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File: ■ Chamomile (*Matricaria recutita* syn. *M. chamomilla*, Asteraceae)
■ Aromatherapy
■ Birth Experience

HC 101811-603

Date: October 31, 2018

RE: Chamomile Aromatherapy Improves Satisfaction and Reduces Contraction Intensity in First Birth Experience

Heidari-Fard S, Mohammadi M, Fallah S. The effect of chamomile odor on contractions of the first stage of delivery in primipara (sic) women: A clinical trial. *Complement Ther Clin Pract.* August 2018;32:61-64. doi: 10.1016/j.ctcp.2018.04.009.

Chamomile (*Matricaria recutita* syn. *M. chamomilla*, Asteraceae) has long been a popular medicinal plant used for a wide range of health conditions and made by a variety of preparations. Essential oils from the flowers are used as a calming agent in aromatherapy and may have application to reduce pain and stress during labor. The researchers in this two-armed, randomized, controlled trial explored the effects of chamomile aromatherapy on the birthing experience for women delivering their first child. They reported a statistically significant reduction in pain from the same intervention in another article. This article focuses on labor contractions and overall satisfaction with the birthing experience.

For this study, pregnant women were recruited at the Emdadi Hospital in Abhar, Iran. Included participants were primipara, between 18 and 35 years old, between weeks 37 and 42 gestation, with a normal pelvis and body mass index, carrying a single, healthy fetus of normal weight, no history of sensory abnormalities, no history of acute or chronic psychological disease or pain, no use of narcotics eight hours previous to active stage of delivery, no history of allergy to chamomile, and having three to five contractions per minute. Exclusion criteria were any problems during delivery or induction of delivery.

Data were collected before, during, and after labor using a form designed by the researchers. A panel of 10 faculty members of the Shadid Beheshti Faculty of Nursing and Midwifery reviewed the form, and the researchers revised it based on their suggestions. Data collected were demographic and maternal information, examination and observation information (including findings from vaginal exam, Bishop score, cervical dilation, and vital signs throughout), and birthing satisfaction using a Likert scale of "satisfied," "relatively satisfied," and "dissatisfied."

The experimental chamomile essential oil produced by the Zardband Pharmaceuticals Company (Tehran, Iran). Water was used as the control. The intervention began at dilation of 4 cm and continued until the end of delivery. Two drops of essential oil or control were applied to a gauze pad, which was held 7 to 10 cm from the nose of the laboring participant,

three times every 30 minutes. The participants were asked to smell the gauze pad. Blinding was not possible due to the distinctive scent of chamomile.

For this study, the following data were analyzed: number, duration, and intensity of contractions at dilations of 3-4, 5-7, and 8-10 cm, as well as subjective satisfaction scores. There were no statistically significant differences between the two groups for demographic data. Mean age of participants was approximately 25 years, approximately 90% of the pregnancies were described as "unwanted," approximately 10% of participants had received a higher education diploma, and approximately 72% were employed. Independent t-test, χ^2 test, and Mann-Whitney U test were used as appropriate to analyze the data.

No statistically significant differences were found between the two groups in duration or number of contractions. As for intensity of contractions, no significant differences were found at 3-4 or at 8-10 cm of dilation. However, the participants in the chamomile group had significantly reduced intensity of contractions at 5-7 cm dilation ($P=0.004$). During this phase, 16.9% of participants in the control group had moderate contractions, and 83.1% had strong. In the chamomile group, 29.2% of participants had moderate contractions, and 70.8% had strong. Of the 130 participants enrolled in the study, one from the intervention group and two from the control group were excluded due to emergency caesarean section.

Participants receiving chamomile aromatherapy were significantly more satisfied with their birthing experience and would use the method again in upcoming deliveries ($P<0.0001$ for both measures). In the chamomile group, 64.6% of participants were satisfied, and 81.5% would use the chamomile aromatherapy method again. In the control group, no participants were satisfied, and 78.5% would not use the control method again.

Satisfaction with the birthing process can have long-lasting benefits for mothers, their children, and for family relationships, extending far beyond the duration of the treatment itself. Other studies have shown that aromatherapy during labor using an essential oil blend containing chamomile, and aromatherapy using lavender (*Lavandula angustifolia*, Lamiaceae) alone increase satisfaction and reduce pain during labor. This is the first study to evaluate chamomile essential oil alone for this use. The findings of this study are preliminary and more research is needed, especially to compare chamomile to other herbs. Furthermore, ruling out a placebo effect is needed, but may be challenging with aromatherapy treatments. Nonetheless, the authors suggest that chamomile aromatherapy is a safe, cost-effective method to improve the birthing experience.

The authors provide no information about funding or conflicts of interest. Data are available from the authors upon request.

—Anne Louise Merrill

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