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A comparative study on the influence of three delivery positions on pain intensity during second stage of labour among antenatal mothers

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Abstract
Women's health is under the influence of biological, social, economic, cultural, and bioenvironmental factors, and is affected by their fertility and motherhood role, especially in the age of 15–45 years. A quantitative research approach with descriptive cross sectional study research design was adopted for the present study. In samples, 60 antenatal mothers at second stage of labour were selected by using convenient sampling technique who meet the inclusion criteria. Out of 60 samples, 20 samples were in lithotomy, 20 samples were in squatting, and 20 samples were in sitting positions. Semi-structured questionnaire was used to collect the background variable and severity of pain by measured by numeral scale [visual analogue scale (VAS)] and verbal scale of McGill [present pain intensity (PPI)]. The study identifies that level of pain intensity on three positions during second stage of labor among antenatal women, in lithotomy position 6(30%) has mild pain, 10(50%) has moderate pain and 4(20%) has severe pain. In squatting position 13(65%) has mild pain, 5(25%) has moderate pain and 2(10%) has severe pain. In sitting position 4(20%) has mild pain, 9(45%) has moderate pain and 7(35%) has severe pain. The calculated independent 't' test value of t = 2.497 was found to be statistically significant at $p<0.05$ level. This clearly indicates that there was significant difference in the level of pain intensity between lithotomy, squatting and sitting position in which antenatal women with squatting position has mild pain during second stage of labour. The study findings suggested that the demographic variables of BMI, type of mensuration, gestational age and type of delivery had shown statistically significant association with level of pain intensity in three delivery position during second stage of labor among antenatal women at $p<0.05$ level.

Keywords: Current situation, high quality human resources, FDI enterprises, attracting and maintaining

Introduction
Motherhood is a gift for every woman; pregnancy and birth are a unique experience. It will be a time of great happiness and fulfillment. During pregnancy, the woman and fetus prepare for the labour process. The labour process is an exciting and anxious time for the woman. The lithotomy position is still preferred by many care providers, but the literature suggests that this position not only increases the risk of perineal lacerations but also increases lumbosacral spine and lower extremity nerve injuries and should not be used for pushing in the second stage of labour. The efficiency of the expulsive forces is increased by directing them toward the pelvis and by making use of the forces of gravity. For the obstetrician this position is comfortable with modern methods of obstetric care1.
As stated by the World Health Organization (WHO) in 2018, the primary outcome for all pregnant women is to have a 'positive childbirth experience'. In addition, the WHO has highlighted that most women value a physiological labour and birth2.
The second-stage of labor is often the most stressful part of the childbirth process for the woman and fetus, and consequently for the care providers. Prolonged duration of the second-stage of labor increases the risk of maternal and fetal complications3.

Various positions at the time of labor and delivery which are as follows
1. Semi-Fowler and side lying positions
2. Standing position
3. Forward bending positions
4. Exaggerated lithotomy position4.

Randomized controlled trials (RCTs) were included in which lateral or lateral tilt and supine positions were combined as recumbent positions5.

The squatting position is considered to be the most natural position for various cultures including those in Anatolia, the Middle East, and Africa, especially for women who are in the habit of squatting to defecate6.

Most women want to have an active role in the care they receive during pregnancy and birth. Having choices and being involved in decision-making contribute to their sense of control and to more positive birth experiences7.

The maternal positions during the second stage of labor have potential benefits in promoting maternal and fetal outcomes. It is divided into a supine, semi-recumbent, lithotomy, lateral and upright position, i.e., standing, sitting, squatting, and kneeling8.

Lithotomy position is presumably not based on evidence. It causes the birthing process to be needlessly complicated, medicalised as well as expensive; seems illogical; thus, possibly converting the laboring woman to a body on the delivery to be relieved of their contents9.

Squatting is common in everyday life, squatting for an extended period invariably leads to soreness of the lower limbs, loss of balance, and, especially for women in the midst of childbirth, reduced efficacy of pushing during the second stage of labor10.

Squatting is a position adopted during defecation. There is no right or wrong, best or worst position to give birth, it depends on where the patient is most comfortable, with minimum complication11.

Epidural analgesia has been used to provide labor pain relief for more than 40 years. The technique has been refined over the past 20 years to provide laboring women with higher-quality pain relief, less leg weakness, and more control over the administration of pain relief medication12.

Epidural local anesthetics or intrathecal opioids can provide effective labor analgesia but may also cause unwanted side effects such as motor blockade, hypotension, and respiratory depression in some cases, with possible fetal compromise13.

Labor pain is one of the most intense pains experienced by women,1 resulting in physical, emotional, and psychological changes in their body. If not controlled properly, labor pain causes discomfort for the mother and the baby14.

In the recombinant or supine position, there is a higher chance of developing blood clots in the uterus therefore the real amount of bleeding remains hidden15.

Methods and Material

A quantitative research approach with descriptive cross sectional study research design was adopted for the present study. In samples, 60 antenatal mothers at second stage of labour were selected by using convenient sampling technique who meet the inclusion criteria. Out of 60 samples, 20 samples were in lithotomy, 20 samples were in squatting, and 20 samples were in sitting positions. Semi-structured questionnaire was used to collect the background variable and severity of pain by measured by numeral scale [visual analogue scale (VAS)] and verbal scale of McGill [present pain intensity (PPI)]. The investigator induced and explained the purpose of the study to samples and the written informed consent. Data collection period was for 1 week to collect data from the antenatal mother.

Result and Discussion

Table 1: Frequency and percentage distribution of level of pain intensity in three delivery position among antenatal women

Level of pain intensity	Lithotomy Position		Squatting Position		Sitting position	
	NO	%	NO	%	NO	%
Mild	6	30%	13	65%	4	20%
Moderate	10	50%	5	25%	9	45%
Severe	4	20%	2	10%	7	35%

Table I shows that level of pain intensity on three positions during second stage of labour among antenatal women, in lithotomy position 6(30%) has mild pain, 10(50%) has moderate pain and 4(20%) has severe pain. In squatting position 13(65%) has mild pain, 5(25%) has moderate pain and 2(10%) has severe pain. In sitting position 4(20%) has mild pain, 9(45%) has moderate pain and 7(35%) has severe pain.

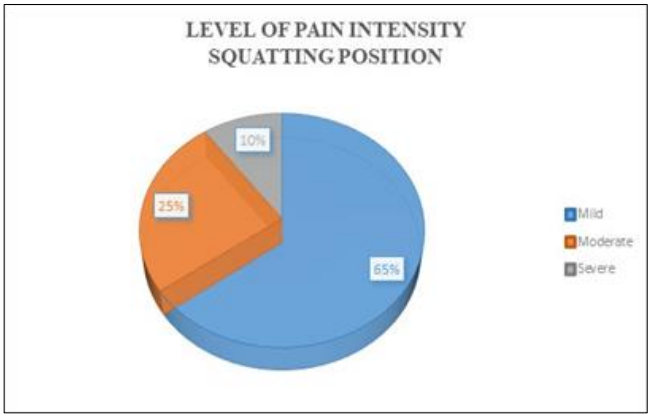

Fig I: Represents the level of pain intensity in squatting position among antenatal women, out of 30 samples, 65% have mild stress, 25% have moderate stress, and 10% have severe stress.

Conclusion

With regard to the findings of the present study, application of positions such as squatting during the second labour stage can positively affect labour pain reduction. This easy, applicable, and cost- effective method is suggested. It is also suggested to educate the mothers concerning all childbirth positions and let them select each of the positions voluntarily. Perhaps, mothers' positioning in sitting position is adequate only at the time of pushing in the second labour stage and positioning the mother in this position from the very beginning of the second stage is not necessary.

The Conflict of Interest

The authors declare no conflicts of interest.

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