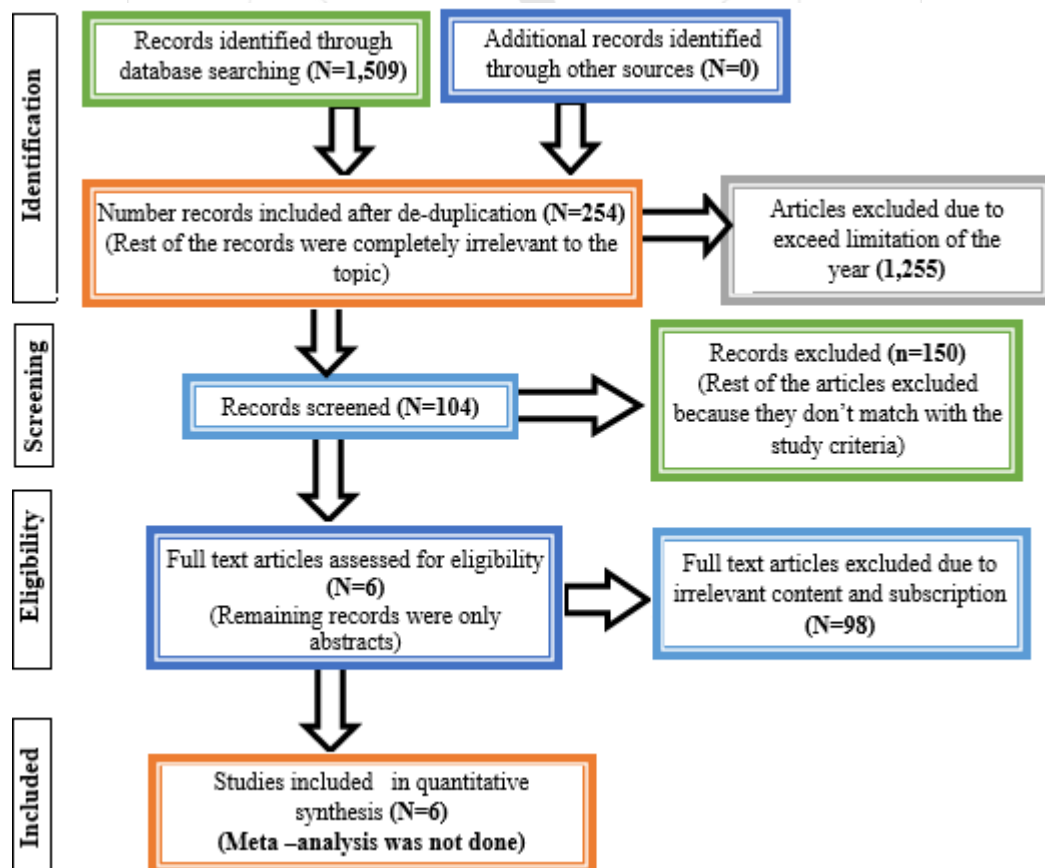


Figure 1: Prisma flow diagram of narrative review

3. Findings

The systematic search was conducted by formulating the terms separately and in integration with all synonyms, also according to the database. Likewise, a manual PUBMED and Google scholar search was undertaken using the keywords and search synonyms from already articles. An addition of 6 articles was found in the database. Initial search recovers 1509 articles over which 254 articles were selected manually. 150 articles were rejected as a result of replication in the database. Replication was removed and reviewed 104 articles for acceptability. 98 more studies were rejected because of unreachability of the full text. Hence 6 articles were screened which includes quantitative study.

4. Discussion

These findings are supported by a study conducted by a quasi experimental study conducted by Fariba, Fereshteh, et al. It was reported that the pain severity in cervical dilatation 3-4 cm (before intervention) was the same in both groups and a significant difference between two groups, the mean of the pain severity in the first labour stage in the heat therapy and control groups was (8.144 to .99) and (8.88 to 1.02) respectively ($p < 0.001$). The study concluded that heat affects the intensity of pain in the first stage and second stage of labour and shortens the first and third stage of labour.

5. Conclusion

There was a significant difference in labour pain on the first stage of labour regarding primigravida after practicing the giving sacral warm compress, thus it has demonstrated to be an effective technique for reducing labour pain. Therefore, this intervention should be encouraged as hospital policy and implemented as routine care for all the primigravida in first stage of labour for reducing labour pain.

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