EFFECT OF MATERNAL BIRTHING POSITION ON MATERNAL AND FETAL OUTCOME-A RANDOMIZED PARALLEL TRIAL

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ABREVIATIONS

S.No	ABBREVIATION	EXPANSION
1	FHR	FETAL HEART RATE
2	NST	NON-STRESS TEST
3	PPH	POST PARTUM HEMORRHAGE
4	POG	PERIOD OF GESTATION
5	WHO	WORLD HEALTH ORGANIZATION
6	FSP	FLEXIBLE SACRAL POSITION
7	EFM	ELECTRONIC FETAL HEART MONITORING
8	GOI	GOVERNMENT OF INDIA
9	MOHFW	MINISTRY OF HEALTH AND FAMILY WELFARE
10	ROM	RANGE OF MOTION
11	NICU	NEONATAL INTENSIVE CARE UNIT
12	LaQshya	LABOUR ROOM & MATERNITY OT QUALITY IMPROVEMENT INITIATIVE
13	HDU	HIGH DEPENDENCY UNITS
14	RMC	RESPECTFUL MATERNITY CARE

15	LSCS	LOWER SEGMENT CESAREAN SECTION
16	PIH	PREGNANCY INDUCED HYPERTENSION
17	GDM	GESTATIONAL DIABETES MELLITUS
18	FGR	FETAL GROWTH RESTRICTION

LIST OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABSTRACT

BACKGROUND:

For centuries, there has been controversy around whether being upright or lying down have advantages for women delivering their babies. To assess the benefits and risks of the use of different positions during the 2nd stage of labour for a safe vaginal delivery an appropriate maternal position can ameliorate the control and creates a positive birth experience to the mother. Upright position was the common position used during delivery till mid 17 century. This was changed to lithotomy for operative vaginal delivery for application of forceps and vacuum. As there are less studies regarding the comparison of different birthing positions there is the need for this study.

AIMS AND OBJECIVES:

To study the effect of maternal birthing position in 2nd stage of labour on various maternal and fetal outcomes

MATERIALS AND METHODS:

- Women admitted in Department of OBSTERTICS & GYNAECOLOGY in B.L.D.E. (DEEMED TO BE UNIVERSITY) Shri B.M. Patil Medical College Hospital and Research Centre, Vijayapura fulfilling the inclusion criteria of term gestation with cephalic presentation with no associated co-morbidities were included.

- The women will be informed about study in all respects and informed written consent will be obtained.

STUDY PERIOD: JANUARY 2021 TO APRIL 2022

METHOD OF STUDY: RANDOMIZED PARALLEL TRIAL

RESULTS: A total of 300 patients fulfilling the inclusion criteria of included in the trial and divided into primigravida 150 women and multigravida 150 women groups and were randomized into three birthing positions supine, lateral, all fours containing 50 women in each sub group. The mean duration of 2nd stage of labour. is decreased in lateral position **32.08 minutes (P value 0.01)** and **25.02 minutes (P value < 0.001)** in primigravida and multigravida respectively. The 2nd stage interventions like operative vaginal delivery weren't statistically significant in primigravida (P value 0.32) and multigravida (P value 0.06). The need for episiotomy is reduced in lateral position **(P value <0.001)** in primigravida and in multigravida (P value 0.24) statistically insignificant. Perineal tear was increased in supine position and reduced in all fours position (P value < 0.01) statistically significant and are statistically insignificant in multigravida (P value 0.88). The need for additional uterotonics was statistically insignificant in primigravida (P value 0.6) and multigravida (P value 0.43). The intensity of pain is reduced in all fours position **(P value <0.01)** in primigravida and in multigravida **(<0.01)**. Preference of position in the subsequent delivery among primigravida women was supine 94% **(P value 0.01)** and among multigravida women it was all fours **(P value <0.01)** statistically significant. There was no significant difference in the overall fetal outcome when compared in three positions **(P value 0.15)** in primigravida and in multigravida (P value 0.79) statistically insignificant. There was no difference in the mean APGAR score at 1 minute (P value 0.09) and at 5 minutes (P value 0.24) in primigravida and in multigravida at 1 minute (P value 0.54) and at 5 minutes (P value 0.54) statistically insignificant.

CONCLUSION: Adopting alternative birthing positions has shown to have improved maternal and fetal outcomes. The decrease in duration of 2nd stage of labour , reduction of

episiotomy rates, decrease in intensity of pain and improved fetal outcomes are seen in lateral and all fours position. In Asian countries where supine position is adopted by default women should be educated about the different birthing positions their advantages and disadvantages during the routine antenatal care. Women should be given choice to choose the comfortable position which is a part of respectful maternity care.

KEYWORDS: Maternal birthing position, 2nd stage , maternal outcomes, neonatal outcomes, NICU.

INTRODUCTION

INTRODUCTION

A woman's pregnancy is a special, exciting, and frequently joyful period because it highlights her incredible creative and nurturing abilities and builds a bridge to the future. The stages of growth that lead a woman into motherhood, a couple into a family, and a beautiful kid into the world are pregnancy and birth[1]. One of the most important moments in a woman's life is giving birth to a child. The health and wellbeing of the mother, as well as the success of her pregnancy, depend on the practices involved in giving birth[2].

There is no ideal posture for labour and delivery , thus traditional advice is to urge expectant mother to give birth in the position she feels most comfortable in . Although most birthing clinics in India encourage women to give birth while supine despite recommendations from international standards against doing so for extended periods of time during labor[3]. The mother's posture affects the biomechanics and physiological responses to labour . Recent studies have concentrated on the biomechanical mechanisms of birth position, which are linked to pelvic measurements, intrauterine pressure, shape of the fetus's head, and progression of the fetus's head tilt along the delivery canal.[4] Due to the gravid uterus' greater aortocaval compression, women who give birth in the supine position endure relatively difficult, protracted labor with a higher incidence of fetal distress [5]. In the 2nd stage of labour , the majority of obstetricians prefer supine position since they are trained to deliver babies in this position. Since it is more convenient to observe the labour process, they can give adequate perineal support during the second stage of labour and do operative vaginal deliveries [3].

The beginning of the labour phase is marked by regular uterine activity, which is accompanied by the descent of fetus and the effacement and dilation of the cervix. For both

women and obstetricians, the 2nd stage of labour is the most. Although the dangers and benefits of each maternal position may not be immediately apparent, certain maternal positions during the 2nd stage of labour may promote optimal mother and newborn outcomes[6].

Compared to the supine position, upright labour positions provide a number of physiological advantages. In the past, women delivered their babies in an upright position out of instinct because doing so resulted in stronger, more effective, and less painful uterine contractions, a faster fetal head descent due to gravitational pull, better alignment of the fetal passage, and larger pelvic outlet diameters, all of which contributed to shorter duration of labour . Additionally, the requirement for operative vaginal births and the rate of caesarean sections are reduced by these positions[3]. The length of the 2nd stage of labour can be affected by a numberof factors, such as the size and position of the f etus, the shape of the mother's pelvis, the intensity of her expulsive efforts and the history of previous pregnancies[6].

AIMS AND OBJECTIVES

AIMS AND OBJECTIVES OF STUDY

- To study the effect of maternal birthing position with respect to various variables on the maternal outcome.
- To study the effect of maternal birthing position with respect to various variables on the fetal outcome.

OBJECTIVES

PRIMARY OBJECTIVE:

To study the effect of maternal birthing position on following variables with respect to mother and fetus.

The maternal variables studied are:

- Duration of 2nd stage of labor various birthing positions.
- Need for episiotomy
- Need for uterotonics
- Intensity of pain in each position
- Perineal tear
- Comfort of the mother

SECONDARY OBJECTIVE:

Fetal variables studied are:

- Fetal outcome
- FHR
- Transient tachypnoea
- APGAR score

REVIEW OF LITERATURE

REVIEW OF LITERATURE

DEFINITION OF LABOR: The physiological process through which the fetus, placenta, membranes, and amniotic fluid of conception are separated and emptied from the uterus through the vagina into the external world . It can be recognized by the regular uterine contractions , cervical effacement and dilatation , and fetal descent [7].

PHENOMENA PRELIMINARY FOR LABOR ONSET:[8]

1) A subjective sensation known as "lightening" is experienced by mother as baby settles into lower uterine segment and happens two to three weeks before term.
2) In primigravida, engagement occurs 2 to 3 weeks before term
3) Increased vaginal secretions
4) The excretion of bodily water contributes to weight loss.
5) A bloody show is noticed as the mucus plug is expelled from the cervix.
6) The cervix softens and effaces.
7) False labour pain occur occasionally.

ONSET OF LABOR:

CONTRACTION : The shortening of muscle in response to stimulus , followed by the muscle's restoration to its initial length once the contraction has passed.

INTENSITY: Also referred to as amplitude, this term describes how strongly a contraction raises intrauterine pressure. Instead of starting at zero, it is measured from the baseline , or resting pressure (tone) 30 to 50 mm Hg is considered normal.

Caldeyro- Barcia defined frequency as the frequency of contractions per interval of ten minutes. The frequency must be at least two contractions per 10 minutes for patient to be in good labour .

Naturally occurring uterine contractions follow patterns that are specific to people and to different stage s of pregnancy. A hand put on the mother's abdomen can be used to feel the uterine contractions to gauge their frequency, length, and force, or electronic methods can be used monitoring.

ACTIVITY : The Montevideo unit (MU) was introduced by Caldeyro - Barcia and represents the average intensity of uterine contractions multiplied by the number of contractions observed during 10-minute Period of monitoring (intensity × frequency).

Uterine contractions occur spontaneously in patterns that are characteristic of individuals and of various stages of gestation .

The frequency , duration , and strength of the myometrial contractions can be estimated by feeling them with a hand placed on the mother’s abdomen or by electronic techniques.[9]

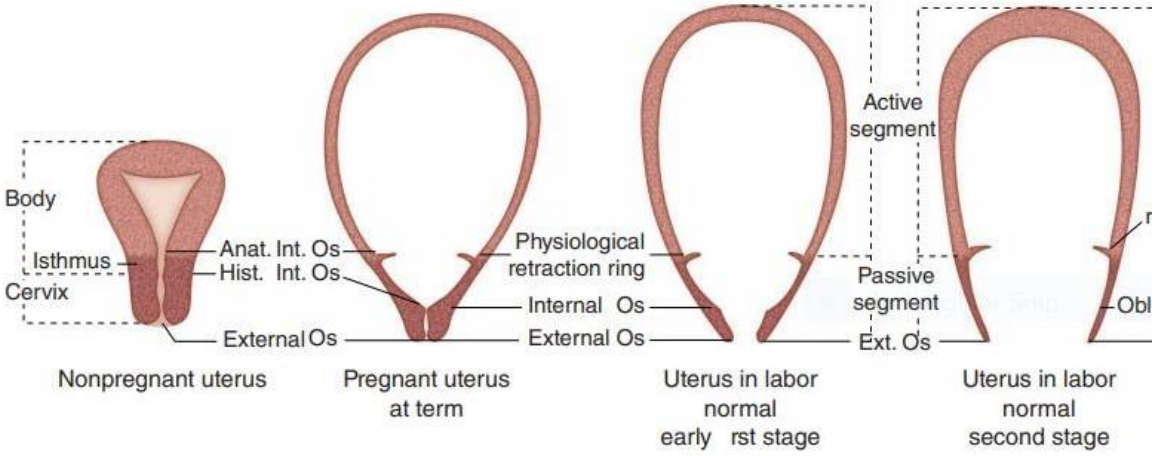


FIGURE 1: PROGRESSIVE DEVELOPMENT OF THE SEGMENTS AND RINGS OF THE UTERUS AT TERM

For normal labor to take place uterus contracts , but the upper segment contracts more strongly than lower segment and in turn , lower segment contractions are stronger than those of the upper segment or else there would be no progress . The normal contractions are regular and intermittent . There is contraction (systole) and relaxation (diastole) .

- Pain is due to contraction of the uterus.
- Pain is intermittent . Pain starts as the uterus contracts and becomes severe as the contraction reaches its peak , and disappears when the uterus relaxes.
- The pain varies in different women, in the same woman during succeeding labors and at different stage in the same labor. In some cases the contractions are painless.

Causes:

1. Distention of lower pole of the uterus.

2. Stretching of ligaments adjacent to the uterus.

3. Pressure on stretching of the nerve ganglia around uterus.

4. Contractions of the muscle while it is in a relatively ischemic state (similar to angina pectoris) This occurs especially when uterine tone is too high or when the contractions are too frequent and last too long .Adequate amounts of blood is not supplied to the muscles, and they become hypoxic.[10]

True Labor pains:

- Pain at regular intervals gradually shorten in duration and increase in severity.
- Pain starts in back and radiates to front walking increases the intensity association between the degree of uterine hardening and intensity of pain.
- Bloody show is often present.
- Cervix effaced and dilated
- Descent of presenting part head is fixed between pains
- Sedation does not stop true labor[11].

STAGES OF LABOR :

First Stage :

- From onset of true labor pains to complete dilatation of the cervix.
- It lasts 6 to 18 hours in nulliparous woman and 2 to 10 hours in multigravida women.

Phases of first Stage of Labor

The Latent Phase:

- The onset of the latent phase of the first stage of labor is difficult to accurately define because it begins when the patient first perceives strong, regular uterine contractions.
- The rate of cervical change is slow and gradual in this phase
- The contractions will become coordinated, stronger, polarized. At the same time, the cervix becomes softer, pliable and more elastic.
- The average latent phase lasts for 8.6 hours in nullipara and 5.3 hours in multipara.
- The normal latent phase does not exceed 20 hours in nullipara women and 14 hours in the multipara women. Patients who enter labor with a ripe cervix have a shorter latent phase than those with cervix is unripe.[8]

The Active Phase :

- The diagnosis of onset of the active phase requires assessment of both uterine contractions and cervical changes. The dilatation of the cervix usually has reached 5 to 6 centimeters**.**
- There may be no change in the uterine contractions, the cervix has undergone important alterations that make it more responsive, and cervical dilatation proceeds more rapidly at this time.
- The average length of the active phase is 5.8 hours in nullipara women and 2.5 hours in multipara women, with the upper limits of normal being 12 and 6 hours, respectively[12].

Descent of the Presenting Part:

- During the latent and early active phase of cervical dilatation, fetal descent may be minimal.
- When the phase of rapid cervical dilatation has begun, steady fetal descent usually begins. The greatest degree of descent takes place when the cervix nears full dilatation and in the 2nd stage of labor.
- When descent begins, it should be progressive. Descent of less than 1 cm/hour in nulliparas and 2 cm/hour in multiparas is abnormal, and investigation is indicated[13].

SECOND STAGE LABOUR:

The 2nd stage of labor begins with complete dilatation of cervix to the birth of baby. The 2nd stage is often divided into passive phase, an active phase. Upright birthing position benefits mother and baby due to several physiological reasons. It lowers the risk of compression of abdominal aorta thereby providing improved oxygen supply to the baby. It also provides efficient uterine contraction and good fetal outcome .[14]

Upright birthing position boosts uterine contractions, fetal condition, and promotes comfort to the mother. FSPs promote adequate pelvic outlet expansion by lessening the weight off sacrum [15]. With the 2nd stage being the most stressful part of child birthing process, ideal maternal positioning is vital and midwives play pivotal role.

Laying in different positions at the time of labor pain, is one of the non-medical methods and has been suggested as another way to reduce pain[16]. Certain maternal positions in the 2nd stage of labor promotes better maternal and neonatal outcomes. The 2nd stage of labor is defined as beginning with complete dilatation of cervix (10cm) and ending with expulsion of the fetus[17]. The duration is ~ 50 minutes for nulliparous women and is about 20 minutes for multiparous women. Prolonged 2nd stage of labor escalates the risk of both maternal and fetal complications.

Maternal complications like prolonged 2nd stage of labor poses risk for postpartum hemorrhage (PPH), 3rd&4th degree perineal tears.

Fetal complications like low APGAR score and neonatal asphyxia which happen during this stage are life threatening so there is a necessity for appropriate management of 2nd stage of labor for safe vaginal deliveries. A proper maternal position can greatly improve the sense of control and creates a positive birth experience to the mother[18].

The use of forceps, continuous fetal heart rate(FHR) monitoring, and analgesics to ease labour pain and delivery became increasingly medicalized, resulting in the supine position becoming the standard in high-income nations. According to a survey of maternal birthing positions, medicalization of labour included giving birth attendants control over selecting positions that they deemed appropriate. In most cases, the women themselves were not consulted.[19]

Childbirth without fear should become a reality for women and obstetricians. True team working is needed, it should be with care and mutual respect[20]**.** Historically, women giving birth alone chosen to accomplish by aligning their bodies upright in sitting / squatting positions by holding onto a tree, rope, or knotted cloth piece. They used to largely avoid lying flat on their backs throughout the ages and across the culture[21]

A higher percentage of intact perineum was seen when upright positions were used. The upright group had a clinically obvious decrease in forceps births. When things moved slowly, turning the pregnant person from a recumbent to an upright position was frequently considered advantageous.[22]

Women began to demand decent treatment during labor, as a part of respectful maternity care(RMC) India is developing its innovative new initiative, the Labor Room and Quality Improvement Initiative (LaQshya)[23].

In order to reduce maternal mortality, improve labour room care, and promote a joyful birthing experience, the Ministry of Health & Family Welfare introduced LaQshya in December 2017. This project mandates RMC for all pregnant women visiting public health institutions[24].

As a part of RMC women should be given the choice in which she is comfortable with[25]. LaQshya' programme of the Ministry of Health and Family Welfare aims at improving quality of care in labour room and maternity Operation Theatre (OT).

Goal : To reduce the preventable maternal and new born mortality, morbidity and stillbirths associated with the care around delivery in Labour room and Maternity OT and ensure respectful maternity care.

Objectives :

- To reduce maternal and new born mortality & morbidity due to APH, PPH, retained placenta, preterm, preeclampsia & eclampsia, obstructed labour , puerperal sepsis, new born asphyxia, and sepsis, etc.
- To improve Quality of care during the delivery and immediate post-partum care, stabilization of complications and ensure timely referrals, and enable an effective two-way follow-up system.

- To enhance satisfaction of beneficiaries visiting the health facilities and provide Respectful Maternity Care (RMC) to all pregnant women attending the public health facility.
- Women should be given the choice of birthing position.

Strategies :

1. Reorganizing/aligning Labour room & Maternity Operation Theatre layout and workflow as per 'Labour Room Standardization Guidelines' and 'Maternal & Newborn Health Toolkit' issued by the Ministry of Health & Family Welfare, Government of India.
2. Ensuring that at least all government medical college hospitals and high case-load district hospitals have dedicated obstetric HDUs (High Dependency Units) as per GOI (Govt of India) MOHFW guidelines, for managing complicated pregnancies that require life-saving critical care.
3. Ensuring strict adherence to clinical protocols for management and stabilization of the complications before referral to higher centres.[26]

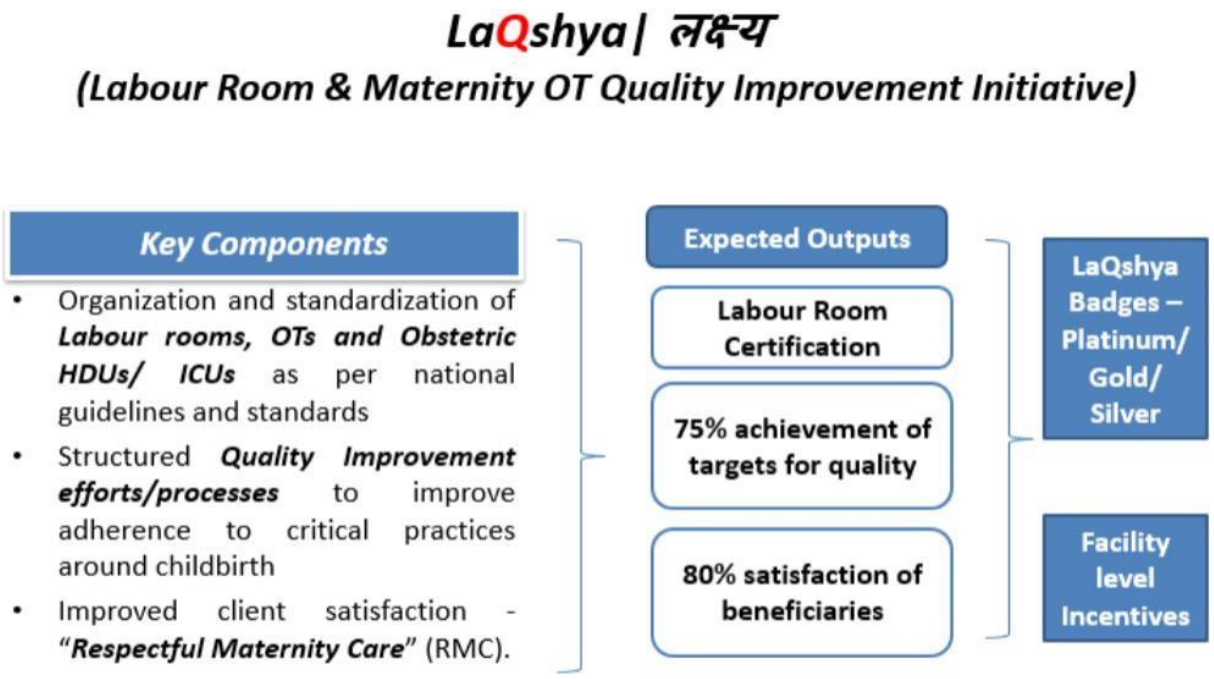


FIGURE 2

WHO Guiding principles for intrapartum care

- Labour and childbirth should be individualized and woman-centered.
- No intervention should be implemented without a clear medical indication.
- Only interventions that serve an immediate purpose and have been proven to be beneficial should be promoted.
- Women should be given the choice of birthing position.
- A clear objective that a positive childbirth experience for the woman, the new born, and her family should be at the forefront of labour and childbirth care at all times[27]

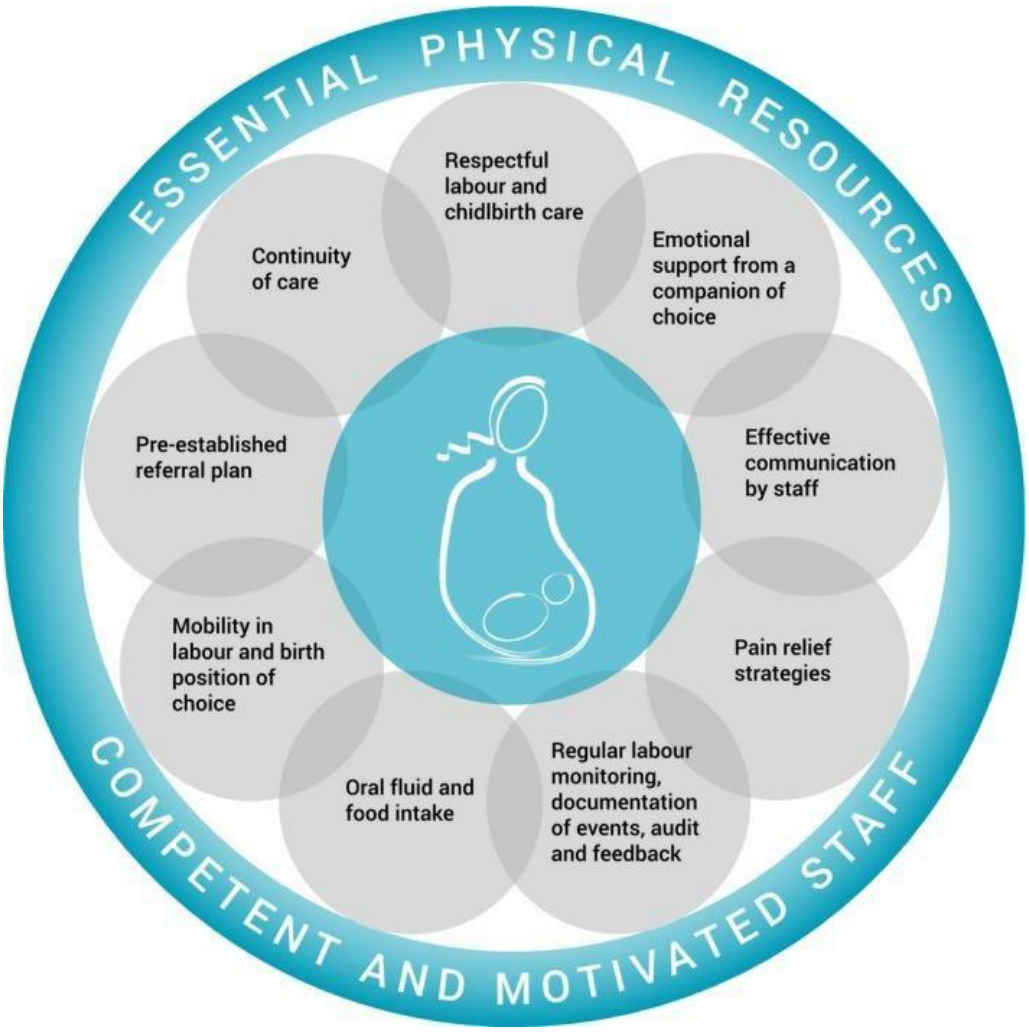


FIGURE 3: WHO GUIDELINES FOR INTRAPARTUM CARE

CLASSIFICATION OF BIRTHING POSITIONS[28]

Classification		Characteristic of placement
Upright	Vertical Sitting	Sitting on a bed, chair, or tool, with one's trunk position tilted to more than 45° to the horizontal.
	Squatting position	Lowering the trunk from standing, with certain supports to keep balance.
	Kneeling positions	Kneeling with one's trunk upright or palms on ground/cushion.
Horizontal	Lateral position	Lying on one's side with upper leg close to chest
	Supine position	Lying flat on one's back or elevating one's trunk to less than 45° to the horizontal.
	Lithotomy position	Lying flat on one's back with legs raised.

TABLE 1: CLASSIFICATION OF BIRTHING POSITIONS

FIGURE 4: DIFFERENT BIRTHING POSITIONS

As weight is removed from the sacrum in certain upright or lateral postures, the pelvic outlet can expand and the SI joints can move more freely. These positions are known as flexible sacrum positions (FSPs). The FSPs were giving birth on the birth sea while standing, squatting, lying on their backs, and in lateral position.[29]

Historically, women giving birth alone chosen to accomplish by aligning their bodies upright in sitting / squatting positions by holding onto a tree, rope, or knotted cloth piece. They used to largely avoid lying flat on their backs throughout the ages and across the culture.[30]

FIGURE 5: SCULPTURE DEPECTING A WOMAN GIVING BIRTH IN STANDING POSITION IN A TEMPLE IN 12TH CENTUARY B.C

According to literature from standing up during the 2nd stage of labour had various advantages, including a reduced chance of aberrant FHR patterns, less discomfort, less need for vacuum or forceps and fewer episiotomies or perineal tears. According to the study, being upright also expedites labors' 2nd stage and lessens augmentation[31].

Studies have shown that FSP shortens the duration of the 1st stage of labour and the active pushing phase in the 2nd stage of labour . It also lessens the rate of operative vaginal delivery, instrumental delivery, caesarean section, episiotomy, perineal trauma, vaginal tears, and severe pain. The incidence of first- and second-degree perineal injuries and estimated blood loss greater than 500 mL was found to be increased by FSP, according to research[32].

Studies have been conducted using MRI, CT, and optoelectronic devices to evaluate the static diameters of maternal pelvis with the outcome of obstetrics[33]. No difference in the prevalence of NICU admissions seen[3].

The fascial and ligamentous quality of the pelvis and spine alter during pregnancy, due to the action of relaxin, and it's likely that the growth in uterus and body size necessitates an increase in the pelvic diameters[34]**.**

The lumbar-iliac, lumbosacral, and sacrococcygeal junctions, as well as the sacroiliac, femoral-acetabular, and pubic symphysis joints, are measured in pelvic diameters. The range of external and internal pelvic diameters is influenced by the range of motion (ROM) of the pelvic joints, which is connected to the balance of tension in the muscles, ligaments, and fascia: Pregnancy-related lumbopelvic discomfort increases the risk of dystocia due to the altered balance and tension[35]

To implementing new birthing position (FSP) in Ethiopia, midwives were trained to attend to the women who choose the FSP.

1. Change in position among the FSPs were allowed.
2. Companion is allowed with them to assist in these FSPs.
3. Skilled midwives provided constant follow-up and labor support.
4. To decrease the complications such as risk of perineal tear, the skilled midwives were trained to provide various pain liberation and perineal support manners. Arm rests, seats, screen sheets were used in implementing the new birthing positions [36].

FLEXIBLE SACRAL POSITIONS :

ADVANTAGES :

- Ease in pelvic outlet expansion by lessening the weight off the sacrum.
- Reduction in the duration of 2nd stage of labour .
- Reduced risk of perineal tears.
- Reduced risk of low APGAR score due to reduction in the duration of 2nd stage .
- Reduced perineal pain.
- Propagates the head rotation, descent of head and body – shortens 2nd stage .
- Good signs in the infants promotes early interaction between the mother and baby[36].

DISADVANTAGES:

- Fast explusion of fetal head with reduction in 2nd stage of labor may prone to maternal and fetal trauma.
- In cases where continuous electronic fetal monitoring is required in these positions it is challenging[36].

NON-FLEXIBLE SACRAL POSITIONS:

ADVANTAGES:

- In these positions the electronic fetal monitoring is easily accessible.
- These positions may be beneficial in some cases. For example, the McRoberts' position. when the woman lies with legs flexed and pulled tightly towards abdomen can help correct a shoulder dystocia.

- These positions are easily accessible for application of forceps, vacuum assisted vaginal delivery[37].

DISADVANTAGES:

- When the coccyx is allowed to move freely, then it can move nearly 16 degrees in upright position. In contrast, when non-flexible sacrum positions are used, the coccyx can only move about 4 degrees.
- There is increase in duration of 2nd stage of labour when compared to flexible sacral positions.
- Due to aorto-caval compression there may be increase chances of birth asphyxia.
- Increase need of episiotomy and operative vaginal delivery.
- Increase in intensity of pain[38]

The all fours position is simple for women to do and maintain, and is supported by MR studies and indicate that all fours position shows more room than in the supine and standing positions give the pelvic greater space[39].

RITGENS MANUVOURE:

Ritgen's maneuver denotes extracting the fetal head, using one hand to pull the fetal chin from between the maternal anus and the coccyx, and the other on the fetal occiput to control speed of delivery[40]. Ritgen's maneuver was performed during a uterine contraction, rather than, as originally recommended, between contractions. Our standard care entailed perineal support with one hand and control of the speed of crowning (33). Suboccipito-bregmatic, the fetal skull's narrowest diameter, emerges through the mother's vaginal opening during a typical labour . During birth, the fetus must adapt from a flexion to an extension posture in order to navigate the 90° curve in the birth canal. The occipito-frontal diameter of the fetal head increases as a result of the Ritgen's manoeuvre, which promotes early extension of the fetal head. The pressure used to flex the fetal head by the delivery attendant does not result in a reduced diameter being present; rather, it just delays the baby's emergence and abnormally forces the developing fetal head into the stretched perineum[41].

The Ritgen's manoeuvre should not be used frequently as it does not appear to have any advantages. For the delivery of the fetus, the "Hands-poised" position is advised above the "hands-on" technique. Episiotomy on a routine basis is not advised[42].

FIGURE 6: RITGENS MANUVOURE

SUPINE POSITION :

In this position, the birthing woman lies horizontal on her back / with her trunk marginally elevated (< 45^0) and her lower limbs placed horizontal on her bed / in the leg rests / can also be pulled up back towards her shoulder.

There are also some research recommendations which encourages and supports the woman by allowing her to assume any position which they feel most comfortable throughout the labour .[43] Inspite of the appropriate scientific substantiation to the contrary, recent literature reveals that the supine position is the most common position assumed during labor all over the world.

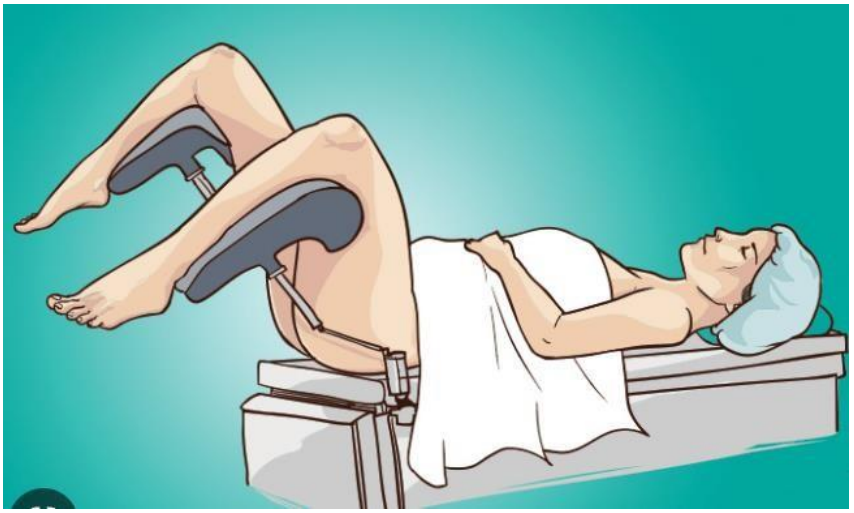


FIGURE 7: SUPINE POSITION

ADVANTAGES:

- It is simpler for obstetricians to access and electronically monitor the FHR if patient is lying or semi-sitting in bed. Electronic fetal monitoring (EFM) was used by the majority of obstetricians till birth continuously or for the majority of the time during labour [45]
- This position is favorable for forceps application and vacuum assisted delivery[46].

DISADVANTAGES:

- Prolongation of duration of 2nd stage of labor.
- Increase the birth asphyxia in new born due to prolonged 2nd stage .
- Increased perception of intensity of pain.
- Increased maternal exhaustion which may lead to increased rates of operative vaginal delivery.[19]

LATERAL POSITION:

Lateral positions, often known as side-lying positions, such as the full Sims position and the exaggerated Sims position (semi prone) The woman lies on her side in the "pure side lying posture," either with her upper legs lifted and supported, a pillow between her legs, and both hips and knees flexed. Additionally, the Sims position, a version of the lateral position, is referred to as the left lateral position.[47] Lateral position is comfortable, reproducible and easy[48]

ADVANTAGES:

- This position does allow for sacral mobility.
- It can be an organizing and calming position for the birthing person, as well as, a good resting position if the birthing person is fatigued.
- It's a gravity neutral position so it provides protection from perineal tear.
- Monitoring of FHR is feasible and accessible.
- The likelihood of spontaneous delivery (birth without the aid of surgery, vacuum, or forceps) has been consistently shown to increase in positions that relieve pressure on the sacrum and coccyx and permit the pelvis to expand[49]

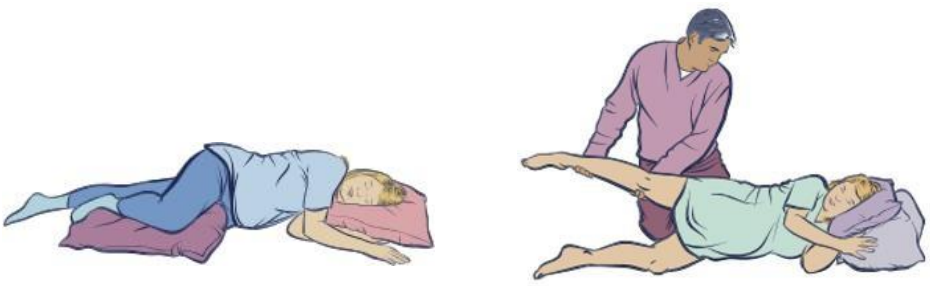


FIGURE 8: LATERAL POSITION

ALL FOURS POSITION:

ADVANTAGES:

- Kneeling positions vary from upright kneeling to all fours' position. Generally, all-fours is also called as hands and knees position.
- With the help of either the palms / her fist of her hands, she will support herself to maintain this position.
- Kneeling position was well used in some of the developed countries (like French) and midwives are appropriately trained.
- Due to the paucity of related awareness, skill and knowledge, kneeling positions are rarely used in some Asian countries in comparison to other birthing positions.
- Allows partner to provide back massage, counterpressure (very firm massage against the lower spine) or applications of warm or cold compresses.
- Deliveries in the kneeling position are most feasible on the standard delivery tables available in the maternity hospitals. [50]
- Amongst the various upright positions, kneeling has been described as the most comfortable 2nd stage position. There is also a paucity of Indian data regarding delivering in kneeling position.[51]
- In this position, women are kneeling and bent forward to support her weight with the arm. It reduces the effect of gravity, duration of contraction, pain due to fetal pressure. It favors the internal rotation.[14]

DISADVANTAGES:

- In cases which require continuous EFM (electronic fetal monitoring) it becomes difficult.
- The risk of perineal tear is increased

FIGURE 9: ALL FOURS POSITION

COMPARISON OF AVAILABLE LITERATURE

- Huang J Yu Zang et al reviewed and compared common maternal positions during 2nd stage of labour . During the course of the 2nd stage of labour , upright and lateral positions provide beneficial outcomes in refining maternal and fetal outcomes and in managing obstetric complications. According to their study, unless women feel comfortable supine position it should be evaded for the added risk of severe perineal trauma, fairly long duration of labour , more pain intensity, and change in FHR patterns[6].

- SUZUKI.S studied Supine, lateral, and all fours' positions were used by 3826, 1754, and 719 of the women. The incidence of perineal laceration was significantly lower in the women who delivered with lateral posture than in the women who delivered with supine posture, but the rate of no laceration was significantly lower in the women who delivered with lateral posture than in the women who delivered with supine posture. The incidence of third- or fourth-degree perineal laceration was significantly higher in women who gave birth in all fours compared to those who gave birth supine [52].

- Janesh K Gupta , Akanksha Sood The results of this review point to a number of potential advantages for women who do not receive epidural anesthesia to maintain an upright posture, including a very slight decrease in the length of the 2nd stage of labour (mainly in the primigravid group), a decrease in the prevalence of episiotomies, and assisted deliveries. Though we cannot be confident of it, there is a higher risk of second-degree tears and a higher risk of blood loss of more than 500 ml. Further studies utilizing carefully developed protocols are required to determine the genuine advantages and dangers of various birth positions in light of the varying risk of bias in the trials examined.[53]

- Anjali Dabral, Pallavi Pawar et al compared to supine posture, women who give birth while kneeling experience a generally shorter 2nd stage of labour and fewer admissions to neonatal intensive care units. On the other hand, primigravida's who deliver while kneeling has a higher chance of second-degree perineal tears. Primigravida women adhere to the kneeling position more consistently.[3]

- Ragnar I, Altman D, Tyden et al studied the duration of the 2nd stage of labour when standing or sitting upright does not significantly differ from one another. When compared to a sitting position, a kneeling position was connected with a more positive maternal experience and less discomfort in healthy primiparous women.[54]

- P.R.de Jong,R.B. Johanson et al conducted a randomized control trial in St Monica's Nursing Home, a maternity facility in Cape Town, South Africa, that relies on midwives. A total of 517 low-risk pregnant women were assigned to give birth at the nursing home. The experiment revealed that compared to women who delivered in the supine position, those who adopted the upright posture during labour and delivery reported less discomfort, less perineal damage, and fewer episiotomies. 17 low-risk pregnant women who were assigned to give birth in a nursing home are suggested to be encouraged to choose their delivery posture based on the statistics. The experiment revealed that compared to women who delivered in the supine position, those who adopted the upright posture during labour and delivery reported less discomfort, less perineal damage, and fewer episiotomies. Data indicate that among women with low obstetrical risk.[31]

- S Bomfim-Hyppólito et al studied that the 2nd stage duration in the vertical position was 3.4 minutes shorter than it was in the horizontal position, a non-significant difference. Similar but minor differences were present in the placenta's delivery time. Women who delivered vertically experienced a slight increase in blood loss, but the difference did not reach statistical significance. Breastfeeding had no effect on blood loss or the time it took to deliver the placenta. Perineal trauma occurred in 44.1 percent of vertical positions, 47 percent of horizontal positions, and 47.8 percent and 71.2 percent of groups with prior episiotomies, respectively. This most recent variation was statistically noteworthy. This study's findings are consistent with those of other studies.[55]

- Kate F Walker , Marion Kibuka et al studied Women who use recumbent or supine positions during the 2nd stage of labour with may experience little to no difference in operational birth. The studies' heterogeneity is likely due to various study designs and interventions, varying levels of adherence to the chosen intervention, and potential attrition and selection bias. Recumbent positions may lessen the requirement for operative birth and caesarean sections without increasing the use of instrumental delivery, according to sensitivity analysis of data with minimal risk of bias. Adopting a reclining position during childbirth may increase the satisfaction of mothers with their laboring experience. The research included in this evaluation examined semi-recumbent and lateral positions. In general, recumbent positions like lying flat on one's back or lithotomy are not employed because due to the possibility of aorto-caval compression, although they acknowledge that these recumbent positions were not the focus of trials included in this review.[56]

- Holly Priddis , Hannah Dahlen et al studied that according to the literature, women who are able to adopt physiological positions throughout labour and give birth in an upright position

of their choosing experience both physical and psychological benefits. In comparison to women in semi-recumbent or supine/lithotomy postures, those who use upright positions during labour experience shorter first- and second-stage labour times, require fewer interventions, report less intense pain, and are more satisfied with their birthing experience. The sole drawback observed is higher blood loss during the third stage , but this could be attributed to increased perineal oedema brought on by upright positions. Research addressing characteristics and/or practices within the existing health system that encourage or discourage women from adopting particular positions during labour and delivery is lacking.[57]

- Barbara Debra Zileni , Pauline Glover et al studied women who gave birth in maternity units to make informed decisions regarding their own delivery options, they must be informed about the various birthing positions. However, it is important for obstetricians to acquire their skills in various delivery positions since they must be able to encourage and help women give birth in various positions. Information on the various labour and delivery positions should be included in childbirth education. The right skills should be available so they can assist women in using various postures when giving birth.[44]

- Ayse Deliktas et al studied the position of the mother during labour has a significant impact on the health of the mother and the foetus. A meta-analysis was used based on Cochrane handbook. It is advised that medical experts choose the proper delivery position after taking the women's preferences and individual risk factors into consideration[58].

- Yu Zang, Hong Lu et al studied a total of 12 studies with 4,314 women in them. Upright positions significantly reduced the rate of instrumental vaginal delivery and shortened the active pushing phase and decreased the rate of severe perineal trauma and episiotomy. However, neither the duration of the 2nd stage of labour nor the PPH showed any appreciable difference. Positions that are upright are advantageous for enhancing maternal outcomes. Many results need to be interpreted with care. Future research must further define upright positions and involve big, reliable investigations in order to provide stronger evidence.[59]

MATERIALS AND METHODS

MATERIALS AND METHODS

- Patients admitted in Department of OBSTERTICS & GYNAECOLOGY in B.L.D.E. (DEEMED TO BE UNIVERSITY) Shri B.M. Patil Medical College Hospital and Research Centre, Vijayapura fulfilling the inclusion and exclusion criteria.
- The patients will be informed about study in all respects and informed writtenconsent will be obtained.

STUDY PERIOD: 1 YEAR (JANUARY 2021 TO APRIL 2022)

METHOD OF COLLECTION OF DATA

INCLUSION CRITERIA

- Pregnant women giving informed and written consent with term gestation 37 to 42 weeks.
- Cephalic presentation.

EXCLUSION CRITERIA

- Pregnant women less than 37 weeks preterm
- Women with previous caesarean section.
- Patient not giving informed and written consent
- Malposition's and Malpresentations
- Multiple gestation
- Any maternal or fetal co morbidity like hypertensive disease of pregnancy, gestational diabetes mellitus, cardiac diseases, small for gestational age, preterm, fetal distress.

Sample size calculation:

The anticipated mean ± SD of kneeling position in pregnant women with 37 - 42 weeks period of gestation is 29.54 ± 15.53 and in supine group is 41.70 ± 16.29 respectively[60]. The required minimum sample size is 90 (minimum) per group (i.e., a total sample size of 270, and divided into 135 primigravida and 135 multigravidas. The group of 135 primigravida are again randomized into supine or kneeling or lateral position and 135 multigravidas are randomized into supine or kneeling or lateral position assuming equal group sizes) to achieve a power of 99% and a level of significance of 1% (two sided), for detecting a true difference in means between the groups.

$$N = 2\left[\frac{(Z_a + z_\beta) * S}{d}\right]^2$$

Z_a Level of significance = 95%

Z_β Power of the study = 80%

d = clinically significant difference between two parameters

SD = Common standard deviation

METHODOLOGY

- This is a Randomized comparative trial. After obtaining the clearance from the ethical committee all the patients who fulfil inclusion criteria and consented will be studied. Consent will be taken once the patient is admitted.
- The sample size of 270 are divided into 135 Multigravida and 135 Primigravida.

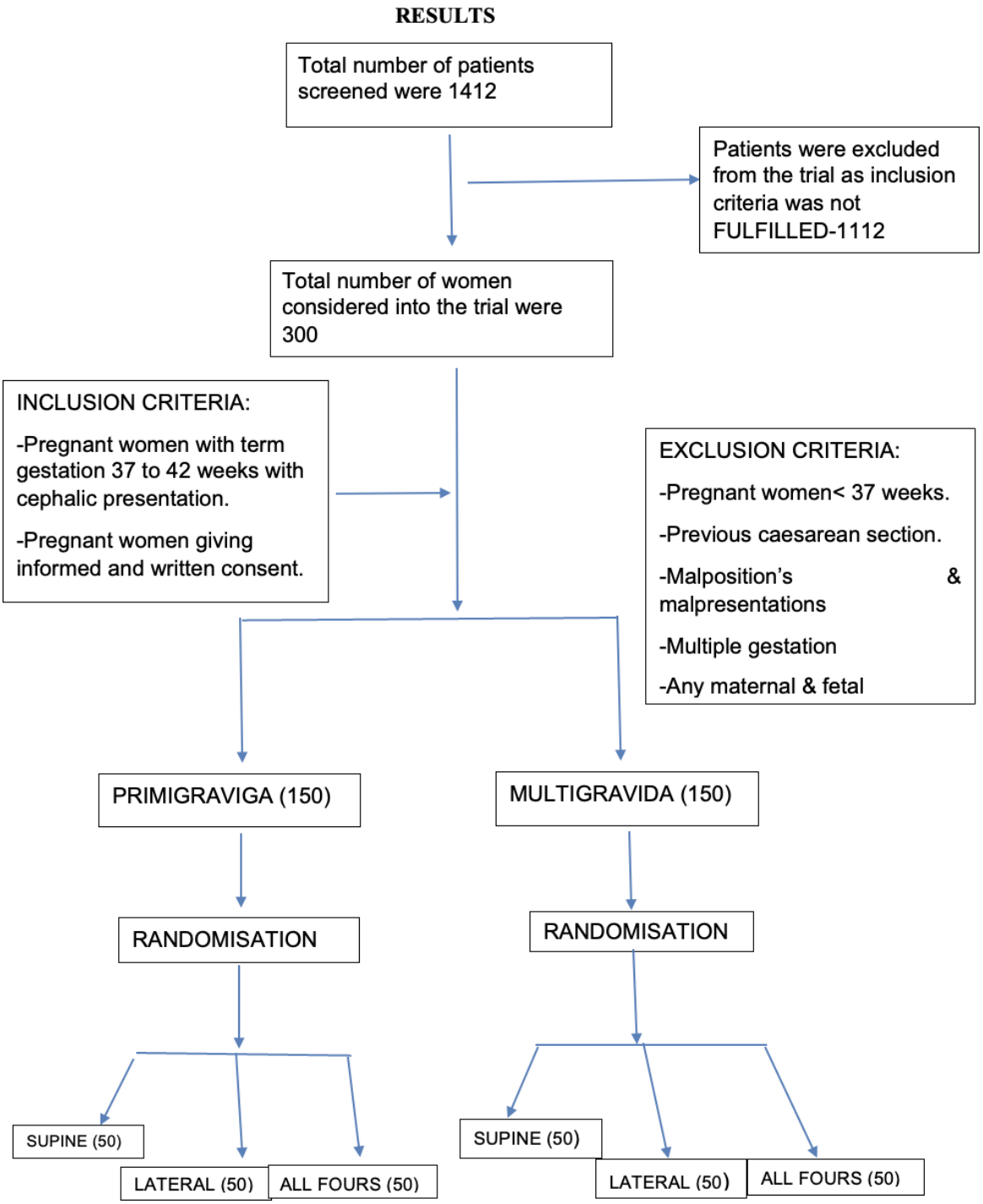
- The group of 135 primigravida and 135 multigravidae will be randomized into Group A, Group B, Group C based on a computer-generated randomization on www.randomization.com into supine, lateral and all fours position.

RESULTS

RESULTS

A total of 1412 women were screened out of which 1112 women were excluded from the trail as inclusion criteria was not fulfilled. A total of 300 women were considered into the trial and were divided into primigravida and multigravida groups each group containing 150 women. These 150 primigravida women were randomized into supine, lateral and all fours sub group. The group of 150 multigravida women were divided into supine, lateral and all fours position by computer generated randomized program.

CONSORT FLOW CHART



PRIMIGRAVIDA RESULTS

AGE DISTRIBUTION AMONG PRIMIGRAVIDA WOMEN

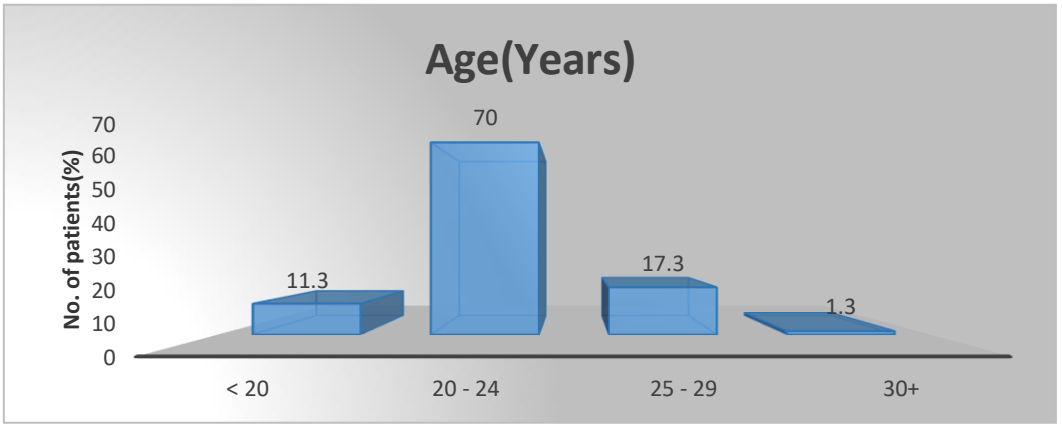
Table 2 & figure 10 represents distribution of the mean age group of primigravida women the most common age group of women included in the trial are 20 to 24 years old. P value was 0.28 was calculated using Anova square test which was statistically insignificant.

TABLE 2: THE MEAN AGE DISRIBUTION AMONG PRIMIGRAVIDA WOMEN

Age (Years)	No. of Women	Percentage	P VALUE
< 20	17	11.3	0.28
20 - 24	105	70.0	
25 - 29	26	17.3	
30+	2	1.3	
Total	150	100.0	

* Note: If the P value is equal to or lesser than 0.05 then the result considered Statistically significant

FIGURE 10: BAR CHART SHOWING MEAN AGE DISTRIBUTION AMONG PRIMIGRAVIDA WOMEN



MEAN GESTATIONAL AGE AMONG PRIMIGRAVIDA WOMEN

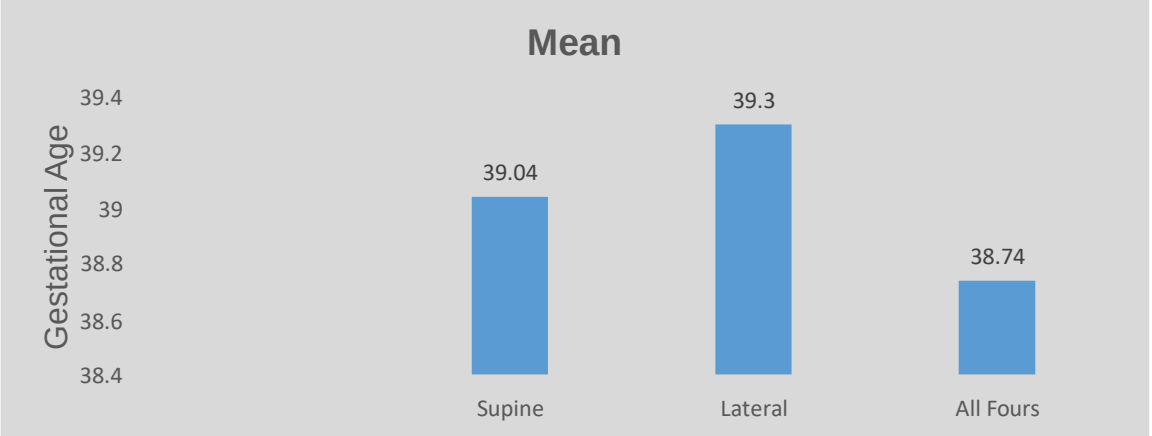
Table 3 and figure 11 represents the mean gestational age of primigravida women participated in the trial in supine position was 39.04 weeks, in lateral position was 39.30 weeks and, in all fours, position was39.03 weeks. The mean gestational age of primigravidae women participated in the trial was 39.03 weeks. P value was 0.06 statistically insignificant

Position	No of women	Mean (POG in weeks)	P VALUE
Supine	50	39.04	0.06
Lateral	50	39.30	
All Fours	50	38.74	
Total	150	39.03	

TABLE 3: THE MEAN GESTATIONAL AGE OF WOMEN IN THREE POSITIONS AMONG PRIMIGRAVIDA WOMEN

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant

FIGURE 11: BAR GRAPH SHOWING GESTATIONAL AGE AMONG PRIMIGRAVIDA



DURATION OF SECOND STAGE OF LABOR (MINUTES) IN PRIMIGRAVIDA WOMEN

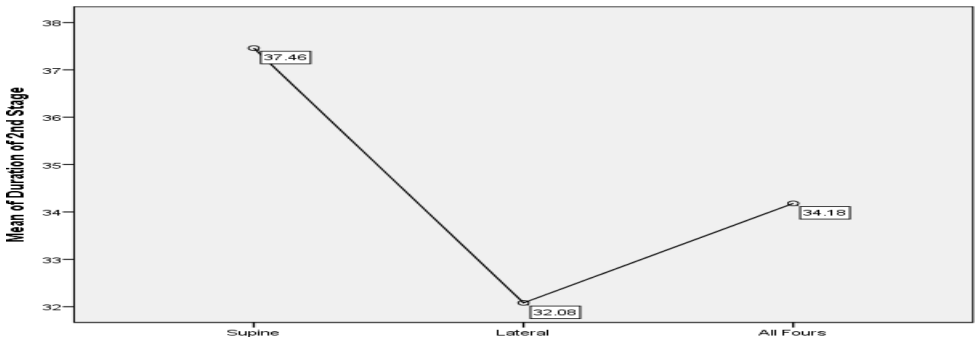
Table 4 and figure 12 represents the mean duration of 2nd stage of labor in supine, lateral and All fours is 37.46 minutes, 32.08 minutes, 34.18 minutes respectively and Anova test was used to compare the mean duration of 2nd stage of labor and P value is <0.01 which is statistically significant. It suggests that mean duration of 2nd stage of labor is reduced in lateral position in primigravida women.

TABLE 4: THE MEAN DURATION OF SECOND STAGE OF LABOUR IN PRIMIGRAVIDA WOMEN IN

DURATION OF SECOND STAGE OF LABOR (MINUTES)	MEAN	STD. DEVIATION	PVALUE
Supine	37.46	3.547	<0.01
Lateral	32.08	4.318	
All fours	34.18	3.095	
STATISTICALLY SIGNIFICANT			

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant

FIGURE 12: LINE GRAPH SHOWING DURATION OF SECOND STAGE OF LABOUR



INTERVENTION NEEDED IN THREE POSITIONS DURING SECOND STAGE AMONG PRIMIGRAVIDA

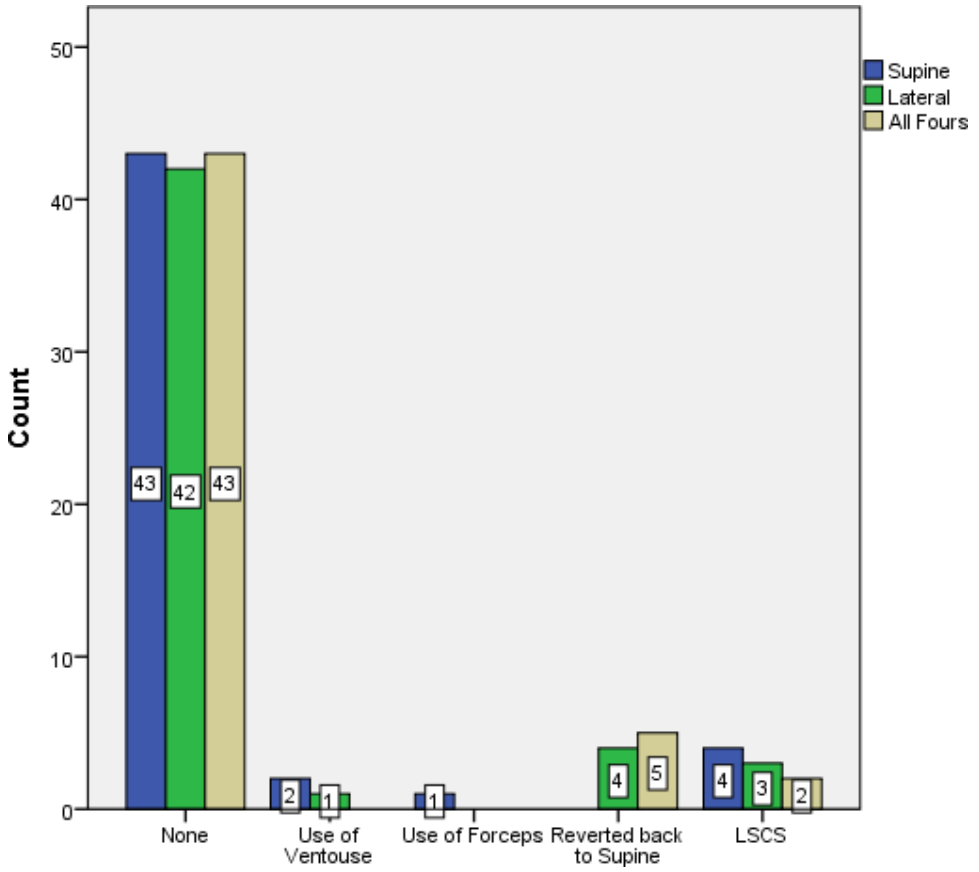
The table 5 and figure 13 explains the intervention required. In 43 out of 50 laboring women in supine position none of the intervention was needed**. Two** women needed the use of Ventouse and **one** woman required forceps and **none** reverted to other positions and **four** women were shifted to LSCS in supine position. In 42 out of 50 women in lateral position required no intervention. **one** woman needed the use of ventouse and **four** women reverted back to supine position. **Three** women were shifted to LSCS. In 43 out of 50 laboring primigravida women none of the intervention was needed. **Five** women reverted back to supine position. **Two** women were shifted to LSCS. P value was calculated using Fisher exact test and P-Value is 0.31which is statistically insignificant in primigravida women.

TABLE 5: INTERVENTION NEEDED IN THREE POSITIONS DURING SECOND STAGE AMONG PRIMIGRAVIDA

INTERVENTION	SUPINE (50)	LATERAL (50)	ALL FOURS (50)	P VALUE
None	43(86%)	42(84%)	43(86%)	0.32
Use of Ventouse	2(4%)	1(2%)	0(0%)	
Use of Forceps	1(2%)	0(0%)	0(0%)	
Reverted back to supine	0(0%0	4(8%)	5(10%)	
LSCS	4(8%)	3(6%)	2(4%)	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant

FIGURE 13 : BAR CHART REPRESENTING THE INTERVENTION NEED IN DIFFERENT POSITIONS DURING SECOND STAGE OF LABOUR IN PRIMIGRAVIDA



NEED FOR EPISIOTOMY IN THREE POSITIONS IN PRIMIGRAVIDA

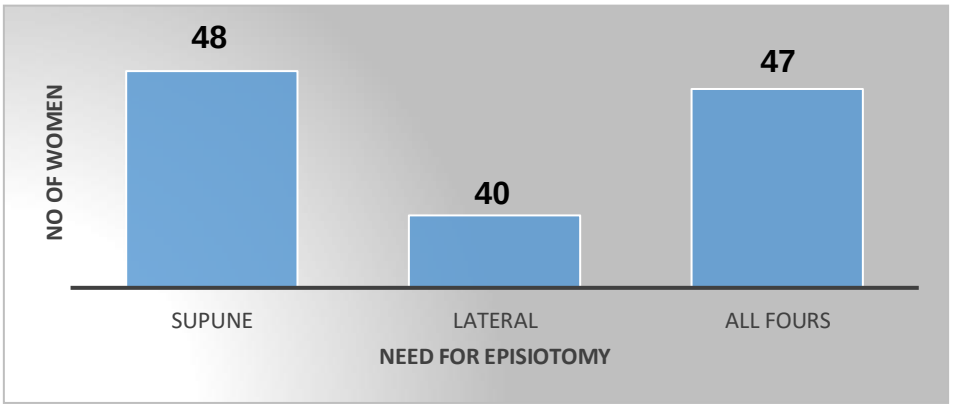
The table 6 and figure 14 describes the need for episiotomy in three positions 48 out of 50 women needed episiotomy in supine position, 40 out of 50 women needed episiotomy in lateral position and 47 out of 50 needed episiotomies in All fours position. P value is calculated using Fisher exact test is used. P-value = 0.01, highly Significant and it suggests that the need for episiotomy is less in lateral position in primigravida women.

TABLE 6: NEED FOR EPISIOTOMY IN THREE POSITIONS IN PRIMIGRAVIDA

EPISIOTOMY	SUPUNE (50)	LATERAL (50)	ALL FOURS (50)	P VALUE
Yes	48(96%)	40(80%)	47(94%)	0.01
No	2(4%)	10(20%)	3(6%)	
STATISTICALLY SIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered to Statistically significant

FIGURE 14: BAR CHART SHOWING THE NEED FOR EPISIOTOMY IN THREE POSITIONS IN PRIMIGRAVIDA



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PERINEAL TEAR IN THREE POSITIONS IN PRIMIGRAVIDA

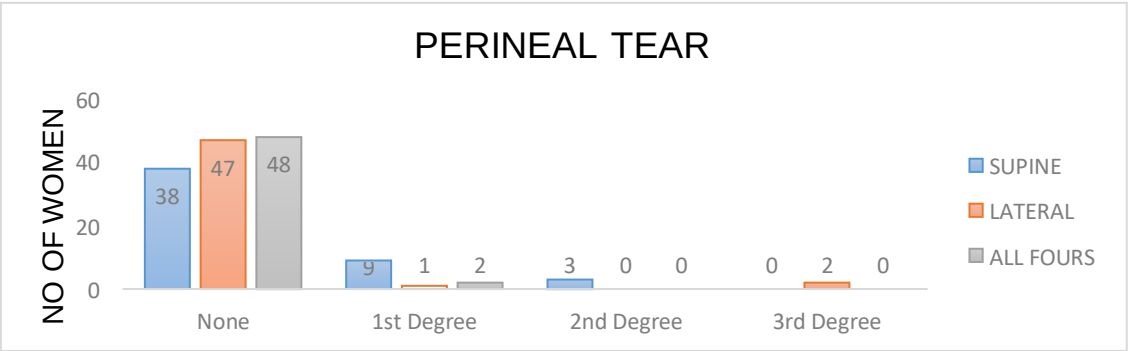
Table 7 and figure 15 explains the degree of perineal tear in each position 9 out of 50 women had 1st degree perineal tear and 3 out of 50 women had 2nd degree perineal tear in supine position and 1 out of 50 had 1st degree perineal tear in lateral position and 3 out of 50 had 3rd degree perineal tear in lateral position and 2 out of 50 had 1st degree perineal tear in all fours position. P value is calculated using Fisher exact test is used. P-value = <0.01, highly Significant. The results suggest that the rate of perineal tear is increased in supine position in primigravida women.

TABLE 7: THE DEGREE OF PERINEAL TEAR IN THREE POSITIONS IN PRIMIGRAVIDA

PERINEAL TEAR	SUPINE	LATERAL	ALL FOURS	P VALUE
None	38(76%)	47(94%)	48(96%)	<0.01
1st Degree	9(18%)	1(2%)	2(4%)	
2nd Degree	3(6%)	0	0	
3rd Degree	0	2(4%)	0	
STATISTICALLY SIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant

FIGURE 15: BAR CHART SHOWING THE DEGREE OF PERINEAL TEAR IN THREE POSITIONS



NEED FOR ADDITIONAL OXYTOCIN IN PRIMIGRAVIDA

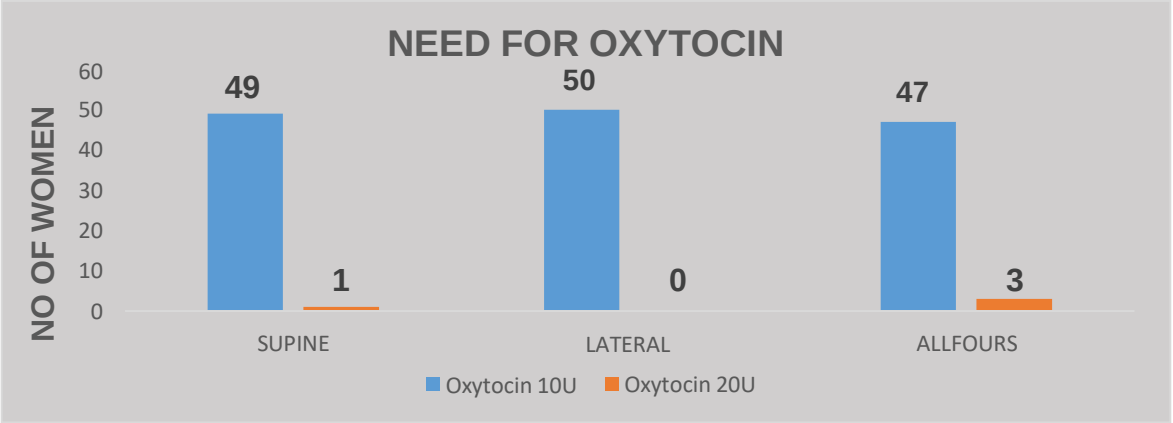
The table 8 and figure 15 describes the need for additional dosage oxytocin in various positions after the delivery of anterior shoulder 1 woman out of 50 required 20 units of oxytocin in supine position none of the women delivered in lateral position required additional dose of oxytocin in lateral position and 3 out of 50 women required 20 units of oxytocin in all fours position. P value is calculated using Fisher exact test which is 0.53 and statistically insignificant.

TABLE 8: NEED FOR ADDITIONAL OXYTOCIN AND DOSAGE IN THREE POSITIONS IN PRIMIGRAVIDA

UTEROTONIC	DOSAGE	SUPINE (50)	LATERAL (50)	ALLFOURS (50)	P VALUE
Oxytocin	10U	49	50	47	0.53
	20U	1	0	3	
	30U	0	0	0	
	40U	0	0	0	
STATISTICALLY INSIGNIFICANT					

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant

FIGURE 16: BAR CHART SHOWING THE NEED FOR ADDITIONAL OXYTOCIN IN THREE POSITIONS IN PRIMIGRAVIDA



NEED FOR METHERGIN IN ADDITIONAL TO OXYTOCIN IN PRIMIGRAVIDA

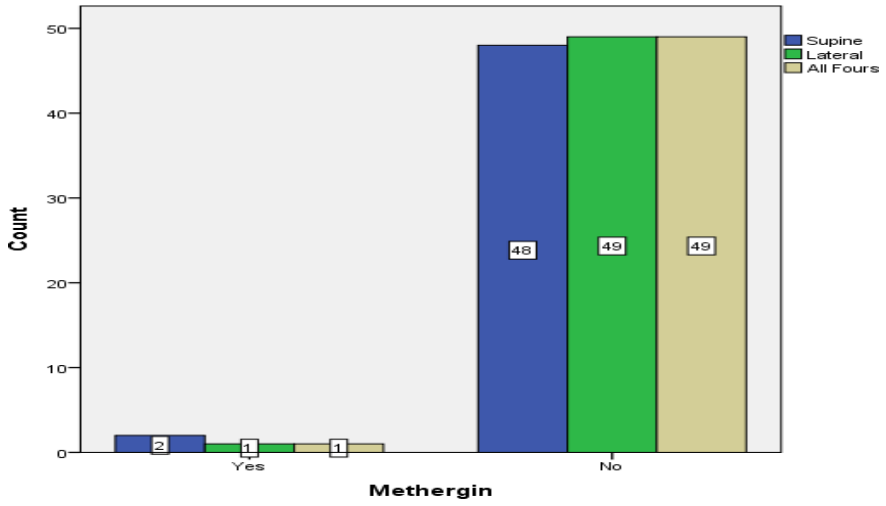
Table 9 and figure 16 describes the need for Methergine in different position 2 out of 50 women needed injection Methergin and 1 out of 50 needed Injection Methergine in lateral position and 1 out of 50 women needed Injection Methergin in All fours position. P value is calculated using Fisher exact test which is 0.77 which is statistically insignificant.

TABLE 9: NEED FOR INJECTION METHERGIN IN THREE POSITIONS ADDITIONAL TO OXYTOCIN IN PRIMIGRAVIDA

METHERGIN	SUPINE (50)	LATERAL (50)	ALL FOURS (50)	P VALUE
Yes	2	1	1	0.77
No	48	49	49	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant.

FIGURE 17: BAR CHART SHOWING THE NEED FOR INJECTION METHERGIN IN THREE POSITIONS ADDITIONAL TO OXYTOCIN IN PRIMIGRAVIDA



NEED FOR PGF2 α ADDITIONAL TO OXYTOCIN IN PRIMIGRAVIDA

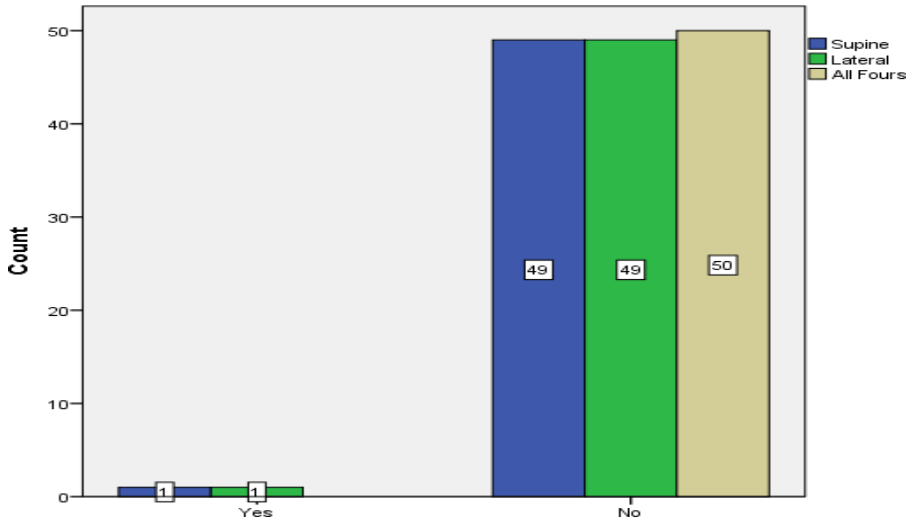
Table 10 and figure 17 is used to describe the need for Injection PGF2 α in various position **one** out of 50 women needed Injection PGF2 α in supine position. **One** out of 50 required Injection PGF2 α in lateral position and **none** required Injection PGF2 α in All fours position. P value is calculated using Fisher exact test which is 0.6 which is statistically insignificant.

TABLE 10: THE NEED FOR INJECTION PGF2 α IN THREE POSITIONS IN ADDITIONAL TO OXYTOCIN IN PRIMIGRAVIDA

PGF2 α	SUPINE	LATERAL	ALL FOURS	P VALUE
Yes	1	1	0	0.6
No	49	49	50	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant

FIGURE 18: BAR CHART SHOWING THE NEED FOR INJECTION PGF2 α IN THREE POSITIONS IN ADDITIONAL TO OXYTOCIN IN PRIMIGRAVIDA



NEED FOR MISOPROSTOL IN ADDITIONAL TO OXYTOCIN IN PRIMIGRAVIDA

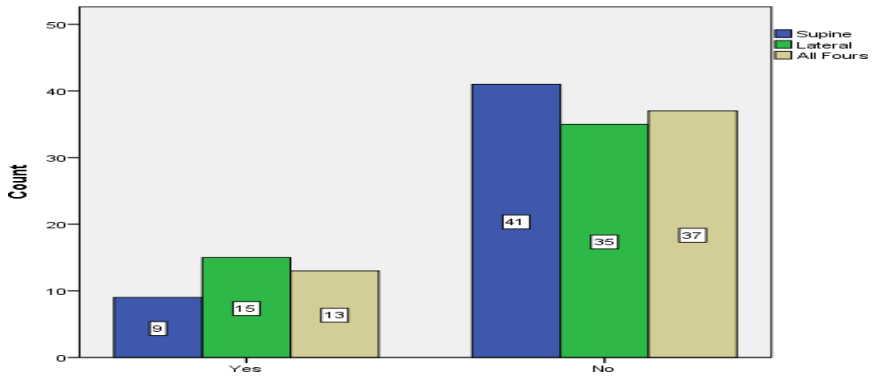
Table 11 and figure 18 interprets the need for Tablet Misoprostol in supine, lateral and all fours position. 9 out of 50 need Tablet Misoprostol for prevention of PPH,15 out of 50 women required Tablet Misoprostol and 13 out of 50 in All fours position needed Tablet Misoprostol in supine, lateral and All fours position respectively. P value is calculated using Chi-Square test the value is 0.36 which is statistically insignificant.

TABLE 11: NEED FOR TABLET MISOPROSTOL IN THREE POSITIONS IN ADDITIONAL TO OXYTOCIN IN PRIMIGRAVIDA

MISOPROSTOL (600mcg)	SUPINE (50)	LATERAL (50)	ALL FOURS (50)	P VALUE
Yes	9	15	13	0.36
No	41	35	37	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant.

FIGURE 19: BAR CHART SHOWING THE NEED FOR TABLET MISOPROSTOL IN THREE POSITIONS IN ADDITIONAL TO OXYTOCIN IN PRIMIGRAVIDA



INTENSITY OF PAIN IN THREE POSITIONS IN PRIMIGRAVIDA

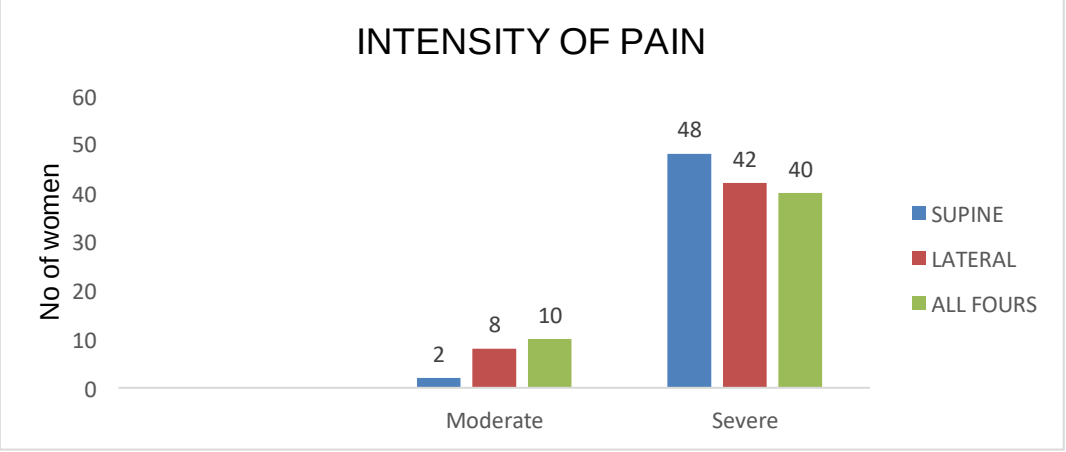
Table 12 and figure 19 explains the intensity of pain in supine, lateral and All fours position. When compared 48 out of 50 women complained of severe pain and 42 out of 50 in lateral position and 40 out of 50 in All fours position. When compared all fours position had lesser intensity of pain. P value is calculated by Fisher exact and P-Value = <0.01, highly Significant.

TABLE 12: INTENSITY OF PAIN IN THREE POSITIONS IN PRIMIGRAVIDA

INTENSITY OF PAIN	SUPINE (50)	LATERAL (50)	ALL FOURS (50)	P VALUE
Moderate	2(4%)	8(16%)	10(20%)	<0.01
Severe	48(96%)	42(84%)	40(80%)	
STATISTICALLY SIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant.

FIGURE 20: BAR CHART SHOWING THE INTENSITY OF PAIN IN THREE POSITIONS IN PRIMIGRAVIDA



PREFERENCE OF POSITION IN SUBSEQUENT DELIVERY AMONG PRIMIGRAVIDA

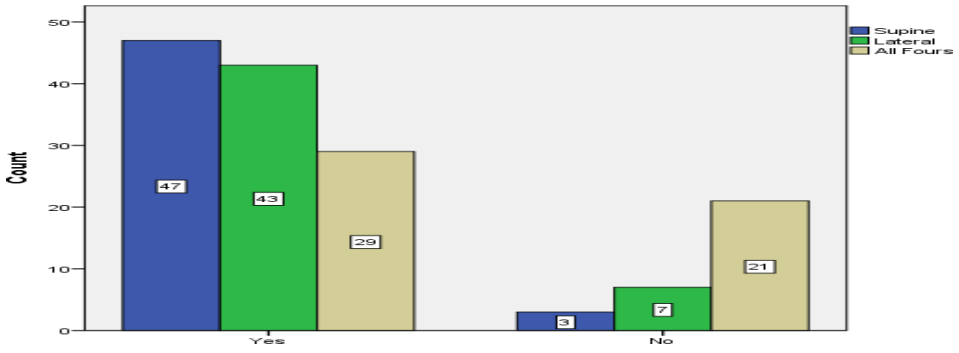
Table 13 and figure 20 explains the preference of same position for next delivery 47 out of 50 patients who delivered in supine position, A 43 out of 50 women in lateral position and 29 out of 50 had answered that they would prefer the same position for next delivery respectively. P value is calculated by using Fisher exact test is used. P-Value = <0.01, which is Highly Significant. It suggests that women who delivered in supine position has preference to deliver in same position in the next delivery.

TABLE 13: PREFERENCE OF SAME POSITION IN SUBSEQUENT DELIVERY AMONG PRIMIGRAVIDA

PREFERENCE OF POSITION	SUPINE (50)	LATERAL (50)	ALL FOURS (50)	P VALUE
Yes	47(94%)	43(86%)	29(58%)	<0.01
No	3(6%)	7(14%)	21(42%)	
STATISTICALLY SIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered to Statistically significant.

FIGURE 21: A BAR CHART SHOWING THE PREFERENCE OF SAME POSITION IN SUBSEQUENT DELIVERY AMONG PRIMIGRAVIDA



OVERALL FETAL OUTCOME IN THREE POSITIONS IN PRIMIGRAVIDA

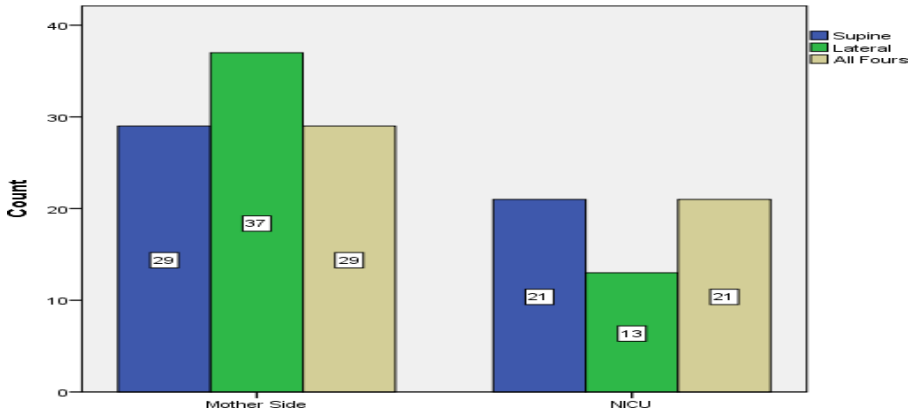
Table 14 and figure 21 explains the fetal outcome whether given mothers' side or admitted to NICU. A total 21out of 50 neonates,13 out of 50 neonates and 21 out of 50 neonates were admitted to NICU in supine, lateral and All fours position respectively. P value is calculated by using Chi-Square test which is 0.15 and is statistically Insignificant.

TABLE 14: OVERALL FETAL OUTCOME IN THREE POSITIONS IN PRIMIGRAVIDA

FETAL OUTCOME	SUPINE (50)	LATERAL (50)	ALL FOURS (50)	P VALUE
Mothers side	29(58%)	37(74%)	29(58%)	0.15
NICU	21(42%)	13(26%)	21(42%)	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered to Statistically significant.

FIGURE 22: A BAR CHART SHOWING THE OVERALL FETAL OUTCOME IN THREE POSITIONS IN PRIMIGRAVIDA



FHR PATTERNS IN THREE POSITIONS IN PRIMIGRAVIDA

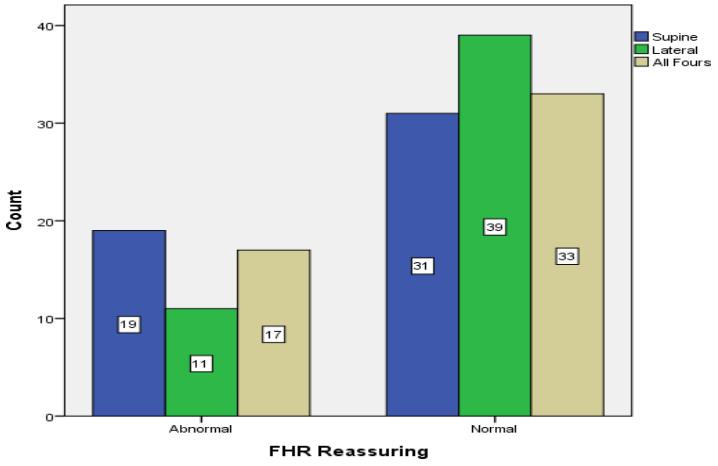
Table 15 and figure 22 explains the FHR pattern if it is normal or abnormal pattern in different positions. A total 19 out of 50 in supine position had abnormal FHR pattern and 31 out of 50 had normal FHR pattern in supine position. Out of 50 women 11 had abnormal FHR pattern and 39 out of 50 had normal FHR pattern in lateral position. Out of 50 women 17 had abnormal FHR patterns and 33 out of 50 had normal FHR pattern value is calculated using Chi-Square test which is 0.2 and statistically Insignificant.

TABLE 15: FHR PATTERN IN THREE POSITIONS IN PRIMIGRAVIDA

FHR	SUPINE (50) (50)	LATERAL (50) (50)	ALL FOURS (50) (50)	P VALUE
Abnormal	19(38%)	11(22%)	17(34%)	0.2
Normal	31(62%)	39(78%)	33(66%)	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant.

FIGURE 23: BAR CHART SHOWING THE FHR PATTERN IN THREE POSITIONS IN PRIMIGRAVIDA



ABNORMAL FHR IN THREE POSITIONS IN PRIMIGRAVIDA

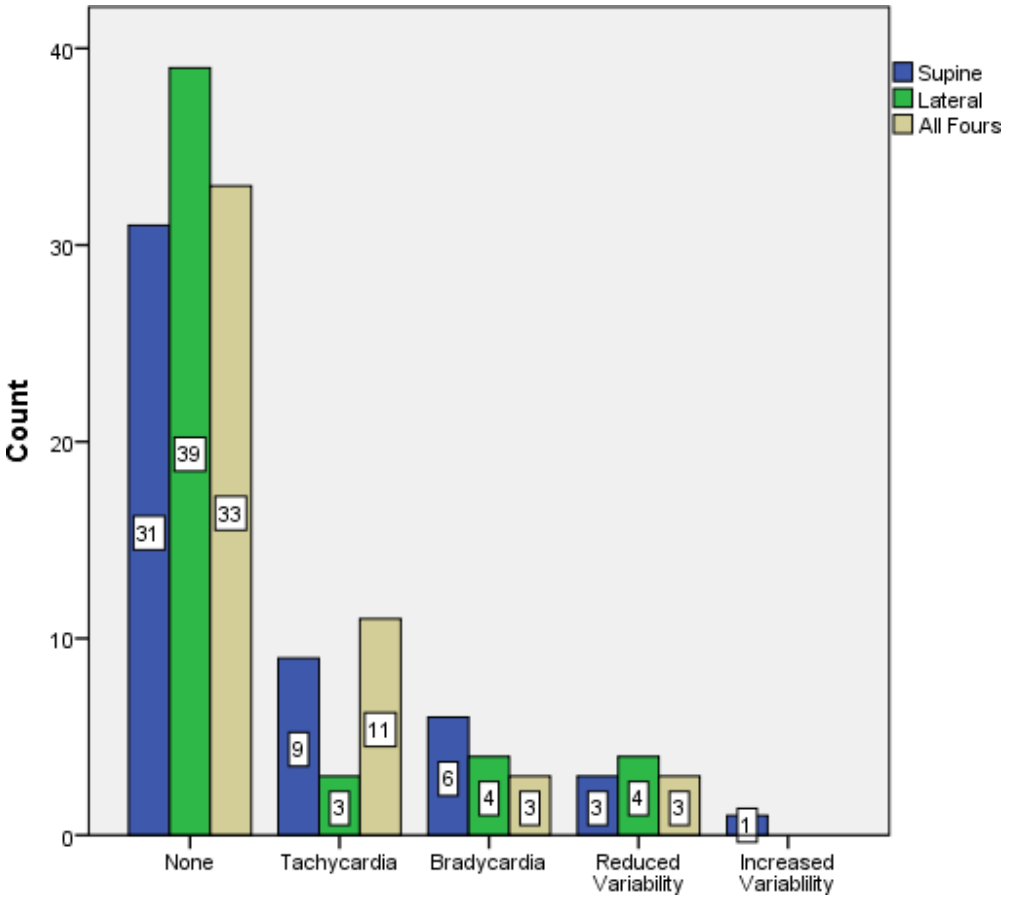
Table 16 and figure 23 explains various abnormal FHR patterns in different positions. Out of 50 women 9 had tachycardia,6 out of 50 had bradycardia,3 out of 50 had reduced variability and 1 out of 50 had increased variability in supine position. Only 3 out of 50 had tachycardia 4 out of 50 had bradycardia,4 out of 50 had reduced variability in lateral position. Out of 50 women 11 had tachycardia, 3 out of 50 had bradycardia and 3 out of 50 had reduced variability in all fours position. P value is calculated using Fisher exact test is used. P-Value 0.35, which is statistically insignificant.

TABLE 16: THE ABNORMAL FHR PATTERN IN THREE POSITIONS IN PRIMIGRAVIDA

FHR	SUPINE (50)	LATERAL (50)	ALL FOURS (50)	P VALUE
None	31(62%)	39(78%)	33(66%)	0.35
Tachycardia	9(18%)	3(6%)	11(22%)	
Bradycardia	6(12%)	4(8%)	3(6%)	
Reduced variability	3(6%)	4(8%)	3(6%)	
Increased variability	1(2%)	0	0	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant

FIGURE 24: BAR CHART SHOWING THE ABNORMAL FHR PATTERN IN THREE POSITIONS IN PRIMIGRAVIDA



TRANSIENT TACHYOPNEA OF NEW BORN IN THREE POSITIONS IN PRIMIGRAVIDA

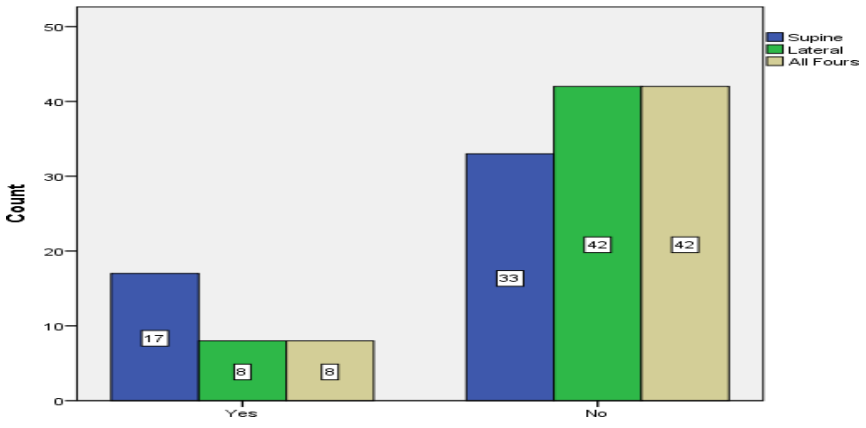
Table 17 and figure 24 explains if the baby had birth asphyxia. A total of 17 out of 50 new borns, 8 out of 50 new borns and 8 out of 50 new borns had birth asphyxia in supine, lateral and All fours position respectively. P value was calculated using Chi square test which is 0.04 which is significant denoting that babies delivered in supine position had significant birth asphyxia compared to lateral and All fours position.

TABLE 17: TRANSIENT TACHYOPNEA IN THREE POSITIONS IN PRIMIGRAVIDA

TRANSIENT TACHYOPNEA	SUPINE (50)	LATERAL (50)	ALL FOURS (50)	P VALUE
Yes	17(34%)	8(16%)	8(16%)	0.04
No	33(66%)	42(84%)	42(84%)	
STATISTICALLY SIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant.

FIGURE 25: BAR CHART SHOWING THE TRASIENT TACHYOPNEA IN THREE POSITIONS



APGAR SCORE AT 1 MINUTE IN PRIMIGRAVIDA

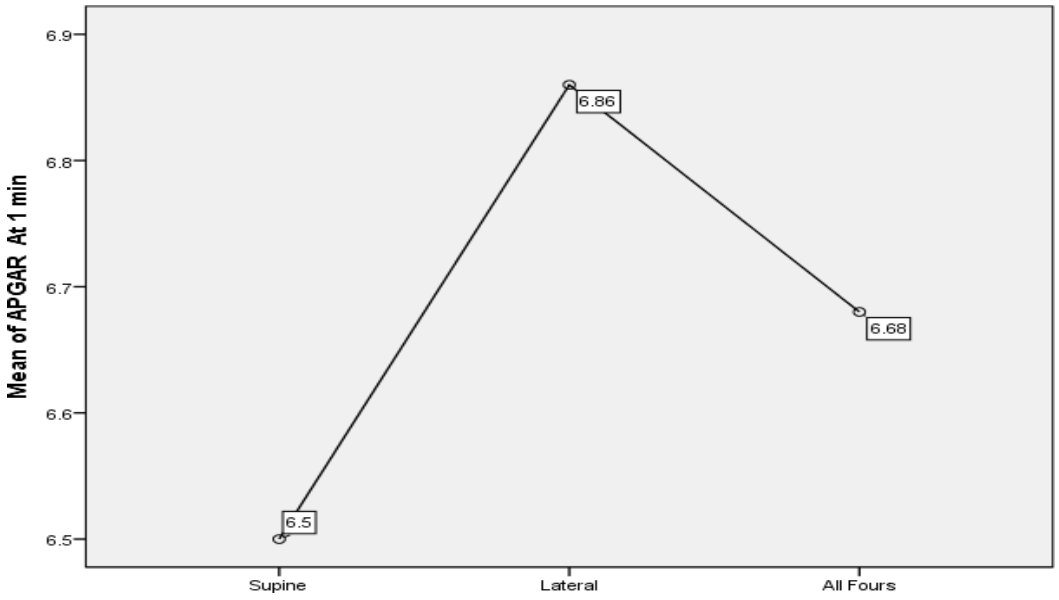
Table 18 and figure 25 compares the APGAR at 1min in various positions. The mean APGAR at 1 min is 6.50,6.86,6.68 in supine, lateral and all fours position respectively. P-value is calculated using Anova test which is 0.09, insignificant.

TABLE 18: MEAN APGAR SCORE AT 1 MINUTE IN THREE POSITIONS IN PRIMIGRAVIDA

APGAR AT 1 MIN	MEAN	STD.DEVIATION	P VALUE
Supine	6.50	1.035	0.09
Lateral	6.86	0.606	
All fours	6.68	0.768	
STATISTICALLY INSIGNIFICANT			

* Note: If the P value is equal to or lesser than 0.05 then the result considered to Statistically significant

FIGURE 26: LINE GRAPH SHOWS MEAN APGAR SCORE AT 1 MINUTE IN THREE POSITIONS



APGAR AT 5 MINUTES IN THREE POSITIONS IN PRIMIGRAVIDA

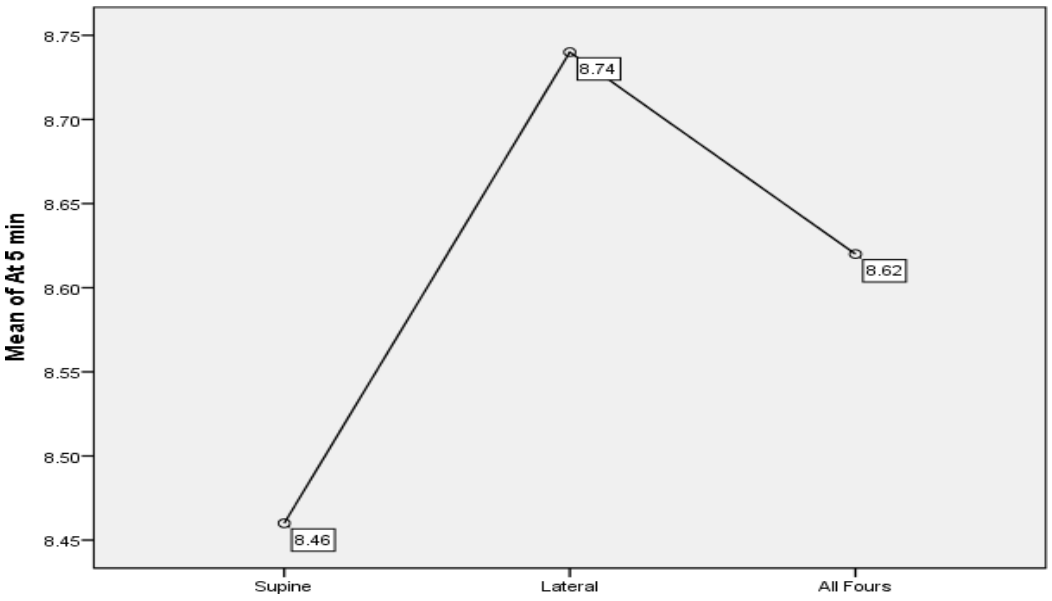
Table 19 and figure 26 explains the mean duration of APGAR score at 5 mins is 8.46 mins, 8.74 mins and 8.62 mins in supine, lateral and All fours respectively. P value is calculated using Anova test which is 0.24 statistically insignificant.

TABLE 19: SHOWS MEAN APGAR SCORE AT 5 MINUTES IN THREE POSITIONS IN PRIMIGRAVIDA

APGAR AT 5MIN	MEAN	STD.DEVIATION	P VALUE
Supine	8.46	0.973	0.24
Lateral	8.74	0.633	
All fours	8.62	0.855	
STATISTICALLY INSIGNIFCANT			

* Note: If the P value is equal to or lesser than 0.05 then the result considered to Statistically significant.

FIGURE 27: LINE GRAPH SHOWS MEAN APGAR SCORE AT 5 MINUTES IN THREE POSITIONS IN PRIMIGRAVIDA



RESULTS OF MULTIGRAVIDA

AGE DISTRIBUTION AMONG MULTIGRAVIDA WOMEN

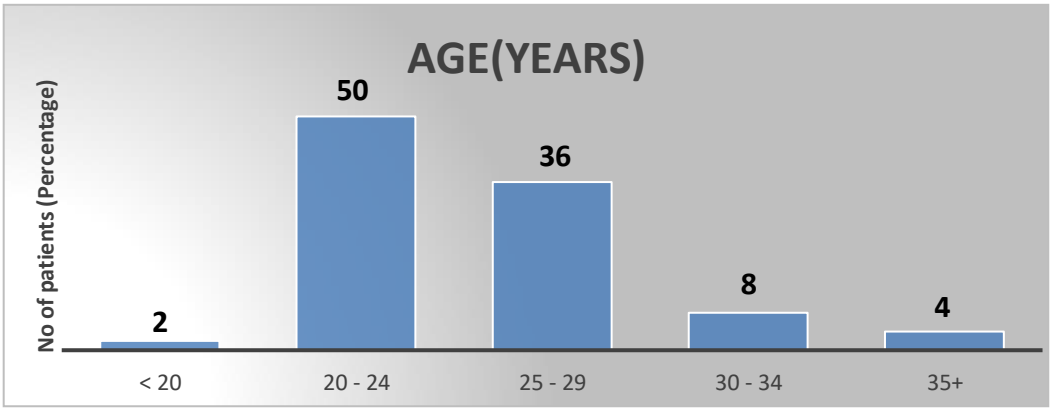
Table 20 and figure 27 explains the mean age group of multigravidae women included into the trial 50% of the patients were 20 to 24 years P value was calculated by Anova square test 0.19 statistically insignificant.

TABLE 20: AGE GROUP OF MULTIGRAVIDA WOMEN

Age (Years)	No. of Patients	Percentage
< 20	3	2
20 – 24	75	50
25 – 29	54	36
30 -34	12	8
>35	6	4
TOTAL	150	100.0
P value 0.19 STATISTICALLY INSIGNIFICANT		

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant

FIGURE 28: BAR GRAPH SHOWING AGE DISTRIBUTION AMONG MULTIGRAVIDA



THE MEAN GESTATIONAL AGE OF MULTIGRAVIDA WOMEN

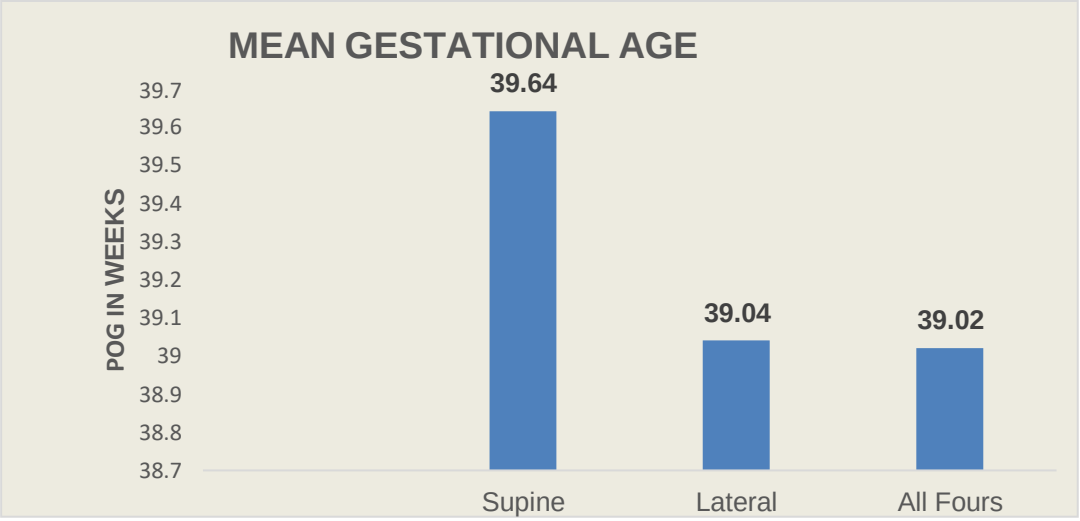
Table 21 and figure 28 explains the mean gestational age of multigravida women participated in the trial in supine position was 39.64 weeks, in lateral position was 39.04 weeks and, in all fours, position was 39.02 weeks. The mean gestational age of primigravidae women participated in the trial was 39.23 weeks.

TABLE 21: SHOWS MEAN GESTATIONAL AGE OF WOMEN IN THREE POSITIONS IN MULTIGRAVIDA WOMEN

Position	N	Mean (POG)
Supine	50	39.64
Lateral	50	39.04
All Fours	50	39.02
Total	150	39.23
P value 0.06 STATISTICALLY INSIGNIFICANT		

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant

FIGURE 29: BAR GRAPH SHOWING GESTATIONAL AGE AMONG MULTIGRAVIDA



DURATION OF SECOND STAGE OF LABOUR IN THREE POSITIONS IN MULTIGRAVIDA WOMEN

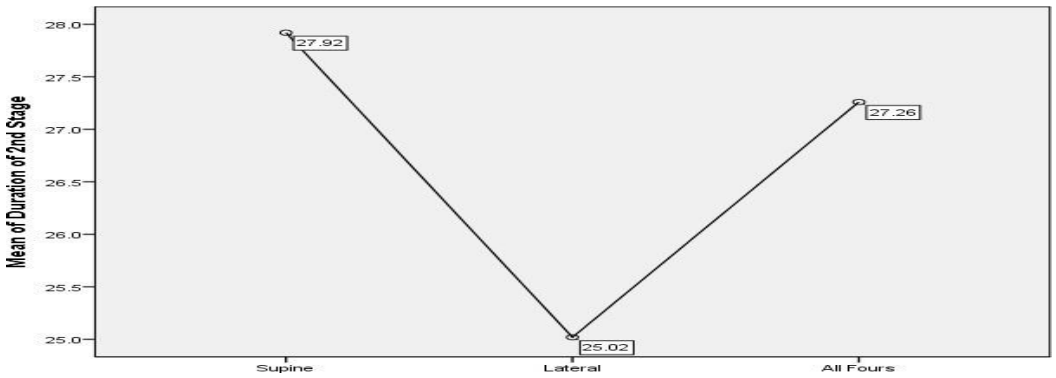
The table 22 and figure 29 explains the mean duration of 2nd stage of labor in supine, lateral and All fours is 27.92 minutes, 25.02 minutes, 27.26 minutes respectively and Anova test was used to compare the mean duration of 2nd stage of labor and P value is <0.01 which is statistically significant. It suggests that mean duration of 2nd stage of labor is reduced in lateral position.

TABLE 22: MEAN DURATION OF SECOND STAGE OF LABOUR IN THREE POSITIONS IN MULTIGRAVIDA WOMEN

DURATION OF SECOND STAGE OF LABOR (MINUTES)	MEAN	STD. DEVIATION	P VALUE
Supine	27.92	3.752	<0.01
Lateral	25.02	2.575	
All fours	27.26	3.212	
STATISTICALLY SIGNIFICANT			

* Note: If the P value is equal to or lesser than 0.05 then the result considered Statistically significant.

FIGURE 30: LINE GRAPH SHOWING DURATION OF SECOND STAGE OF LABOUR IN THREE POSITIONS IN MULTIGRAVIDA WOMEN



INTERVENTION NEEDED IN THREE POSITIONS DURING SECOND STAGE AMONG MULTIGRAVIDA

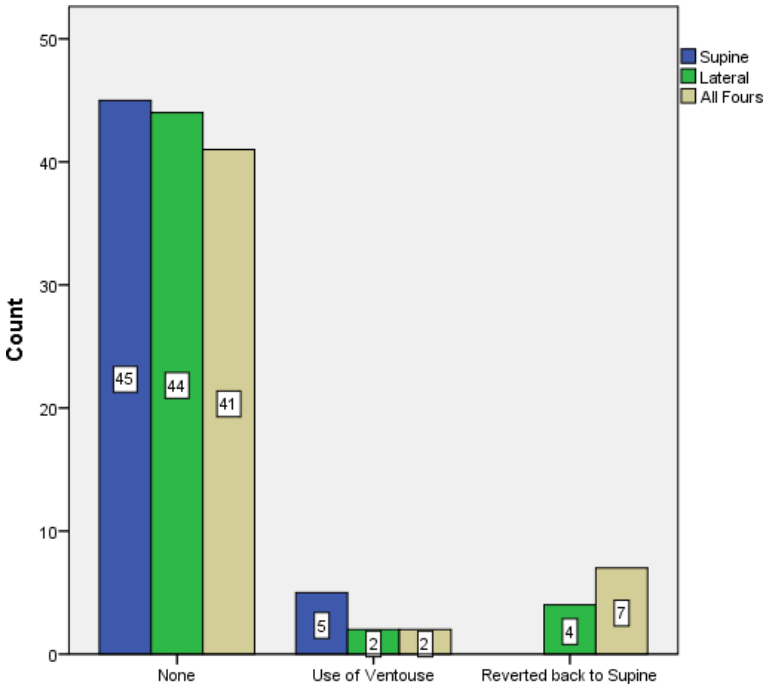
The table 23 and figure 30 explains the intervention required. In 45 out of 50 laboring women in supine position none of the intervention was needed. Only 5 women needed the use of Ventouse and none required forceps and none reverted back to supine position and in none LSCS was done. In 44 out of 50 women in lateral position required no intervention. Only 2 women needed the use of ventouse. women reverted back to supine position were 4 and needed LSCS. In 41 out of 50 laboring primigravida women none of the intervention was needed. women reverted back to supine position were 7. Only 2 women needed application of ventouse and none needed LSCS and application of forceps. P value was calculated using Fisher exact test and P-Value is 0.06 which is statistically insignificant.

TABLE 23: INTERVENTION NEEDED IN THREE POSITIONS DURING SECOND STAGE IN THREE POSITIONS DURING SECOND STAGE AMONG MULTIGRAVIDA

INTERVENTION	SUPINE (50)	LATERAL (50)	ALL FOURS (50)	P VALUE
None	45(90%)	44(88%)	41(82%)	0.06
Use of Ventouse	5(10%)	2(4%)	2(4%)	
Use of Forceps	0	0	0	
Reverted back to supine	0	4(8%)	7(14%)	
LSCS	0	0	0	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant.

FIGURE 31 : BAR CHART REPRESENTING THE INTERVENTION NEEDED IN DIFFERENT POSITIONS DURING SECOND STAGE OF LABOUR IN THREE POSITIONS DURING SECOND STAGE AMONG MULTIGRAVIDA



NEED FOR EPISIOTOMY IN THREE POSITIONS IN MULTIGRAVIDA

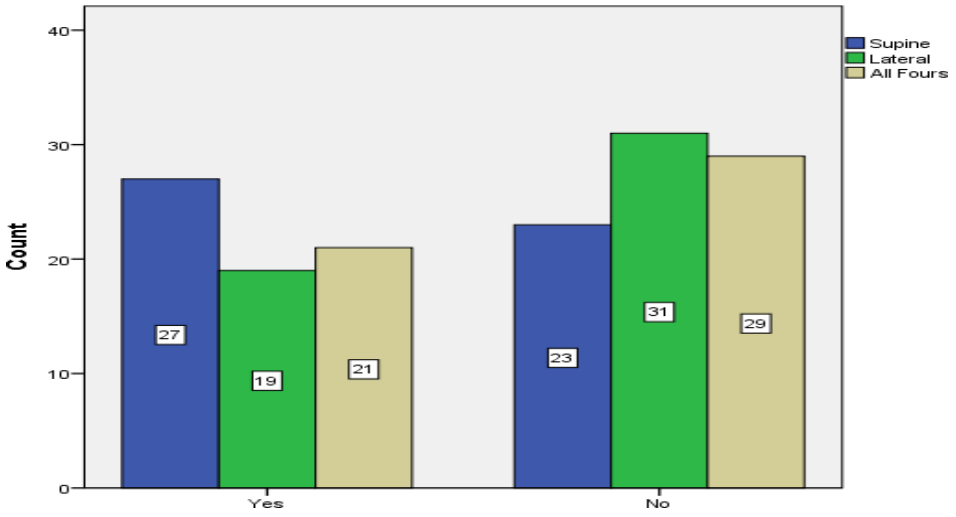
The following table 24 and figure 31 describes the need for episiotomy in three positions 27 out of 50 women needed episiotomy in supine position, 19 out of 50 women needed episiotomy in lateral position and 21 out of 50 needed episiotomies in All fours position. P value is calculated using Fisher exact test is used. P-value = 0.24, statistically insignificant.

TABLE 24: NEED FOR EPISIOTOMY IN THREE POSITIONS IN MULTIGRAVIDA

EPISIOTOMY	SUPUNE (50)	LATERAL (50)	ALLFOURS (50)	P VALUE
Yes	27(54%)	19(38%	21(42%)	0.24
No	23(46%%	31(62%)	29(58%)	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant.

FIGURE 32: BAR CHART SHOWING THE NEED FOR EPISIOTOMY IN THREE POSITIONS IN MULTIGRAVIDA



PERINEAL TEAR IN THREE POSITIONS IN MULTIGRAVIDA

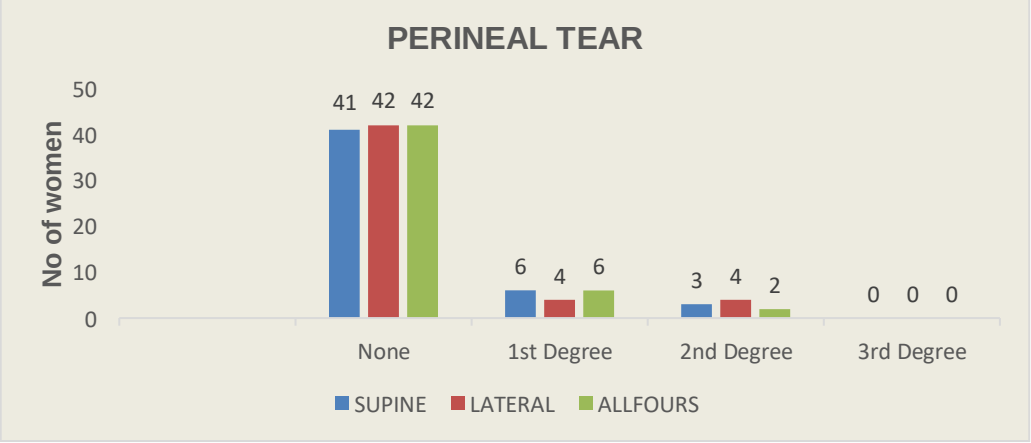
The following table 25 and figure 32 explains the degree of perineal tear in each position 6 out of 50 women had 1st degree perineal tear in supine position. Out of 50 women 4 had 1st degree perineal tear and 4 out of 50 had 3rd degree perineal tear in lateral position and 6 out of 50 had 1st degree perineal tear and 2 out of 50 had 2nd degree perineal tear in All fours position. P value is calculated using Fisher exact test is used. P-value = <0.88, insignificant.

TABLE 25: DEGREE OF PERINEAL TEAR IN THREE POSITIONS IN MULTIGRAVIDA

PERINEAL TEAR	SUPINE (50)	LATERAL (50)	ALLFOURS (50)	P VALUE
None	41(82%)	42(84%)	42(84%)	0.88
1st Degree	6(12%)	4(8%)	6(12%)	
2nd Degree	3(6%)	4(8%)	2(4%)	
3rd Degree	0	0	0	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant

FIGURE 33: BAR CHART SHOWING THE DEGREE OF PERINEAL TEAR IN THREE POSITIONS IN MULTIGRAVIDA



NEED FOR ADDITIONAL OXYTOCIN IN MULTIGRAVIDA

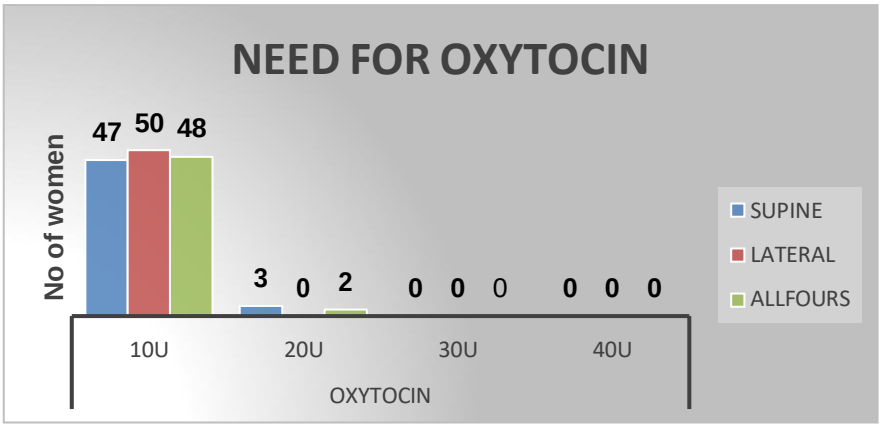
The above table describes the need for additional dosage oxytocin in various positions after the delivery of anterior shoulder **three** women out of 50 required 20 units of oxytocin in supine position **none** of the women delivered in lateral position required additional dose of oxytocin in lateral position and **two** out of 50 women required 20 units of oxytocin in all fours position. P value is calculated using Fisher exact test which is 0.53 and statistically insignificant.

TABLE 26: NEED FOR ADDITIONAL OXYTOCIN AND DOSAGE IN THREE POSITIONS IN MULTIGRAVIDA

UTEROTONIC	DOSAGE	SUPINE (50)	LATERAL (50)	ALLFOURS (50)	P VALUE
Oxytocin	10U	47	50	48	0.53
	20U	3	0	2	
	30U	0	0	0	
	40U	0	0	0	
STATISTICALLY INSIGNIFICANT					

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant.

FIGURE 34: BAR CHART SHOWING THE NEED FOR INJECTION OXYTOCIN AND DOSAGE IN THREE POSITIONS IN MULTIGRAVIDA



NEED FOR METHERGIN ADDITIONAL TO OXYTOCIN IN MULTIGRAVIDA

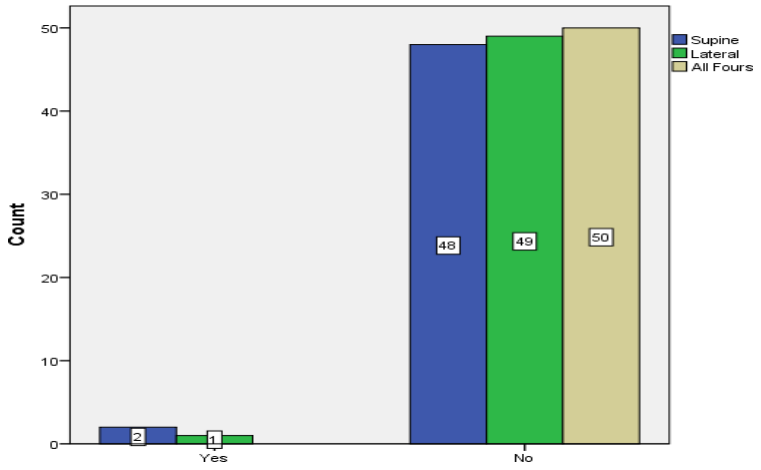
The following table 27 and figure 34 describes the need for methergine in different positions, **two** out of 50 women needed injection methergine and **one** out of 50 needed Injection Methergine in lateral position and **none** of the women needed Injection Methergine in All fours position. P value is calculated using Fisher exact test which is 0.36 which is statistically insignificant.

TABLE 27: NEED FOR METHERGIN IN THREE POSITIONS ADDITIONAL TO OXYTOCIN IN MULTIGRAVIDA

METHERGINE	SUPINE (50)	LATERAL (50)	ALL FOURS (50)	P VALUE
Yes	2	1	0	0.36
No	48	49	50	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant.

FIGURE 35: BAR CHART SHOWING THE NEED FOR METHERGIN IN THREE POSITIONS ADDITIONAL TO OXYTOCIN IN MULTIGRAVIDA



NEED FOR PGF2 α ADDITIONAL TO OXYTOCIN IN MULTIGRAVIDA

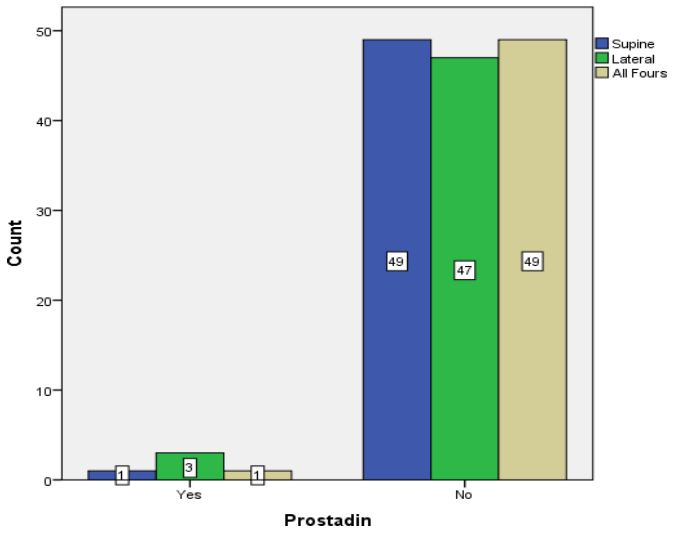
The above table is used to describe the need for Injection PGF2 α in various positions **one** out of 50 women needed Injection PGF2 α in supine position. **Three** out of 50 women required Injection PGF2 α in lateral position and **one** out of 50 required Injection PGF2 α in All fours position. P value is calculated using Fisher exact test which is 0.43 which is statistically insignificant.

TABLE 28: NEED FOR INJECTION PGF2 α ADDITIONAL TO OXYTOCIN IN MULTIGRAVIDA IN THREE POSITIONS

PGF2 α	SUPINE (50)	LATERAL (50)	ALL FOURS (50)	P VALUE
Yes	1	3	1	0.43
No	49	47	49	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant.

FIGURE 36: BAR CHART SHOWING THE NEED FOR PGF2 α ADDITIONAL TO OXYTOCIN IN MULTIGRAVIDA IN THREE POSITIONS



NEED FOR MISOPROSTOL IN ADDITIONAL TO OXYTOCIN IN MULTIGRAVIDA

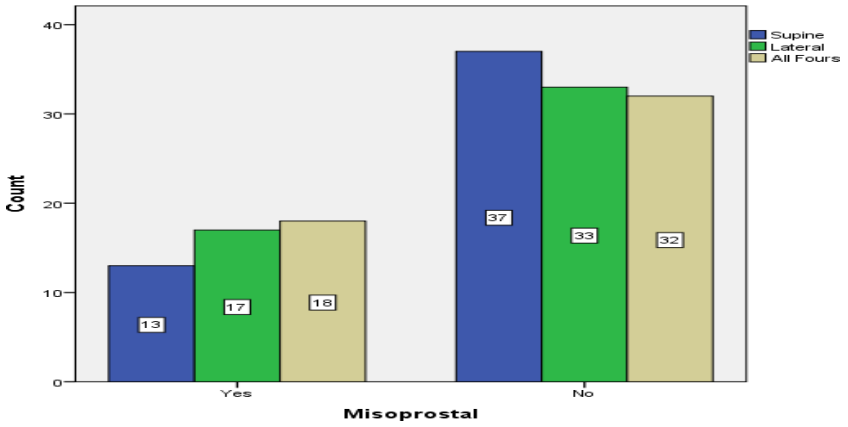
The table 29 and figure 36 interprets the need for Tablet Misoprostol in supine, lateral and All fours position. A total of 13 out of 50 needed Tablet Misoprostol for prevention of PPH and 17 out of 50 women required Tablet Misoprostol and 18 out of 50 in All fours position needed Tablet Misoprostol in supine, lateral and All fours position respectively. P value is calculated using Chi-Square test the value is 0.52 which is statistically insignificant.

TABLE 29: NEED FOR TABLET MISOPROSTOL IN THREE POSITIONS IN ADDITIONAL TO OXYTOCIN IN MULTIGRAVIDA

MISOPROSTOL (600mcg)	SUPINE	LATERAL	ALL FOURS	P VALUE
Yes	13	17	18	0.52
No	37	33	32	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered to Statistically significant.

FIGURE 37: BAR CHART SHOWING THE NEED FOR TABLET MISOPROSTOL IN THREE POSITIONS IN ADDITIONAL TO OXYTOCIN IN MULTIGRAVIDA



INTENSITY OF PAIN IN THREE POSITIONS IN MULTIGRAVIDA

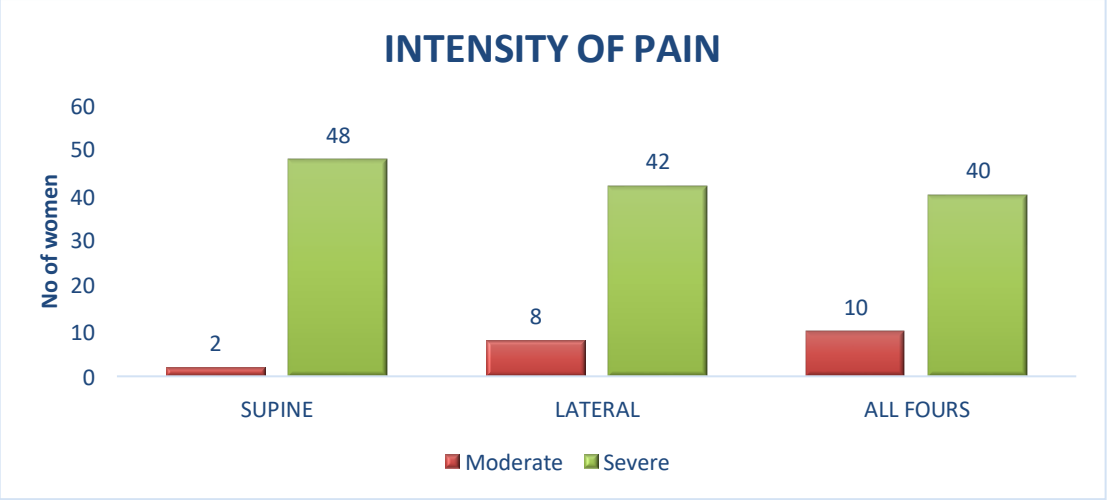
The following table 30 and figure 37 explains the intensity of pain in supine, lateral and All fours position. When compared 48 out of 50 women complained of severe pain and 42 out of 50 in lateral position and 40 out of 50 in All fours position. When compared to three positions all fours position had lesser intensity of pain. P value is calculated by Fisher exact and P-Value = <0.01, highly Significant.

TABLE 30: INTENSITY OF PAIN IN THREE POSITIONS IN MULTIGRAVIDA

INTENSITY OF PAIN	SUPINE (50)	LATERAL (50)	ALL FOURS (50)	P VALUE
Moderate	2(4%)	8(16%)	10(20%)	<0.01
Severe	48(96%)	42(84%)	40(80%	
STATISTICALLY SIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant.

FIGURE 38: BAR CHART SHOWING THE INTENSITY OF PAIN IN THREE POSITIONS IN MULTIGRAVIDA



PREFERENCE OF POSITION IN SUBSEQUENT DELIVERY IN MULTIGRAVIDA

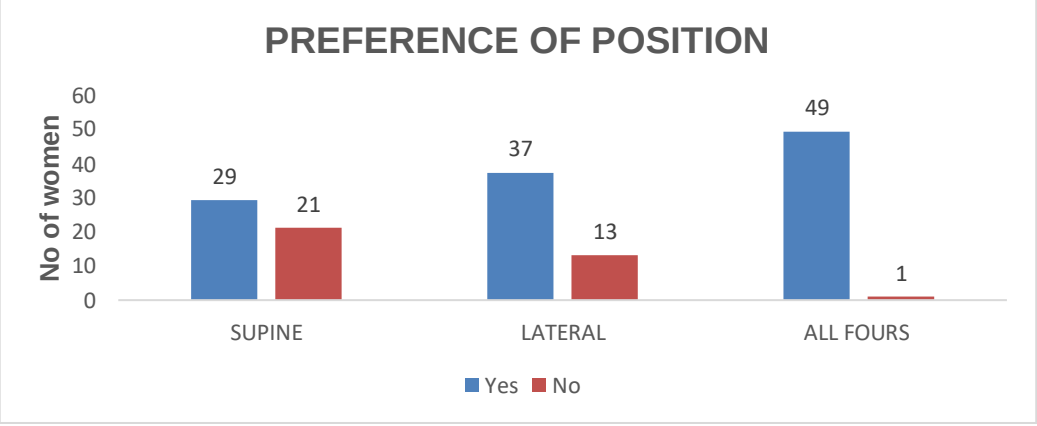
Table 31 & figure 39 explains the preference of same position for next delivery 29 out of 50 patients who delivered in supine position, A total of 37 out of 50 women in lateral position and 49 out of 50 had answered that they would prefer the same position for next delivery respectively. P value is calculated by using Fisher exact test is used. P-Value = <0.01, which is Highly Significant. It suggests that women who delivered in all fours position has preference to deliver in same position in the next delivery.

TABLE 31: PREFERENCE OF SAME POSITION IN SUBSEQUENT DELIVERY IN MULTIGRAVIDA

PREFERENCE OF POSITION	SUPINE	LATERAL	ALL FOURS	P VALUE
Yes	29(58%)	37(74%)	49(98%)	<0.01
No	21(42%)	13(26%)	1(2%)	
STATISTICALLY SIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant.

FIGURE 39: A BAR CHART SHOWING THE PREFERENCE OF SAME POSITION IN SUBSEQUENT DELIVERY IN MULTIGRAVIDA



OVERALL FETAL OUTCOME IN THREE POSITIONS IN MULTIGRAVIDA

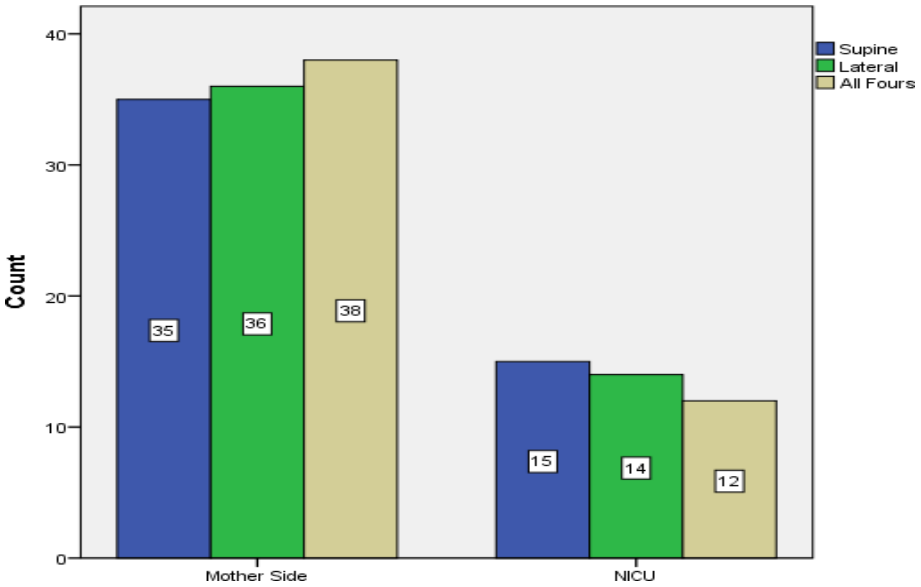
Table 32 & figure 40 is used to explain the fetal outcome whether given mothers' side or admitted to NICU. A total 15 out of 50 neonates,14 out of 50 neonates and 12 out of 50 neonates were admitted to NICU in supine, lateral and All fours position respectively. P value is calculated by using Chi-Square test which is 0.79 and is statistically Insignificant.

TABLE 32: SHOWS THE OVERALL FETAL OUTCOME IN THREE POSITIONS IN MULTIGRAVIDA

FETAL OUTCOME	SUPINE	LATERAL	ALL FOURS	P VALUE
Mothers side	35(70%)	36(72%)	38(76%)	0.79
NICU	15(30%)	14(28%)	12(24%)	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered Statistically significant.

FIGURE 40: A BAR CHART SHOWING THE OVERALL FETAL OUTCOME IN THREE POSITIONS IN MULTIGRAVIDA



FHR PATTERNS IN THREE POSITIONS IN MULTIGRAVIDA

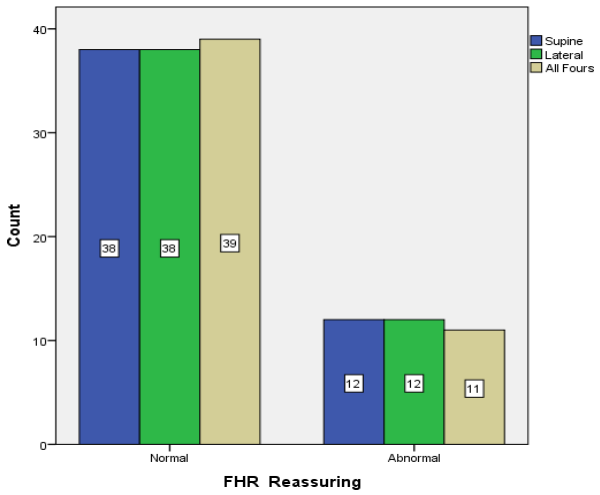
The following table 33 and figure 41 explains the FHR pattern if it is normal or abnormal pattern in different positions. A total 12 out of 50 in supine position had abnormal FHR pattern and 38 out of 50 had normal FHR pattern in supine position. 12 out of 50 had abnormal FHR pattern and 38 out of 50 had normal FHR pattern in lateral position. A total of 11 out of 50 had abnormal FHR patterns and 39 out of 50 had normal FHR pattern. P value is calculated using Chi-Square test which is 0.96 and statistically insignificant.

TABLE 33: THE FHR PATTERN IN THREE POSITIONS MULTIGRAVIDA

FHR	SUPINE	LATERAL	ALL FOURS	P VALUE
Abnormal	12(24%)	12(24%)	11(22%)	0.96
Normal	38(76%)	38(76%)	39(78%)	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered Statistically significant.

FIGURE 41: BAR CHART SHOWING THE FHR PATTERN IN THREE POSITIONS IN MULTIGRAVIDA



ABNORMAL FHR PATTERNS IN THREE POSITIONS IN MULTIGRAVIDA

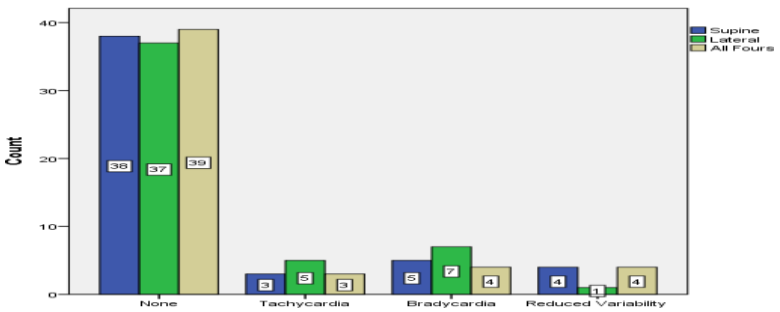
The table 34 and figure 42 explains various abnormal FHR patterns in different positions. Out of 50 women 3 had tachycardia,5 out of 50 had bradycardia,4 out of 50 had reduced variability in supine position. Only 5 out of 50 had tachycardia, 1 out of 50 had bradycardia,4 out of 50 had reduced variability in lateral position. Out of 50 women 3 had tachycardia, 4 out of 50 had bradycardia and 4 out of 50 had reduced variability in all fours position. P value is calculated using Fisher exact test is used. P-Value 0.72, which is statistically insignificant.

TABLE 34: THE ABNORMAL FHR PATTERN IN THREE POSITIONS IN MULTIGRAVIDA

FHR	SUPINE (50)	LATERAL (50)	ALL FOURS (50)	P VALUE
None	38(76%)	37(74%)	39(78%)	0.72
Tachycardia	3(6%)	5(10%)	3(6%)	
Bradycardia	5(10%)	1(2%)	4(8%)	
Reduced variability	4(8%)	4(8%)	4(8%)	
Increased variability	0	0	0	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant

FIGURE 42: BAR CHART SHOWING THE ABNORMAL FHR PATTERN IN THREE POSITIONS IN MULTIGRAVIDA



TRANSIENT TACHYOPNEA OF NEW BORN

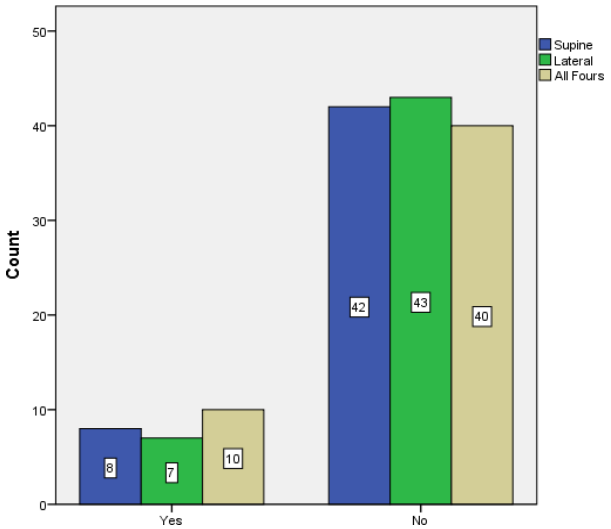
The table 35 & figure 43 explains the transient tachypnoea. A total of 8 out of 50 new borns, 7 out of 50 new borns and 10 out of 50 new borns had birth asphyxia in supine, lateral and All fours position respectively. P value was calculated using Chi square test which is 0.71 which is insignificant.

TABLE 35: THE TRANSIENT TACHOPNEA IN THREE POSITIONS IN MULTIGRAVIDA

TRANSIENT TACHYOPNEA	SUPINE	LATERAL	ALL FOURS	P VALUE
Yes	8(16%)	7(14%)	10(20%)	0.71
No	42(84%	43(86%)	40(80%)	
STATISTICALLY INSIGNIFICANT				

* Note: If the P value is equal to or lesser than 0.05 then the result considered statistically significant.

FIGURE 43: BAR CHART SHOWING THE TRANSIENT TACHYOPNEA IN THREE POSITIONS IN MULTIGRAVIDA



APGAR SCORE AT 1 MINUTE IN THREE POSITIONS IN MULTIGRAVIDA

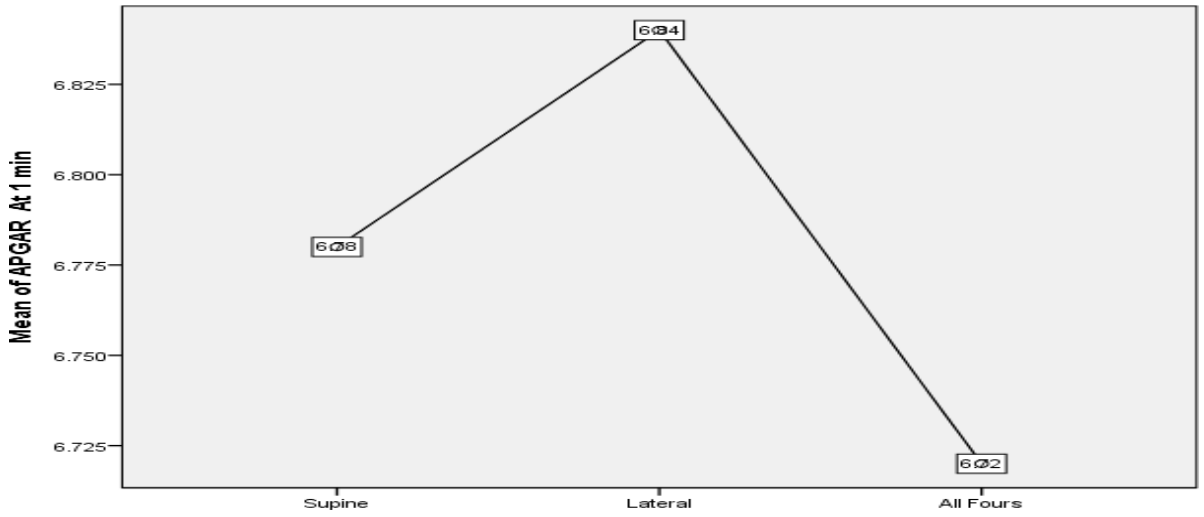
The table 36 & figure 44 compares the APGAR at 1min in various positions. The mean APGAR at 1 min is 6.78,6.84,6.72 in supine, lateral and all fours position respectively. P-value is calculated using Anova test which is 0.54, insignificant.

TABLE 36: SHOWS MEAN APGAR SCORE AT 1 MINUTE IN THREE POSITIONS IN MULTIGRAVIDA

APGAR AT 1 MIN	MEAN	STD.DEVIATION	P VALUE
Supine	6.78	0.465	0.54
Lateral	6.84	0.422	
All fours	6.72	0.701	
STATISTICALLY INSIGNIFICANT			

* Note: If the P value is equal to or lesser than 0.05 then the result considered Statistically significant.

FIGURE 44: LINE GRAPH SHOWS MEAN APGAR SCORE AT 1 MINUTE IN THREE POSITIONS IN MULTIGRAVIDA



APGAR AT 5 MINUTES IN THREE POSITIONS IN MULTIGRAVIDA

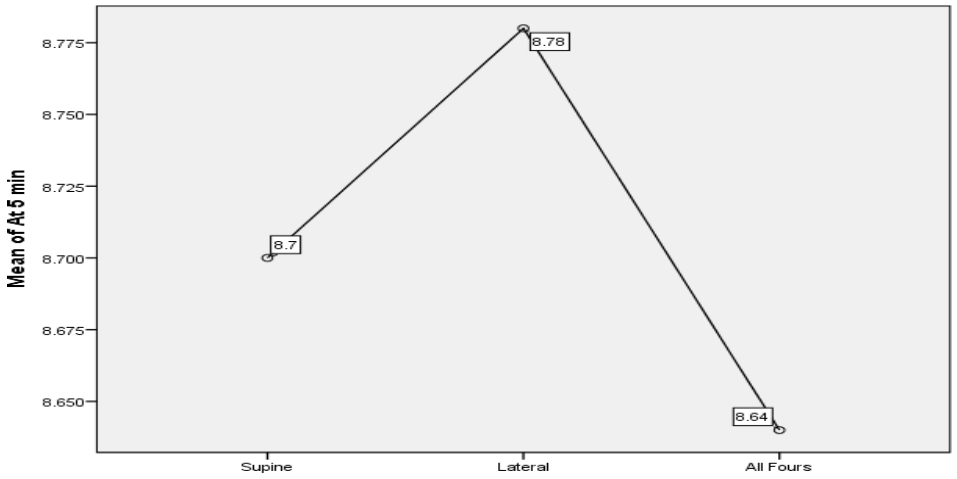
The table 37 & figure 45 compares the APGAR at 5 min in various positions. The mean APGAR at 5 min is 8.70,8.78,8.64 in supine, lateral and all fours position respectively. P-value is calculated using Anova test which is 0.54, insignificant.

TABLE 37: SHOWS MEAN APGAR SCORE AT 5 MINUTES IN THREE POSITIONS IN MULTIGRAVIDA

APGAR AT 5 MIN	MEAN	STD.DEVIATION	P VALUE
Supine	8.70	0.678	0.54
Lateral	8.78	0.616	
All fours	8.64	0.827	
STATISTICALLY INSIGNIFICANT			

* Note: If the P value is equal to or lesser than 0.05 then the result considered Statistically significant.

FIGURE 45: LINE GRAPH SHOWS MEAN APGAR SCORE AT 5 MINUTES IN THREE POSITIONS IN MULTIGRAVIDA



DISCUSSION

DISCUSSION

Women delivering in alternative birthing positions have varied maternal and fetal outcomes. Our study we compared various maternal and fetal outcomes.

Our study the mean duration of 2nd stage of labor in primigravidae in supine position was 37.46 minutes in lateral position was 32.08 minutes and, in all fours, position was 34.18 minutes. The difference of the duration of 2nd stage among the three positions **(**P value <0.01**)** were statistically significant. In primigravida women the mean duration of 2nd stage of labour is less in lateral position in comparison with other two positions. When compared the mean duration of 2nd stage of labor in multigravidae women supine, lateral and all fours position it was 29. 92 minutes, 25.02 minutes, 27.26 minutes respectively. The difference of the duration of second stage among the three positions (P value < 0.001**)** was statistically significant. The mean duration of 2nd stage of labour was less in lateral position in multigravida women in comparison with other two positions. Marta Berta et al conducted similar study with objective to determine the effect of maternal flexible sacrum birthing positions on duration of 2nd stage of labor in comparison with supine position and concluded that the mean duration of 2nd stage of labour was reduced in cases of a flexible sacrum birthing position which was 34.8 minutes (P value <0.001) similar to our study[61]. This can be substantiated in lateral position the mobility of the sacral bone in maintained and the curvature of the pelvis increases by 16 degrees so the duration of 2nd stage of labor is reduced in lateral position.

In our study in primigravida the interventions in 2nd stage of labour like vacuum assisted delivery, application of forceps, reverted to different position and need for caesarean were compared with in supine, lateral and all fours position the (P value 0.32) were statistically insignificant. Peter Brocklehurst et., al conducted a similar study in which they have concluded that no evidence of differences was found for most of the outcomes including instrumental vaginal delivery (adjusted risk ratio 1.08, 99% confidence interval 0.99 to 1.18) [50] Susan J Garpiel and et al calculated the rate caesarean section in 2nd stage of labour in various maternal birthing position which was consistent with our findings. The above-mentioned interventions in 2nd stage of labour were calculated in multigravida women in supine, lateral and all fours position respectively the (P value 0.06) were statistically insignificant. In multigravida the need for interventions in 2nd stage of labour when compared among three positions (P value 0.06) statistically insignificant Elke Mattern et al conducted a study in Germany a randomized control trial in comparing the delivery in upright and supine position concluding that there are fewer interventions in upright position (P Value 0.07) but aren't statistically significant[62].

The need for episiotomy was calculated in primigravida women in supine, lateral and all fours position groups which was 96%, 86%, and 94% **respectively (**P value <0.001**) statistically significant** concluding that need for episiotomy is decreased in lateral position.

Jesmin Pervin et al studied associations between improved care during the 2nd stage of labour and maternal and neonatal health outcomes in a rural hospital in Bangladesh in which they concluded that frequency of need for episiotomy in lateral position was 29% and in supine position was 43% ($P < 0.001$) which is consistent with our study [63]**.**Hongyu Zang et al in their study described the need for episiotomy was decreased in lateral and all fours position with P value of <0.001 which is the same conclusion as our study[64]. In multigravida women when compared the need for episiotomy in supine, lateral and all fours position (P value 0.24) which was statistically insignificant. J Paternotte et al studied that in multigravida women the need for is decreased in lateral position (P value=0.0001)[65] which was not consistent with our study**.**

In our study the degree of perineal tear in supine, lateral and all fours position was calculated 18% of women had 1st degree perineal tear and 6% of women had 2nd degree perineal tear in supine position and 2% had 1st degree perineal tear and 4 % had 3rd degree perineal tear in lateral position and 4% had 1st degree perineal tear in all fours position (P value <0.01) statistically significant women who delivered in supine position had increased perineal tear.

In multigravida women when degree of perineal tear was compared in supine, lateral, and all fours position the 12% had 1st degree and 6% had second degree perineal tear in supine position. In lateral position 4% had 1st degree perineal tear and 4% had 2nd degree perineal tear. In all fours position 12% had 1st degree and 4% had 2nd degree perineal tear (P value 0.88) which was statistically insignificant. In a study conducted by jorunn wik Tunestveit et al [66]in Norway all fours position was associated with the lowest risk of OASIS (Adjusted *odds ratio*: 0.15; 95% confidence interval: 0.03 to 0.70 P value <0.001) was consistent with primigravida women but was not similar with multigravida women. Inge Meyvis et al a study on maternal outcomes and various variables perinatal outcomes in 557 births in both primigravida and multigravida women in their study they concluded that in which the need for episiotomy in lithotomy position was 32.8 % position and lateral position was 6.7% (p value < 0.001) they also concluded that increasing parity associated with decreased need for episiotomy[67].

The use of additional uterotonics like injection oxytocin in primigravida in supine, lateral and all fours position when compared (P value 0.53) which was statistically insignificant, the need for injection PGF2 α in supine, lateral and all fours in primigravida women when compared (P value 0.6) which was statistically insignificant. The need for injection methergin in three positions in primigravida women when compared (P value 0.77) which was statistically insignificant. The need for tablet misoprostol 600mcg when compared in supine, lateral and all fours position in primigravida women (P value 0.36) statistically insignificant.so it concludes that the use of uterotonics in different positions during 2nd stage of labour was not significant. Amelia Miquelleti et al studied the need for various uterotonics in upright and supine position in randomized control trial in nulliparous women also had similar conclusion

in their study with confidence interval of 1.02 (0.68–1.54) which was statistically insignificant[68]. The need for injection oxytocin in multigravida women in supine, lateral and all fours position (P value 0.53) which was statistically insignificant. The need for injection PGF2 α in supine, lateral and all fours position in multigravida (P value 0.43) which was statistically insignificant. The need for injection methergin in three positions in multigravida women when compared the (P value 0.36) which was statistically insignificant. The need for tablet misoprostol 600mcg when compared in supine, lateral and all fours position in multigravida women when compared (P value 0.52) statistically insignificant. Elke Mattern et al also had similar conclusion[62].

The intensity of pain was assessed by **visual analog scale (VAS)** when compared in supine, lateral and all fours position in primigravidae intensity of pain was severe for 96% of women is supine position, 84% in lateral position and 80% in all fours position the (P value <0.01) which was statistically significant. It signifies that the intensity of pain is less in all fours position The intensity of pain in multigravida women in supine , lateral and all fours position was 96%,84%,80% respectively the (P value <0.01) which was statistically significant patient being able to rock the hips the intensity of pain is reduced in all fours position Maria Amelia et al also had similar conclusion in their study[68].

The preference of position in primigravida women with 50 participants in each group 96% of women preferred supine position for subsequent delivery, 86% of women preferred lateral position and 58% preferred all fours position in subsequent delivery was statistically significant Shefaly Shorey et., al concluded that women preferred all fours and lateral position which was against our study(55). In multigravidae when compared in supine, lateral and all fours position 58% ,74% and 98% respectively was the preference when (P value 0.01) which was statistically significant Zwelling et.,al in their study concluded that the women preferred all fours position [70] which is similar as our study.

The overall Fetal outcome when compared in primigravidae women whether baby was giving mothers side or admitted in NICU in supine, lateral and all fours position were 58%, 74% and 58% were given mothers side respectively and 42%,26 and 42% were admitted to NICU respectively **(P** value 0.15**)** which was statistically insignificant.

The overall fetal outcome multigravidae women whether baby was given mothers side or NICU admission in supine, lateral and all fours position was 70%,72% and 76% were given mothers side and 30%,28% and 24% were admitted to NICU respectively **(**P value 0.79**)** statistically insignificant. Janesh K Gupta et al studied position in the 2nd stage of labour without epidural analgesia they concluded that there is no difference in newborns admitting to NICU (RR 0.79, 95% CI 0.51 to 1.21) it is similar to ourstudy[53]**.**

The transient tachyopnea in new born when compared in supine, lateral and all fours position in primigravidae was 34%, 16% and 16% respectively the babies born to mothers delivered in supine position had increased transient tachyopnea (P value 0.04) is statistically significant the reason is due to prolonged duration of 2nd stage of labor and aortocaval compression in supine position and in multigravidae it 16%,14% and 20% in supine, lateral and all fours position respectively and **(**P value 0.71**)** statistically insignificant.

The abnormal fetal patterns in primigravida women in supine position 18% had tachycardia,12% had bradycardia, 6% had decreased variability and 1% had increased variability and in lateral position 6% had tachycardia, 4% had bradycardia, 4% had decreased variability. In all fours position 22% had tachycardia, 6% had bradycardia, 6% had decreased variability (P value 0.35) which was statistically insignificant. This suggested that maternal birthing position does not have any significant effect on FHR pattern. The abnormal fetal patterns in multigravida women in supine position 6% had tachycardia,5% had bradycardia, 4% had decreased variability and in lateral position 10% had tachycardia, 2% had bradycardia, 8% had decreased variability. In all fours position 6% had tachycardia, 8% had bradycardia, 8% had decreased variability (P value 0.72) which was statistically insignificant. Gupta et al did cochrane review that revealed lesser abnormal FHR patterns in lateral and all fours (RR 0.46, 95% CI 0.22 0.93), but there was no clear difference in numbers[53]. Women who choose lithotomy or supine positions during delivery there is compression of intra-abdominal arteries constricted, which results in inadequate maternal flow into the placenta and decreased uteroplacental perfusion, which leads to an increase in FHR anomalies. In contrast, upright positions and lateral positions may prevent compression

of intra-abdominal arteries, especially the inferior vena cava, leading to the discovery of fewer FHR patterns. [71]

When APGAR score at 1 minute was compared among primigravida in supine, lateral and all fours position the mean APGAR score at 1 minute was 6.50, 6.86 and 6.68 when (P value 0.09) which was statistically insignificant. APGAR score at 1 minute was compared among multigravida in supine, lateral and all fours position the mean APGAR score at 1 minute was 6.78, 6.84 and 6.72 (P value 0.54) which was statistically insignificant. This concludes that there is no significant difference in APGAR score at 1 minutes in different birthing positions Barbara Bodner Adler et al conducted a study on women's position during labour : influence on maternal and neonatal outcome concluded that no difference in the mean APGAR score at 1 minute (P value > 0.05) which was statistically insignificant[72].

When APGAR score at 5 minutes was compared among primigravida in supine, lateral and all fours position the mean APGAR score at 5 minute was 8.46, 8.74 and 8.62 and (P value 0.24 which was statistically insignificant. APGAR score at 5 minute was compared among multigravida in supine, lateral and all fours position the mean APGAR score at 5 minutes was 8.70, 8.78 and 8.64 and (P value 0.54) which was statistically insignificant. This concludes that there is no significant difference in APGAR score at 5 minutes in different birthing positions. Barbara Bodner Adler et al conducted a study on women's position during labour : influence on maternal and neonatal outcome concluded that no difference in the mean APGAR score at 5 minute (P value > 0.05) which was statistically insignificant[72].

CONCLUSION & SUMMARY

CONCLUSION

In order to improve the maternal and neonatal outcomes and manage pain, upright and lateral positions may be more advantageous. Women should be educated about the advantage of various birthing position and should be given the freedom to choose the position in which she wants to give birth as a part of respective maternity care. In our study we conclude that there was decrease in the duration of 2nd stage of labour in primigravida and in multigravida in lateral position with reduction in the duration of labour many potential obstetric complications and interventions like application of forceps, vacuum assisted deliveries can be reduced.

The need for episiotomy was decreased in the lateral position in our study among primigravida women this can be substantiated by flexible sacrum which allows the easy passage of the fetus. The perineal tears when compared between the three positions among primigravida the women who delivered in supine position had increased perineal tear and women delivering in the all-fours position and lateral position had reduced perineal tears. Delivering lateral position is protective to perineum. When compared in multigravida the perineal tear wasn't significant in three positions.

The need for additional uterotonics when compared in primigravida and multigravida it was not significant if we cut down the duration of 2nd stage of labour the additional dosage of uterotonics can be reduced.

When women were asked about the preference of position in the subsequent delivery among primigravida women preferred supine position and among multigravida preferred all fours position this may be due to the rocking of hips during delivery which reduces the pain intensity.

The intensity of pain is reduced in all fours position in both primigravida and multigravida women it's because all fours position also helps in faster rotation of head and decreasing the duration of 2nd stage of labour .

The overall fetal outcome , FHR patterns and APGAR score at 1 minute and 5 minutes when compared among three positions in primigravida and multigravida women there was no significant difference among three positions but the transient tachyopnea of new born was increased in supine position in primigravida women it is due to prolonged duration of 2nd stage of labour and aortocaval compression causing reduced blood supply to fetus so there can be increased transient tachyopnea in newborn.

SUMMARY

In Shri B.M Patil Medical college we conducted a randomized parallel trial on 300 women dividing them based on parity into primigravida group containing 150 women and these women were randomized into birthing positions supine, lateral and all fours position containing 50 participants in each group and multigravida group containing 150 women and these women were randomized into birthing positions supine, lateral and all fours position.

The three groups of both primigravida and multigravida were matched with age and gestational age.

These three groups in both primigravida and multigravida were assessed for duration of 2nd stage of labour , need for interventions like application of forceps, vacuum assisted delivery, reverting into different position, need for LSCS, need for episiotomy, degree of perineal tears, need for uterotonics, intensity of pain, preference of position in subsequent delivery and overall fetal outcome , FHR patterns, transient tachyopnea of newborn, APGAR at 1 minute and 5 minutes were assessed.

In our study we concluded that the duration of 2nd stage of labour was reduced in lateral position in primigravida and multigravida. There were no significant interventions done in both primigravida and multigravida women. The need for episiotomy is decreased in primigravida women in lateral position it was insignificant in multigravida women.

Perineal tear when compared among three positions it was more in supine position and it was reduced in lateral and is least in all fours position and was insignificant in multigravida women. The intensity of pain when compared among three groups in primigravida it was least in all fours position and in multigravida women also it was least in all fours position. when compared the preference of position in primigravida they preferred supine position and multigravida preferred all fours position

The overall fetal outcome , FHR patterns and APGAR score at 1 minute and 5 minutes when compared among three positions in primigravida and multigravida women there was no significant difference among three positions but the transient tachyopnea of new born was increased in supine position in primigravida women it is due to prolonged duration of 2nd stage of labour and aortocaval compression causing reduced blood supply to fetus so there can be increased transient tachyopnea in newborn.

LIMITATIONS:

- Since the development of operative vaginal delivery supine position has become the default birthing position as a part of respectful maternity care women should be educated about various birthing position their advantages and disadvantages and should be given the choice. In our study birthing position was allotted based on randomization.
- Awareness should be created among health care professionals, skilled birth attendant's and birth attenders about various birthing positions and their advantages

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ANNEXURES

B.L.D.E. (DEEMED TO BE UNIVERSITY)

SHRI B .M PATIL MEDICAL COLLEGE HOSPITAL & RESEARCH CENTRE, VIJAYAPURA-586103, KARNATAKA

CONSENT FORM

INFORMED CONSENT FOR PARTICIPATION IN DISSERTATION/RESEARCH

I, the undersigned,_____, D/O W/O____, aged__years, ordinarily resident of _____ do hereby state/declare that Dr YETURI SUSHMITHA of Shri. B. M. Patil Medical College Hospital and Research Centre has examined me thoroughly on_____at_____(place). Further Dr YETURI SUSHMITHA informed me that he/she is conducting dissertation/research titled "effect of maternal birthing position on maternal and fetal outcomes A Randomized parallel trial" under the guidance of Dr. Rajasri G Yaliwal requesting my participation in the study. Apart from routine treatment procedure, the pre-operative, operative, post-operative and follow-up observations will be utilized for the study as reference data. Doctor has also informed me that during conduct of this procedure like adverse results may be encountered. Among the above complications most of them are treatable but are not anticipated hence there is chance of aggravation of my condition and in rare circumstances it may prove fatal in spite of anticipated diagnosis and best treatment made available. The Doctor has also informed me that information given by me, observations made photographs video graphs taken upon me by the investigator will be kept secret and not assessed by the person other than me or my legal hirer except for academic purposes. The Doctor did inform me that though my participation is purely voluntary, based on information given by me, I can ask any clarification during the course of treatment / study related to diagnosis, procedure of treatment, result of treatment or prognosis. At the same time I have been informed that I can withdraw from my participation in this study at any time if I want or the investigator can terminate me from the study at any time from the study but not the procedure of treatment and follow-up unless I request to be discharged. After understanding the nature of dissertation or research, diagnosis made, mode of treatment, I the undersigned Smt_____under my full conscious state of mind agree to participate in the said research/dissertation.

Signature of patient: Signature of doctor

Place:

Date:

PROFORMA

Effect of maternal birthing position on maternal and fetal outcome : A Randomized parallel study

NAME:

AGE:

IN PATIENT NUMBER (I.P No.):

DATE OF ADMISSION:

ADDRESS AND PHONE NUMBER:

L.M.P (LAST MENSTRUAL PERIOD) :

P.O.G (PERIOD OF GESTATION) :

E.D.D (EXPECTED DATE OF DELIVERY):

MENSTRUAL HISTORY :

MARITAL HISTORY

OBSTETRIC HISTORY

PAST HISTORY:

PERSONAL HISTORY:

GENERAL PHYSICAL EXAMINATION:

PALLOR: TEMPERATURE:

PULSE: BLOOD PRESSURE:

CARDIOVASCULAR SYSTEM:

RESPIRATORY SYSTEM

PER ABDOMEN:

PRESENTATION:

POSITION OF PATIENT:

A. SUPINE
B. LATERAL
C. KNEELING

BIRTH WEIGHT:

DATE OF DELIVERY:

USE OF VENTOUSE / FORCEPS DURING DELIVERY / REVERTED BACK TO SUPINE / LSCS

EPISIOTOMY: ☐ (YES – 1, NO – 2)

DURATION OF STAGES OF LABOUR:

- 1st STAGE:
- 2nd STAGE:

DEGREE OF PERINEAL TEAR (1 - 4):

USE OF UTEROTONICS: ☐ (YES – 1, NO – 2)

Drug & Dosage:

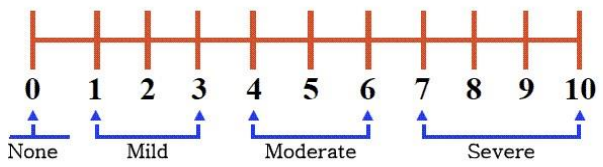
NUMERIC PAIN INTENSITY SCALE

0 – None ನೋವು ಇಲ್ಲ

1,2,3 – Mild ಸೌಮ್ಯ ನೋವು

4,5,6 – Moderate ಮ್ಧ್ಯ ಮ್ ನೋವು

7,8,9,10 – Severe ತೋವ್ರ ನೋವು



COMFORT OF MOTHER:

FETAL OUTCOME:

FHR:

CTG:

- REASSURING – TACHYCARDIA / BRADYCARDIA
- NON-REASSURING:
  - REDUCED VARIABILITY
  - INCREASED VARIABILITY
  - LATE DECELERATIONS

BIRTH ASPHYXIA: ☐ (YES – 1, NO – 2)

APGAR SCORE: AT 1 MINUTE:

5 MINUTES:

MASTER CHART - PRIMIGRAVIDA

S.No	Age	IP No	POG	Position of Patient	Episiotomy	Duration of 2nd Stage of Labour (min)	Degree of Perineal Tear	Use of Uterotonics					Numeric Pain Intensity Scale	Does she prefer to deliver in the same position in the next pregnancy ?	Fetal Outcome	Reassuring FHR	Non Reassuring FHR	Birth Asphyxia	APGAR	
			Weeks						Oxytocin	Methergin	Prostadin	Tab. Misoprostal							At 1 min	At 5 min
1	20	56191	37	3	1	34	1	1	20U	2	2	2	6	1	2	0	1	1	5	9
2	23	59356	37	2	2	32	2	1	20U	2	2	2	8	1	1	1	0	2	7	9
3	21	122457	40	3	1	34	2	1	20U	2	2	2	6	1	1	1	0	2	7	9
4	25	9730	38	1	1	40	2	1	20U	2	2	2	9	1	2	0	1	2	7	9
5	20	127351	40	2	2	30	1	1	20U	2	2	1	8	1	1	1	0	2	7	9
6	20	133629	38	1	1	38	2	1	20U	2	2	1	7	1	2	0	2	1	5	9
7	22	153899	38	2	2	28	1	1	20U	2	2	1	8	1	2	1	0	2	7	9
8	26	143870	39	3	1	30	1	1	20U	2	2	1	10	1	1	1	0	2	7	9
9	22	161218	37	1	1	38	2	1	20U	2	2	1	7	1	2	0	1	2	6	9
10	21	164226	39	2	2	28	1	1	20U	2	2	1	7	1	1	1	0	2	7	9
11	24	2994	38	1	2	38	2	1	20U	2	2	1	8	1	1	1	0	2	7	9
12	25	7672	38	2	1	29	2	1	20U	2	2	1	9	1	1	1	0	2	7	9
13	20	11278	42	2	1	34	2	1	20U	2	2	1	7	1	2	0	3	1	6	8
14	25	9459	39	1	1	30	2	1	20U	2	2	2	8	1	2	0	1	1	7	9
15	20	14305	40	2	2	28	1	1	20U	2	2	2	8	1	1	1	0	2	7	9
16	21	103233	40	1	1	38	2	1	20U	2	2	1	9	1	2	0	3	1	4	7
17	23	19639	38	2	1	30	3	1	20U	2	2	1	9	1	1	1	0	2	7	9
18	19	32825	37	2	1	28	3	1	20U	2	2	2	8	1	2	0	1	1	6	8
19	21	45991	39	1	1	34	1	1	20U	2	2	2	7	1	1	1	0	2	7	9
20	19	64026	40	1	2	28	1	1	20U	2	2	2	8	1	1	1	0	2	7	9

21	24	72299	39	1	2	38	1	1	20U	2	2	2	6	1	1	1	0	2	7	9
22	22	81707	41	3	2	35	1	1	20U	2	2	2	7	1	2	1	0	2	6	8
23	19	68579	40	2	1	22	1	1	20U	2	2	2	7	1	1	1	0	2	7	9
24	20	96515	39	1	1	40	1	1	20U	2	2	2	7	1	1	1	0	2	7	9
25	26	95499	42	1	1	36	1	1	20U	2	2	2	8	1	2	0	3	1	5	8
26	22	24051	39	2	2	32	1	1	20U	2	2	1	8	1	1	1	0	2	7	9
27	19	26454	41	2	1	28	1	1	20U	2	2	1	8	1	1	1	0	2	7	9
28	28	71656	39	1	1	38	2	1	20U	2	2	2	7	1	1	1	0	2	7	9
29	29	113313	39	3	1	34	2	1	20U	2	2	1	7	2	2	0	1	1	5	6
30	22	123453	39	1	1	42	2	1	20U	2	2	1	7	1	2	0	1	1	6	8
31	21	127518	40	1	1	37	1	1	20U	2	2	1	8	1	1	1	0	2	7	9
32	21	133210	41	2	1	32	1	1	20U	2	2	1	8	1	1	1	0	2	7	9
33	20	149551	39	3	1	30	1	1	20U	2	2	2	6	2	2	0	1	1	6	7
34	23	150702	38	2	1	35	1	1	20U	2	2	2	8	1	1	1	0	2	7	9
35	28	728786	37	1	1	38	2	1	20U	2	2	2	8	1	2	0	1	1	6	7
36	21	157227	39	1	1	34	1	1	20U	2	2	2	7	1	1	1	0	2	7	9
37	21	160814	40	1	1	42	1	1	20U	2	2	2	7	1	2	0	2	1	3	7
38	19	16696	39	3	1	34	1	1	20U	2	2	2	6	2	1	1	0	2	7	9
39	21	166929	38	2	1	44	1	1	20U	2	2	2	7	1	1	1	0	2	7	9
40	21	170908	38	3	1	34	1	1	20U	2	2	2	6	1	2	0	3	2	6	8
41	20	179301	38	2	1	32	1	1	20U	2	2	2	7	1	1	1	0	2	7	9
42	21	181098	38	1	1	37	1	1	20U	2	2	2	8	1	2	0	1	1	7	9
43	21	163236	38	2	1	34	1	1	20U	2	2	2	7	1	2	0	1	1	6	8
44	20	183643	39	1	1	38	1	1	20U	2	2	2	7	1	1	1	0	2	7	9
45	22	183488	38	1	1	35	1	1	20U	2	2	2	7	1	1	1	0	2	8	9
46	25	186280	40	1	1	38	1	1	20U	2	1	2	9	1	1	1	0	2	7	9
47	20	134564	39	1	1	35	1	1	20U	1	2	2	8	1	1	1	0	2	7	9
48	20	198809	38	1	1	37	1	1	20U	1	2	2	9	1	1	1	0	2	7	9
49	20	201774	39	1	1	36	1	1	20U	2	2	2	9	1	1	1	0	2	7	9
50	21	165596	39	3	1	33	1	1	20U	2	2	2	6	2	1	1	0	2	7	9
51	25	217812	39	1	1	38	1	1	20U	2	2	2	7	1	1	1	0	2	7	9
52	23	238746	40	2	1	30	1	1	20U	2	1	2	8	1	1	1	0	2	7	9
53	20	238764	41	3	1	33	1	1	20U	2	2	2	6	2	1	1	0	2	7	9
54	24	241185	37	3	1	34	1	1	20U	2	2	2	6	2	2	0	1	2	7	9
55	26	242144	40	2	1	26	1	1	20U	2	2	2	8	1	2	0	2	2	7	9
56	22	249094	38	1	1	40	1	1	20U	2	2	2	7	1	2	0	3	1	5	6
57	19	249151	39	1	1	36	1	1	20U	2	2	2	7	1	2	0	1	1	7	9
58	22	249709	38	3	1	33	1	1	20U	2	2	2	9	2	2	1	0	2	7	9
59	22	250050	38	3	1	32	1	1	20U	2	2	2	9	1	2	0	1	2	7	9
60	20	250630	39	2	1	31	1	1	20U	2	2	2	8	1	1	1	0	2	7	9
61	20	250832	40	2	1	34	1	1	20U	2	2	1	7	1	1	1	0	2	7	9

62	23	250816	39	3	1	36	1	1	20U	2	2	1	9	1	1	1	0	2	7	9
63	20	36678	41	2	1	30	1	1	20U	2	2	2	7	1	1	1	0	2	8	9
64	20	258211	38	2	1	32	1	1	20U	2	2	2	8	1	1	1	0	2	7	9
65	21	258706	37	3	1	29	1	1	20U	2	2	2	9	2	1	1	0	2	7	9
66	21	261231	37	3	1	38	1	1	20U	2	2	1	8	1	1	1	0	2	7	9
67	19	262091	40	3	1	32	1	1	20U	1	2	1	8	2	1	1	0	2	7	9
68	21	263238	42	2	1	28	1	1	20U	2	2	1	8	1	1	1	0	2	8	9
69	20	266725	39	3	1	36	1	1	20U	2	2	2	8	1	2	1	0	2	7	9
70	22	269034	40	2	1	28	1	1	20U	2	2	1	8	1	2	0	3	1	5	7
71	28	51631	40	1	1	40	1	1	20U	2	2	1	7	1	2	0	4	1	4	6
72	21	274167	40	3	1	36	1	1	20U	2	2	2	9	2	1	1	0	2	7	9
73	22	278677	38	3	1	39	1	1	20U	2	2	1	7	1	1	1	0	2	7	9
74	24	280125	39	2	1	28	1	1	20U	2	2	2	7	1	1	1	0	2	7	9
75	22	282378	39	3	1	33	1	1	20U	2	2	2	7	1	2	1	0	2	6	8
76	20	290806	41	2	1	31	1	1	20U	2	2	2	6	1	1	1	0	2	7	9
77	23	290826	40	2	1	36	2	1	20U	2	2	2	7	1	1	1	0	2	7	9
78	18	294771	40	2	1	38	1	1	20U	2	2	2	9	1	1	1	0	2	7	9
79	21	295692	37	1	1	38	3	1	20U	2	2	2	7	1	2	1	0	2	7	9
80	20	296114	39	3	1	37	1	1	20U	2	2	2	8	1	2	0	3	1	4	6
81	19	231706	39	3	1	36	1	1	20U	2	2	2	8	2	1	1	0	2	8	9
82	27	299315	37	3	1	36	1	1	20U	2	2	2	8	1	1	1	0	2	7	9
83	24	299304	40	2	1	33	1	1	20U	2	2	2	7	1	2	0	2	2	7	8
84	24	299331	39	3	1	39	1	1	20U	2	2	2	8	2	2	0	2	2	7	9
85	25	280891	39	2	1	33	1	1	20U	2	2	2	7	1	1	1	0	2	8	9
86	20	90422	39	3	1	31	1	1	20U	2	2	2	9	2	1	1	0	2	7	9
87	23	313777	38	3	1	28	1	1	20U	2	2	2	8	1	2	2	1	1	4	6
88	27	301785	37	2	1	35	1	1	20U	2	2	1	8	1	1	1	0	2	7	9
89	23	314540	41	2	1	36	1	1	20U	2	2	2	8	2	2	0	3	1	5	6
90	19	1334	39	3	1	38	1	1	20U	2	2	2	9	2	1	1	0	2	7	9
91	26	2003	38	2	1	28	1	1	20U	2	2	2	7	1	2	1	0	1	6	8
92	21	22388	39	2	1	39	1	1	20U	2	2	2	8	2	1	1	0	2	7	9
93	20	25545	37	3	1	36	1	1	20U	2	2	2	9	2	1	1	0	2	7	9
94	20	12924	37	2	1	31	1	1	20U	2	2	2	8	2	1	1	0	2	7	9
95	21	39079	40	1	1	35	1	1	20U	2	2	2	7	1	1	1	0	2	8	9
96	20	55264	38	1	1	38	3	1	20U	2	2	2	8	1	2	1	0	2	7	9
97	19	58502	40	3	1	39	1	1	20U	2	2	2	9	2	2	0	1	2	7	8
98	25	61069	40	2	1	36	1	1	20U	2	2	2	8	1	1	1	0	2	7	9
99	26	65107	38	1	1	39	1	1	20U	2	2	2	7	1	1	1	0	2	7	9
100	21	66502	41	1	1	23	1	1	20U	2	2	2	8	1	1	1	0	2	7	9
101	20	69396	39	3	1	30	1	1	20U	2	2	2	8	1	1	1	0	2	7	9
102	23	81385	39	2	1	28	1	1	20U	2	2	1	8	2	2	0	2	1	5	7

103	24	82042	39	3	1	36	1	1	20U	2	2	1	8	1	1	1	0	2	7	9
104	20	83529	39	2	1	32	1	1	20U	2	2	1	9	1	2	0	3	2	7	9
105	23	307081	38	1	1	40	3	1	20U	2	2	2	9	1	2	0	2	1	4	6
106	19	308071	39	3	1	38	1	1	20U	2	2	1	8	1	1	1	0	2	7	9
107	20	9438	39	3	1	29	1	1	20U	2	2	1	8	1	1	1	0	2	7	9
108	23	84709	39	2	1	30	1	1	20U	2	2	2	9	1	1	1	0	2	7	9
109	25	87300	40	1	1	42	1	1	20U	2	2	2	7	1	1	1	0	2	7	9
110	20	88629	37	3	2	32	1	1	20U	2	2	1	8	1	2	0	3	1	6	9
111	25	89966	40	2	1	24	1	1	20U	1	2	2	9	1	1	1	0	2	7	9
112	33	72100	37	1	1	39	1	1	20U	2	2	2	8	1	1	1	0	2	7	9
113	25	92284	42	3	1	38	1	1	20U	2	2	1	8	2	2	0	1	2	7	9
114	21	97097	39	1	2	36	1	1	20U	2	2	2	7	1	2	1	0	2	7	9
115	25	98933	39	2	1	35	1	1	20U	2	2	2	9	1	1	1	0	2	7	9
116	21	98959	40	3	1	36	1	1	20U	2	2	2	9	1	2	0	1	2	7	9
117	21	98268	38	3	1	32	1	1	20U	2	2	2	9	1	1	1	0	2	7	9
118	27	106531	39	3	1	36	1	1	20U	2	2	2	8	2	2	0	1	1	6	7
119	22	115460	38	3	1	32	1	1	20U	2	2	1	9	1	2	0	2	1	6	7
120	26	107964	39	3	1	34	1	1	20U	2	2	1	8	1	1	1	0	2	7	9
121	19	77273	40	3	1	32	1	1	20U	2	2	2	8	1	1	1	0	2	7	9
122	22	82973	40	1	1	40	1	1	20U	2	2	2	8	1	1	1	0	2	7	9
123	23	303981	39	1	1	39	1	1	20U	2	2	2	9	1	1	1	0	2	7	9
124	31	127574	39	1	1	37	1	1	20U	2	2	2	9	1	1	1	0	2	7	9
125	21	129213	38	1	1	36	1	1	20U	2	2	2	8	1	1	1	0	2	7	9
126	20	129411	38	1	1	38	1	1	20U	2	2	2	8	1	2	0	2	1	6	7
127	19	131564	38	1	1	36	1	1	20U	2	2	2	7	1	1	1	0	2	7	9
128	20	133899	40	1	1	40	1	1	20U	2	2	2	8	1	1	1	0	2	7	9
129	22	140912	40	1	1	36	1	1	20U	2	2	2	7	1	2	0	1	1	6	7
130	21	140975	40	1	1	40	1	1	20U	2	2	2	8	1	2	1	0	1	6	7
131	22	75666	40	1	1	36	1	1	20U	2	2	2	7	1	1	1	0	2	7	9
132	21	330481	38	1	1	42	1	1	20U	2	2	2	7	2	1	0	1	2	7	9
133	20	338510	40	1	1	42	1	1	20U	2	2	1	8	2	1	0	1	2	7	9
134	23	337103	40	1	1	44	1	1	20U	2	2	2	8	2	2	0	2	1	6	7
135	20	317509	38	3	2	41	1	1	20U	2	2	2	8	1	1	1	0	2	7	9
136	20	316605	37	2	2	40	1	1	20U	2	2	2	9	1	1	1	0	2	7	9
137	26	319990	42	1	2	38	1	1	20U	2	2	1	8	1	2	0	2	1	6	7
138	21	312242	41	2	1	40	1	1	20U	2	2	2	8	2	2	0	2	1	7	8
139	22	132267	39	2	1	38	1	1	20U	2	2	2	8	1	2	0	1	2	7	9
140	28	123251	40	2	1	36	1	1	20U	2	2	2	8	1	1	1	0	2	7	9
141	20	132676	37	3	1	32	1	1	20U	2	2	2	8	2	2	0	2	2	7	9
142	23	133724	38	3	1	30	1	1	20U	2	2	2	8	1	1	1	0	2	7	9
143	23	155109	39	2	1	34	1	1	20U	2	2	2	7	1	1	1	0	2	7	9
144	18	154440	40	2	1	30	1	1	20U	2	2	2	9	1	1	1	0	2	7	9

145	22	167014	40	3	1	35	1	1	20U	2	2	2	9	2	1	1	0	2	7	9
146	21	168683	39	2	1	32	1	1	20U	2	2	2	8	2	1	1	0	2	7	9
147	22	172599	39	3	1	32	1	1	20U	2	2	2	8	2	1	1	0	2	7	9
148	19	172680	39	2	1	36	1	1	20U	2	2	2	8	2	1	1	0	2	7	9
149	21	172685	40	3	1	33	1	1	20U	2	2	2	6	1	1	1	0	2	7	9
150	19	170005	39	2	1	32	1	1	20U	2	2	2	9	1	1	1	0	2	7	9

MASTER CHART - MULTIGRAVIDA

S.No	Age	IP No	POG	Position of Patient	Episiotomy	Duration of 2nd Stage of Labour (min)	Degree of Perineal Tear	Use of Uterotonics					Numeric Pain Intensity Scale	Does she prefer to deliver in the same position in the next pregnancy ?	Fetal Outcome	Reassuring FHR	Non Reassuring FHR	Birth Asphyxia	APGAR	
			Weeks						Oxytocin	Methergin	Prostadin	Tab. Misoprostal							At 1 min	At 5 min
1	24	28522	40	2	2	24	2	1	1	2	2	1	7	2	1	1	0	2	7	9
2	23	63057	37	2	2	28	1	1	1	2	2	1	6	1	1	1	0	2	7	9
3	24	64655	38	2	1	32	1	1	1	2	1	1	8	2	2	2	1	1	6	8
4	22	71254	40	1	1	30	1	1	1	2	2	1	8	2	1	1	0	2	7	9
5	23	79301	41	1	2	23	2	1	1	2	2	1	7	2	2	2	2	2	6	8
6	25	77664	42	1	2	27	1	1	1	1	2	2	6	2	1	1	0	2	7	9
7	27	119376	38	1	1	30	1	1	1	2	2	1	7	2	1	1	0	2	7	9
8	20	20892	39	2	2	24	1	1	1	2	2	1	7	2	1	1	0	2	7	9
9	31	3162	39	2	2	25	1	1	1	2	2	2	8	1	2	2	1	2	7	9
10	26	122203	39	2	1	26	1	1	1	1	1	1	8	2	1	1	0	2	7	9
11	30	122451	40	1	1	32	1	1	1	2	2	1	7	2	2	2	3	2	6	8
12	20	126558	39	1	1	33	1	1	1	2	2	1	8	2	1	1	0	2	7	9
13	21	130036	39	3	1	26	1	1	1	2	2	1	7	1	1	1	0	2	7	9
14	25	130013	39	2	2	26	2	1	1	2	2	1	6	1	1	1	0	2	7	9
15	30	137860	37	2	2	24	1	1	1	2	2	1	7	1	2	2	1	1	6	8
16	28	157897	40	3	2	26	1	1	1	2	2	1	9	1	1	1	0	2	7	9
17	23	161476	38	2	2	20	1	1	1	2	2	1	6	1	1	1	0	2	7	9
18	24	164225	40	2	2	24	3	1	1	2	2	1	6	1	2	1	0	2	7	9
19	20	4759	40	1	1	28	1	1	1	2	2	1	6	2	1	1	0	2	7	9
20	24	7705	41	3	2	28	2	1	1	2	2	1	8	1	1	2	1	1	6	8
21	23	146708	40	3	1	25	1	1	1	2	2	1	7	1	1	1	0	2	7	9
22	24	31275	37	2	2	20	1	1	1	2	2	1	6	2	2	2	2	2	7	9

23	23	9450	40	1	2	22	1	1	1	2	2	2	7	2	1	1	0	2	7	9
24	28	9452	37	3	2	25	1	1	1	2	2	2	6	1	1	1	0	2	7	9
25	27	11241	39	3	2	22	1	1	1	2	2	1	6	1	1	2	1	1	6	8
26	28	8928	37	3	2	28	1	1	1	2	2	1	6	1	2	2	1	2	7	9
27	29	18515	40	2	2	26	1	1	1	2	2	2	8	2	1	1	0	2	7	9
28	19	32579	40	2	1	22	1	1	1	2	2	2	7	1	1	1	0	2	7	9
29	22	161194	41	1	1	28	1	1	1	2	2	2	7	2	1	1	0	2	7	9
30	25	63196	38	1	2	29	1	1	1	2	2	2	8	2	1	1	0	2	7	9
31	26	66075	41	1	2	28	3	1	1	2	2	2	7	2	1	1	0	2	7	9
32	31	149044	39	1	2	27	1	1	1	2	2	2	8	2	1	1	0	2	7	9
33	28	71656	39	2	1	30	1	1	1	2	2	2	7	1	1	1	0	2	7	9
34	28	78325	39	1	2	32	3	1	1	2	2	2	9	2	1	1	0	2	7	9
35	23	78326	39	1	2	28	2	1	1	2	2	2	8	2	2	2	2	1	6	8
36	28	79239	38	3	2	26	3	1	1	2	2	2	7	1	2	2	3	2	7	9
37	24	84575	41	1	1	22	1	1	1	2	2	1	8	2	1	1	0	2	7	9
38	24	89636	39	1	2	32	1	1	1	2	2	1	7	2	2	2	3	1	6	7
39	24	64599	40	1	1	27	1	1	1	2	2	2	7	2	1	1	0	2	7	9
40	27	95386	40	1	2	32	2	1	1	2	2	2	8	2	1	1	0	2	7	9
41	28	95492	37	3	2	25	1	1	1	2	2	2	7	1	2	1	0	2	7	9
42	30	96610	40	3	1	30	1	1	1	2	2	1	9	1	1	1	0	2	7	9
43	27	111050	38	2	2	27	1	1	1	2	2	2	8	2	1	1	0	2	7	9
44	24	11030	39	2	1	26	1	1	1	2	2	2	9	1	1	1	0	2	7	9
45	24	120367	37	1	2	35	1	1	1	2	2	2	8	2	2	2	2	1	6	8
46	24	122289	40	2	2	27	3	1	1	2	2	2	8	1	1	1	0	2	7	9
47	23	98399	39	1	1	25	1	1	1	2	2	2	7	2	1	1	0	2	7	9
48	36	126976	40	1	1	32	1	1	1	2	2	2	8	1	1	1	0	2	7	9
49	22	128881	38	1	2	26	2	1	1	2	2	2	9	1	1	1	0	2	7	9
50	25	131848	40	1	2	30	1	1	1	2	2	2	8	1	1	1	0	2	7	9
51	23	135703	40	1	2	30	1	1	1	2	2	2	8	1	2	1	0	2	7	9
52	29	133214	40	2	2	25	1	1	1	2	2	2	7	1	1	1	0	2	7	9
53	23	131805	38	1	1	28	1	1	1	2	2	2	7	1	2	2	2	1	6	7
54	25	144316	39	1	2	32	1	1	1	2	2	1	8	1	1	1	0	2	7	9
55	20	105996	38	3	1	28	1	1	1	2	2	1	7	1	1	1	0	2	7	9
56	24	129493	41	1	1	29	1	1	1	2	2	1	7	1	2	2	1	2	7	9
57	24	154462	41	1	1	30	1	1	1	2	2	2	8	1	2	2	1	1	6	8
58	24	155752	41	3	1	26	2	1	1	2	2	2	7	1	1	1	0	2	7	9
59	35	160870	39	2	1	28	1	1	1	2	2	2	7	1	1	1	0	2	7	9
60	25	160859	38	3	1	34	1	1	1	2	2	2	7	1	1	1	0	2	7	9
61	20	63505	39	1	2	30	1	1	1	2	2	2	7	1	1	1	0	2	7	9
62	26	168057	40	3	2	28	2	1	1	2	2	1	6	1	1	1	0	2	7	9
63	25	170948	38	2	1	26	1	1	1	2	2	2	6	1	1	1	0	2	7	9

64	27	173365	37	3	1	28	1	1	1	2	2	2	8	1	1	1	0	2	7	9
65	24	143016	41	2	2	25	2	1	1	2	2	2	8	1	2	2	2	1	5	6
66	25	184995	40	1	1	32	1	1	1	2	2	2	8	1	2	2	1	1	5	6
67	27	144310	40	3	2	29	1	1	1	2	2	2	6	1	1	1	0	2	7	9
68	26	46266	37	2	2	24	1	1	1	2	2	2	6	1	2	1	2	2	7	9
69	35	190202	38	1	2	28	1	1	1	2	2	2	7	1	1	1	0	2	7	9
70	27	144310	42	3	2	36	1	1	1	2	2	2	6	1	1	1	0	2	7	9
71	35	175776	40	3	2	30	1	1	1	2	2	2	6	1	2	2	2	1	6	8
72	23	203091	37	1	1	26	1	1	1	2	2	2	8	1	1	1	0	2	7	9
73	19	135013	38	2	1	22	1	1	1	2	2	2	9	1	1	1	0	2	7	9
74	23	202584	40	1	1	28	1	1	1	2	2	2	8	1	1	1	0	2	7	9
75	21	209460	39	3	1	26	1	1	1	2	2	2	6	1	1	1	0	2	7	9
76	27	212323	38	2	2	22	3	1	1	2	2	2	7	1	2	2	3	1	6	7
77	27	240324	39	3	2	24	1	1	1	2	2	2	8	1	2	2	3	1	3	5
78	23	241084	40	3	1	25	1	1	1	2	2	2	9	1	1	1	0	2	7	9
79	24	241188	40	2	1	26	1	1	1	2	2	2	6	1	1	1	0	2	7	9
80	23	241159	41	1	1	20	1	1	1	2	2	2	7	1	1	1	0	2	7	9
81	31	247226	39	3	1	25	1	1	1	2	2	2	6	1	1	1	0	2	7	9
82	28	247005	39	1	1	30	1	1	1	2	2	2	9	1	2	2	3	1	6	7
83	31	248636	37	3	1	28	1	1	1	2	2	2	9	1	2	2	3	1	5	6
84	22	249049	41	1	2	26	1	1	1	2	2	1	7	1	1	1	0	2	7	9
85	23	248812	40	3	2	25	1	1	1	2	2	2	7	1	1	1	0	2	7	9
86	36	249131	40	2	2	26	3	1	1	2	2	2	6	1	2	2	2	2	7	9
87	23	75496	39	3	2	26	1	1	1	2	2	2	6	1	1	1	0	2	7	9
88	24	230025	38	1	1	26	1	1	1	2	2	2	7	1	1	1	0	2	7	9
89	20	250630	40	2	1	25	1	1	1	2	2	2	7	1	1	1	0	2	7	9
90	22	250803	38	3	2	22	1	1	1	2	2	2	8	1	2	1	0	1	6	8
91	28	253384	41	1	2	23	1	1	1	2	2	2	9	1	1	1	0	2	7	9
92	34	249415	40	1	1	32	1	1	1	2	1	2	8	1	2	1	0	2	7	9
93	22	258310	39	2	1	24	1	1	1	2	2	2	8	1	1	1	0	2	7	9
94	21	261092	39	2	2	23	1	1	1	2	2	1	8	2	1	1	0	2	7	9
95	31	261089	38	3	2	20	1	1	1	2	2	2	7	1	1	1	0	2	7	9
96	22	263252	40	1	2	23	1	1	1	2	2	2	7	1	1	1	0	2	7	9
97	22	247220	40	2	1	27	1	1	1	2	2	2	8	1	1	1	0	2	7	9
98	24	264873	41	3	2	28	2	1	1	2	2	2	7	1	1	1	0	2	7	9
99	24	275506	40	1	2	26	3	1	1	2	2	2	7	1	2	2	2	2	7	9
100	25	275793	38	2	2	28	1	1	1	2	2	2	8	2	1	1	0	2	7	9
101	29	196218	37	3	2	28	1	1	1	2	1	1	8	1	1	1	0	2	7	9
102	24	281755	38	2	2	26	1	1	1	2	1	1	7	2	2	2	1	2	7	9
103	24	239520	40	1	1	25	1	1	1	2	2	2	8	1	1	1	0	2	7	9
104	26	296177	38	3	2	27	1	1	1	2	2	2	9	1	1	1	0	2	7	9

105	24	296537	41	1	1	22	1	1	1	2	2	2	8	1	1	1	0	2	7	9
106	22	300765	40	2	1	26	1	1	1	2	2	2	8	1	1	1	0	2	7	9
107	20	298747	41	1	2	18	1	1	1	2	2	1	8	1	1	1	0	2	7	9
108	26	20782	39	2	1	24	1	1	1	2	2	2	8	1	1	1	0	2	7	9
109	23	25453	39	3	1	23	1	1	1	2	2	2	8	1	2	2	3	2	7	9
110	27	194891	39	1	1	24	1	1	1	2	2	2	7	1	1	1	0	2	7	9
111	20	31366	38	2	2	25	1	1	1	2	2	2	7	1	2	2	1	2	7	8
112	23	38306	41	3	1	24	1	1	1	2	2	2	8	1	1	1	0	2	7	8
113	22	43052	39	1	2	30	1	1	1	2	2	2	7	1	1	1	0	2	7	9
114	28	45797	38	2	2	24	1	1	1	2	2	2	8	1	1	1	0	2	7	9
115	22	48046	39	3	1	27	1	1	1	2	2	2	8	1	2	1	0	1	6	7
116	25	55155	40	1	1	29	1	1	1	2	2	1	7	1	1	1	0	2	7	9
117	27	56457	39	2	2	27	1	1	1	2	2	2	7	1	1	1	0	2	7	9
118	26	57177	41	2	2	24	1	1	1	2	2	1	8	2	1	1	0	2	7	9
119	27	7868	38	3	1	25	1	1	1	2	2	2	7	1	1	1	0	2	7	9
120	26	166142	40	3	1	28	1	1	1	2	2	2	8	1	1	1	0	2	7	9
121	29	308274	38	3	2	27	1	1	1	2	2	2	8	1	1	1	0	2	7	9
122	22	64695	39	2	2	23	1	1	1	2	2	2	7	2	2	2	2	1	6	9
123	26	6753	39	2	2	24	1	1	1	2	2	2	6	1	1	1	0	2	7	9
124	21	73256	42	2	1	22	1	1	1	2	2	2	7	2	1	1	0	2	7	9
125	25	78671	42	2	1	30	1	1	1	2	2	2	8	1	1	1	0	2	7	9
126	26	78652	37	3	2	34	1	1	1	2	2	1	8	2	1	1	0	2	7	9
127	24	74741	39	3	1	29	1	1	1	2	2	1	9	1	1	1	0	2	7	9
128	28	1354	38	3	2	26	1	1	1	2	2	2	8	1	2	2	2	1	6	8
129	25	81380	41	3	1	29	1	1	1	2	2	2	7	1	1	1	0	2	7	9
130	18	174024	41	3	1	32	1	1	1	2	2	2	8	1	1	1	0	2	7	9
131	27	91807	40	3	2	22	1	1	1	2	2	2	9	1	1	1	0	2	7	9
132	24	96035	39	3	2	28	1	1	1	2	2	1	8	1	1	1	0	2	7	9
133	28	572	38	3	2	29	1	1	1	2	2	1	9	1	1	1	0	2	7	9
134	24	101941	41	3	1	34	2	1	1	2	2	1	9	1	2	2	2	1	6	8
135	25	107216	40	1	1	28	1	1	1	2	2	2	8	2	2	1	0	2	7	9
136	21	69906	39	2	1	30	1	1	1	2	2	2	7	1	1	1	0	2	7	9
137	22	112981	39	1	1	28	2	1	1	2	2	2	8	1	1	1	0	2	7	9
138	25	114777	39	1	1	35	2	1	1	1	2	2	8	1	2	2	3	1	6	8
139	32	120340	37	2	2	24	2	1	1	2	2	1	7	1	1	1	0	2	7	9
140	33	122621	40	2	2	25	1	1	1	2	2	1	8	2	1	1	0	2	7	9
141	22	124125	40	2	2	22	1	1	1	2	2	2	7	1	2	2	2	1	6	8
142	22	275806	38	2	1	26	1	1	1	2	2	1	8	1	1	1	0	2	7	9
143	20	127578	41	2	1	25	1	1	1	2	2	2	9	1	1	1	0	2	7	9
144	21	127601	38	2	2	22	1	1	1	2	2	2	8	1	1	1	0	2	7	9
145	21	131441	38	2	2	20	1	1	1	2	2	1	8	1	2	2	2	1	6	7

146	22	131542	38	3	2	27	1	1	1	2	2	2	7	1	1	1	0	2	7	9
147	30	136336	39	3	2	30	1	1	1	2	2	2	8	1	2	2	2	1	6	7
148	22	138194	37	3	2	28	3	1	1	2	2	1	8	1	1	1	0	2	7	9
149	25	106539	39	3	1	30	2	1	1	2	2	1	9	2	1	1	0	2	7	9
150	38	143971	40	3	2	27	1	1	1	2	2	1	6	1	1	1	0	2	7	9

IEC/100-9/2021
Date- 22/01/2021

B.L.D.E. (DEEMED TO BE UNIVERSITY)
(Declared vide notification No. F.9-37/2007-U.3 (A) Dated 29-2-2008 of the MHRD, Government of India under Section 3 of the UGC Act, 1956)
The Constituent College
SHRI. B. M. PATIL MEDICAL COLLEGE, HOSPITAL AND RESEARCH CENTRE

INSTITUTIONAL ETHICAL CLEARANCE CERTIFICATE

The Institutional ethical committee of this college met on 11-01-2021 at 11-00 am to scrutinize the synopsis of Postgraduate students of this college from Ethical Clearance point of view. After scrutiny the following original/corrected and revised version synopsis of the Thesis has been accorded Ethical Clearance.

Title: Effect of maternal birthing position on maternal and fetal outcome – A randomized parallel trial.

Name of PG student: Dr Yeturi Sushmitha
Department of Obst/Gynaec

Name of Guide/Co-investigator: Dr Rajasri.G.Yaliwal, Associate Professor of Obst/Gynaec

DR. S.V. PATIL
CHAIRMAN, IEC
Institutional Ethical Committee
B L D E (Deemed to be University)
Shri B.M. Patil Medical College,
VIJAYAPUR-586103 (Karnataka)

Following documents were placed before Ethical Committee for Scrutinization:

1. Copy of Synopsis / Research project
2. Copy of informed consent form
3. Any other relevant documents.

15

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