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## Midwives' Preferred Birthing Positions During Second Stage of Labour in Owerri, Imo State, Nigeria

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### **Abstract:**

*The paper set out to explore the midwives' preferred birthing positions during the second stage of labour in selected hospitals in Owerri, Imo state. The study adopted the descriptive survey research design, with 121 sample size randomly selected for the study in selected public and private hospitals. Questionnaire and interview schedule were used to elicit data from the respondents. The result showed that 79% preferred the lithotomy position, 14% preferred the dorsal position, 2% preferred the all-fours, 1% preferred the squatting and 4% preferred the sitting position. This means that 93% of the respondents preferred horizontal birthing position while 7% preferred the alternative birthing position during second stage and this comes with some complications and risks for the mother and child. The result contrasts with evidence-based study which revealed that alternate birthing positions are more beneficial to the mother and child, and also prevent complications. To this end, the study recommends that midwives and mothers should be re-educated and enlightened on evidence-based approach so as to change their knowledge and preference of the birthing positions. Women in labour should be allowed to make choices of preferred birthing position during second stage except horizontal position.*

**Keywords:** Maternal birthing positions, horizontal position, alternate position, midwives' preference

### **1. Introduction**

Globally, high child and maternal mortality rates are still prevalent in some parts of the world and available records indicate that about 830 women and children die daily from avoidable causes related to pregnancy and childbirth (Sedgh *et al.*, 2015). In the global index of current research, Nigeria comes first in maternal mortality with a ratio of 917.00 (World Bank, 2021). Labour and childbirth related challenges and complications constitute foremost contributors to the mounting problems of child/maternal disability and death. Consequently, imperative in the global concern and search for the reduction of maternal and child mortality rates, especially in Africa, Nigeria inclusive is evidence-based and skilled midwifery care, which must be pro-actively employed so that midwives can utilize their training and experience to promote maternal health and achieve a positive balance. Midwives, who are in the front line of the care of women during delivery, have the power to make necessary changes as regarding the best positions to adopt. Renfrew *et al.* (2014) declare that horizontal positions are preferred by midwives since it is usually easier for them to monitor the fetal heart rate in that position. According to World Health Organization (WHO), care of a woman during second stage in a normal birth should promote the adoption of position preferable by the mother except horizontal position. Women should not be forced to adopt any particular position that is uncomfortable to them; rather they should be assisted to assume position of their choice that is not harmful to both the mother and the fetus. The health attendants should be equipped with all the necessary training to be able to support the evidence based practice (WHO, 2018).

According to research, 98% of women still give birth in lithotomy position in Nigeria (Diorgu *et al.*, 2016). This current trend of practice of midwifery in most hospitals in Nigeria during second stage needs to be given attention. One of the known interventions for preventing child/maternal complications and death during labour involves the adoption and application of appropriate birthing positions during the stages of labour. Abnormal or inappropriate birthing positions during the stages of labour can lead to death and complications afterwards. Krywko and King (2021) stated that when venous return from the lower extremities back to maternal heart is impeded due to compression of inferior vena cava and aorta by gravid uterus in horizontal position, there will be reduced blood flow to the placenta and this may invariably lead to morbidity and mortality to the mother and the fetus.

Midwives and other care givers do not encourage women to make their choices of birthing positions during labour especially during the second stage. On the contrary, they encouraged the conventional lithotomy position where the women are made to lie on their back to bear down during delivery.

### 1.1. Research Questions

The study sought to answer the following questions:

- Which are the midwives' preferred birthing positions during the second stage of labour?
- What are the reasons for midwives' preferred birthing positions during the second stage of labour?

## 2. Literature Review

### 2.1. Birthing Positions

The positions the woman in labour adopt during the time of delivery is termed birthing positions. Birthing positions are classified into vertical (also called upright, alternative position or evidence-based position) and horizontal positions (Macdonald, 2011; Tew, 2013). In upright position, the pregnant mother's third and fifth vertebrae is somehow vertical than in horizontal position where the woman's weight is supported by her back while lying down on the bed. The upright positions are the positions of preference and they includes; kneeling position, all-fours position, sitting position, standing position, semi-recumbent position, squatting position and semi-squatting position. In kneeling position, the mother uses her knees with her trunk in vertical position and her palms on the ground or on her legs as support. In standing position, the woman stands with her legs in standing position as the name implies during delivery with her two legs apart from each other to allow the easy delivery of the baby. In semi-recumbent position, the mother uses a pillow or a wedge to be raised at about angle 30°, thereby reducing the weight of the gravid uterus on the back of the woman. The mother flexes the hip and the knees in squatting position. The semi-squatting consists of half-sitting position between the squatting and standing positions. The woman is standing while squatting at the same time. In all-fours as the name implies, the woman kneels with her two knees and leans forward with her both hands hence balancing in both her two knees and hands, thereby widening the pelvic cavity more (Gizzo *et al.*, 2014).

Horizontal birthing position includes recumbent (supine), lithotomy and lateral positions (Gizzo *et al.*, 2014). In recumbent position the woman delivers while lying flat on her back. In the lithotomy position, the woman's legs are supported by stirrups as she is lying flat on her back. In lateral position, the mother delivers while lying on her side and it not harmful to both the woman and the baby, compared to the supine and lithotomy positions (Gizzo *et al.*, 2014). These birthing positions evolved and developed over time.

## 3. Methodology

This study adopts the descriptive survey research design. According to Armitage, Murugan and Kato (2011), this design is the most appropriate in the measurement of perception, and captures accurately the attitudes, opinions, behaviours and characteristics of a population or sample. Survey research design tries to systematically describe a population, situation or phenomenon using survey instruments of questionnaires, interviews and one-on-one meetings. Therefore, this study adopted a mixed methods research design that employed quantitative and qualitative components in the work. Simple random sampling method was used for quantitative data collection. Lottery method was used whereby each midwife that met the inclusion criteria in each hospital where the study was carried out was given a number and after which the numbers were randomly selected for the study. The questionnaires were administered by the researchers and the duly completed questionnaires were retrieved on the spot. Interview guide was also employed in the collection of data. In this method, the researchers had a face-to-face contact and interaction with the respondents. Open-ended questions were used and these consist of the interviewer asking each respondent the same questions and probing for clarity as may be necessary. The interviews were scheduled and each interview took an average of forty five minutes to one hour. Data were collected through audio recording device and writing materials, which were later transcribed. It took about 4 weeks to carry out the field work.

Descriptive and inferential statistics methods were used to analyze the quantitative data generated so as to achieve the objectives of the study. The results were presented in frequency counts and percentages; to show the occurrence of each of the variables. The qualitative data gotten through one to one interview were analyzed using thematic review to determine their preferred maternal birthing positions during second stage of labour. Coding of the key concepts into categories and themes was carried out and were transcribed and analyzed systematically. Coding involves the labelling of ideas to enable the researchers make comparison about pieces of data and the phenomenon. First each transcribed interview was selected and read through, and then repeated to ensure clarity. Repetitive words or phrases were noted, the repetitive perceptions were observed, and similarities and differences were noted. Categories were also identified and noted. The identified categories were reviewed and named and a short description of the category written. Smaller categories were created as sub-themes and descriptions were reviewed and themes were formed across the written categories.

## 4. Data Presentation

### 4.1. Socio- Demographic Data (n=100)

Items	Frequency	Percentage (%)
<b>Age (Yrs)</b>		
18-30	7	7
31-40	34	34
41-50	40	40
51-60	19	19
<b>Qualifications</b>		
RM	66	66
B.Sc	30	30
M.Sc	4	4
<b>Years of Working Experience</b>		
01-May	5	5
06-Oct	20	20
Nov-15	24	24
16-20	34	34
21-25	7	7
26-30	7	7
<b>Marital Status</b>		
Single	18	18
Married	73	73
Widowed	9	9
<b>Rank - Professional Status</b>		
Midwifery Officer II	10	10
Midwifery Officer I	38	38
Senior Midwifery Officer	40	40
Principal Midwifery Officer	7	7
Chief Midwifery Officer	4	4
Others	1	1

Table 1: Socio-Demographic Data Analysis

#### 4.1.1. What Is Your Most Preferred Birthing Position?

Birthing Position	Frequency	Percentage
Horizontal	79	79
Dorsal	14	14
All fours	2	2
Squatting	1	1
Semi dorsal/Sitting Position-	4	4
Total	100	100

Table 2: Most Preferred Birthing Position

Table 2 above shows the most preferred birthing position by the midwives. The result showed that 79%, 14%, 2%, 1%, 4% preferred the lithotomy, dorsal, All-fours, squatting and sitting positions respectively. The result showed that 79% preferred the horizontal position, 14% preferred the dorsal position, 2% preferred the all-fours, 1% preferred the squatting and 4% preferred the sitting position. Therefore the result showed that majority (93%) of the midwives preferred the horizontal birthing position.

#### 4.1.2. Do You Choose Your Most Preferred Birthing Position as a Result of It Being Convenient and Comfortable for You?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	85	85.0	87.6	87.6
	No	9	9.0	9.3	96.9
	Neutral	3	3.0	3.1	100.0
	Total	97	97.0	100.0	
Missing	System	3	3.0		
Total		100	100.0		

Table 3: Reasons for Most Preferred Birthing Position.

Source: SPSS Output

Table 3 shows the response of midwives on the reason for their most preferred birthing position, 85% preferred their birthing position because it was simply convenient for them while 9% was not simply because of it being convenient for them, 3% were neutral. Therefore the result showed that the maternal birthing position preferred by the midwives was simply because it was convenient for them.

1. Midwives' Preferred Birthing Positions during second stage	1.1 Horizontal positions are the best for mothers and midwives 1.2 Mothers birthing position preference 1.3 Midwives trained to use supine position
2. Midwives' Reasons for Preferred Birthing Positions	2.1 Alternative positions are difficult to use 2.2 Birth attendant perceived fear of complication.

Table 4: Thematic Review

#### 4.1.2.1. Theme 1: Midwives' Preferred Birthing Positions during Second Stage

The theme deals with midwives preferred birthing positions during second stage of labour and are analyzed under the following sub themes: Horizontal positions are the best for mothers and midwives, mothers birthing position preference, midwives trained to use supine position, alternative positions are difficult to use, birth attendant perceived fear of complication, midwives lack requisite skills for alternative positions.

#### 4.1.2.2. Theme 1.1 Horizontal Positions Are the Best for Mothers and Midwives

Majority of the respondents perceived horizontal birthing positions as the best for both the woman in labour and the midwife. They find it convenient and comfortable for both the midwife and the mother. With this in mind, they frequently use the supine position for delivery. One of the respondents noted, '...lithotomy position is what we normally prefer during second stage. They are very good and it is easy to utilize horizontal positions during second stage of labour. It does not require special equipment. We prefer them during delivery and it is comfortable and convenient for the midwife and the mother. We also do not have the needed equipment. We are not used to them practically too' (RN, RM, worked in labour ward for 8years).

#### 4.1.2.3. Theme 1.2 Mother's Birthing Position Preference

The respondents underscore that majority of the women prefer supine position as the position of choice and spontaneously go for it during second stage of labour. Some of the mothers are usually aware that supine position is what is used and they comply without any objection.

A respondent notes, '...We prefer horizontal position in our facility during second stage. The women position themselves that way and find it uneasy to change to other birthing positions. Majority of the women may not know any other position other than lying down. We do not train them to use any other position during second stage other than supine position. They are not allowed to make choice of birthing position during second stage. (RN, RM, worked in labour ward for 10 years).

#### 4.1.2.4. Theme 1.3 Midwives Trained to Use Supine Positions

Majority of the midwives were trained and skilled in horizontal birthing position and as such do not bother to embrace upright birthing positions. A respondent states '...Lithotomy position is what we prefer. Sometimes, mothers may be uncomfortable when pushing in lithotomy position, but we do encourage them to persevere. Indeed, we are trained that way and I have not really experienced delivery in other positions, other than lying down.' (RN, RM worked in labour ward for 5 years). One other respondent also noted '...we prefer lithotomy position during second stage. Apart from that, I was not trained to use other positions. We are not like traditional birth attendants who use squatting position. Above all, observation and monitoring are made easier in lithotomy position; you have a clear view of what is going on and also help to prevent complications such as cord prolapse, tear, etc.' (RN, RM, worked in labour ward for over 30years)

#### 4.1.2.5. Theme 2: Midwives' Reasons for Not Using Alternative Birthing Positions

Data available to this study reveal that midwives kept to the use of horizontal birthing position instead of using the alternative birthing position for a number of reasons and these are outlined in theme 2.

#### 4.1.2.6. Theme 2.1 Alternative Positions Are Difficult to Use

Few of the respondents acknowledge that alternative birthing positions are very good, though can be difficult to use especially when the facilities are not available. Most of the labour wards are not spacious enough for a woman to use upright position. One of the respondents' notes, '...we normally use semi-recumbent position in the facility. Knowing that the horizontal positions can cause problem during second stage of labour and given that our labor ward is not equipped with alternative birthing equipment, we create one for ourselves. It is not easy, but we are coping very well. We either raise the couch up or use pillows to raise the mother in a half-sitting position.' (RN, RM, worked in labour wards for 10years). These efforts of midwives make the use of upright birthing position possible, at least horizontal position is avoided.

#### 4.1.2.7. Theme 2.2 Midwives Perceived Fear of Complication

Majority of the respondents were of the opinion that baby might fall off in upright position, thereby leading to complications or death. When the woman is lying down, there is no fear of baby slipping off, and the midwife is more relaxed. One of the respondents remarked, '...we don't adopt other positions such as squatting or standing which can make the baby to slip off, thereby leading to head injury or death. Indeed, such positions are not convenient for women during second stage of labour. They are full of risks and can generate complications. So, to avoid maternal and fetal death, they need to be avoided.' (RN, RM. Worked in labour ward for 20 years) In the same vein another respondent notes '...we cannot decide to use other birthing positions so that we will not attract problems for ourselves. Other positions such as squatting and standing positions are risky, because if you don't take time, the baby might just fall, and there will be head injury and the midwife will be in trouble' (RN, RM BScN in view, 20years experience).

### *4.2. Discussion of Findings*

#### 4.2.1. Most Preferred Birthing Position

As with other endeavors of life, when faced with choice, one is meant to prefer one over another. In the study, 79% of the midwives preferred the horizontal position, 14% preferred the dorsal position, 2% preferred the all-fours, 1% the squatting position and 4% the sitting position. The reason for their most preferred choice of birthing position was simply because it was that which was convenient and comfortable, enabling them to have clear view. This is in line with a study by Gyesaw and Ankomah (2013), midwives in Cape Coast Metropolitan hospital preferred the lithotomy or supine birthing positions during second stage because it is convenient for the birth attendants, hence the midwife will have easy access and a clear view of what is going on medically. Unfortunately, they noted that what might be good for the birth attendant may not be necessarily good for the labouring mother who feels uncomfortable and humiliated to push without the force of gravity (Gyesaw & Ankomah, 2013). This is similar also to a study in South Africa by Musie et al. (2019) to find out the midwives' preferences on different maternal birthing positions. The midwives seek their own comfort rather than that of the woman in labour because they are in control of labour ward and do what is comfortable and convenient for themselves. It was also indicated that another reason for their preference of horizontal positions is that they enable the attendants to have a good view of the perineum so that monitoring would be easier.

Majority of the midwives prefer the horizontal birthing position and perceived it to be advantageous, more convenient and comfortable birthing position because it enables them to properly observe and monitor the mothers. This is corroborated by responses from midwives during the interview section where they opined that they use the horizontal position because it is convenient for them and the mother. While horizontal birth position may be convenient for the midwife; however, it is inappropriate for the health of the unborn child and the mother as it prevents the free flow of blood and reduces the ability of the mother to push (Renfrew et al., 2014).

That the lithotomy and dorsal positions are comfortable for the midwife is in line with a study conducted in the United States of America which explored how the midwives perceive the horizontal positions during second stage of labour. The study stated that many caregivers prefer back-lying or semi-sitting positions because of convenience and comfort (Renfrew et al., 2014). Majority preferred to use the horizontal positions because it is comfortable for the midwives even though it may be uncomfortable to the woman in labour, and have negative effect on the baby in-utero. The lithotomy and dorsal positions from previous studies were shown not to be comfortable for the mother and child as it impedes blood flow and her ability to push thereby creating discomfort (Diorgu et al., 2016; Mselle & Eustace, 2020). Being a midwife-centred study, the result shows the lithotomy and dorsal positions as comfortable for the midwife. But as this deviates from previous evidence-based studies that proved that the lithotomy and dorsal positions are not comfortable for the mother and baby, a further study has to be carried out in the sampled hospitals to get the mothers' perceptions on the convenience and comfortability of the lithotomy and dorsal positions.

Further, the findings show that fewer respondents preferred the semi-recumbent, all-fours and squatting positions. For these few, the semi-recumbent, squatting and all-fours are advantageous because they make delivery faster and enabled the cervix to open easily during the second stage of labour. This is in line with evidence-based studies such as (Huang et al., 2019; Modrzejewska, Torbe & Torbe, 2019) that have shown these positions to be beneficial to the mother and child as it improves blood circulation and enables the pelvis floor to open optimally, thereby encouraging better movement and delivery.

### *4.3. Conclusion*

This study set out to determine the midwives' preferred birthing positions during the second stage of labour. The results from the study show that the majority of midwives preferred supine birthing positions due to convenience for mothers and midwives. Like every other branch of human endeavour, change is the only permanent thing given the fact that there is progress and development. Evidence-based research and practice have shown that the alternative birthing positions are more beneficial, less risky and enhance safe delivery and promote life. Be that as it may, midwives and mothers should be re-educated and enlightened on evidence-based approach. Women in labour should be allowed to make choice of preferred birthing position during second stage that is evidence-based, so that they will be active participants and not passive participants.

### *4.4. Recommendations*

It is very important that midwifery education programs include an evidence based understanding of best practices during the second stage of labour especially as it pertains to positioning. There is the need to establish a mandatory



updating training for the midwives on evidence-based maternal birthing positions through regular update courses, workshops, seminars and campaigns. There is also need to further research on whether or not the supine position is comfortable and convenient for the laboring woman and her baby.

#### 4.5. Contributions to Knowledge

This work has brought out the significance and critical dimension of the second stage of labour and that is why the second stage cannot be compromised. This work has also increased and widened the literature available for research on midwives preferred birthing positions and can be used to promote change.

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