Original Article

Pregnant Women's Preferred Birthing Positions In A Tertiary Health Facility In Cross River State, Nigeria

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Abstract

Objective: In recent times, there have been a shift in the focus of health sector towards respectful maternity care. The concept of respectful maternity care is inclined towards client centred care with the right of women to make informed decisions concerning birth choices. The right of a woman to decide which position to adopt during childbirth has been limited the supine position in most maternity service centres and hospital settings. This study sought to investigate pregnant women's preferred birthing positions in a tertiary health care facility in Calabar, Cross River State, Nigeria

Materials and methods This study utilized the descriptive cross-sectional design to recruit 169 pregnant women using the purposive sampling techniques. The instrument for data collection was a structured and validated questionnaire.

Results: Finding showed that 89.3% had good knowledge on birthing positions. Also, a good number of participants preferred the squatting position and position change as they deem comfortable during childbirth. Supine positions where the least preferred. Additionally, most participants agreed that level of education, age, previous childbirth familiarities, place of birth and support from midwives were factors that could influenced their choice of birthing positions.

Conclusion: Based on these findings, the researchers recommended that midwives update their knowledge on the different birthing positions in order to educate and assist pregnant women who may desire these positions during childbirth. This will encourage the utilization of Skilled Birth Attendants (SBAs) which will help reduce maternal morbidity and mortality that would occur during childbirth on the overall.

Keywords: Pregnant women, Childbirth**,** Preferred birthing positions, Knowledge,

Introduction

Over the last two decades, research supporting the benefits of one birthing position over another, as well as the preference of one birthing position over the other among pregnant women, has been scrutinized. Protecting the woman's right to

assume the position of her choice during childbirth is a critical component of providing respectful maternity care. (Gizzo , Gangi, Noventa, Bacile, Zambon, Nardelli, 2014). Birthing positions are the "physical postures" that a pregnant woman can take when giving birth (KANGE'THE, Karonjo, and NancyMaingi). These physical postures include standing/squatting with a partner or a prop, kneeling upright or on hands and knees, and using a birth seat (Melissa et al., 2014). Standing/squatting with a partner or prop, kneeling upright or hand and knees, using a birth seat, non-upright positions such as supine, lithotomy, lateral, and the McRobert's position are examples of the physical postures that a womancan adopt during childbirth (Hemmerich A, Geens E, and Diesbourg, 2018; Yadav et al, 2021). Denying a woman to adopther choice of birthing position, among other variables, can create barriers to her use of facility-based childbirth care where skilled birth attendants can be found.

Building provider's competence and confidence to support a range of birthing positions can help to create more client centred maternity services that may be associated with better satisfaction and utilisation of the facility-based child birth services (Gupta, Hofmeyr & Shehmar, 2012). A number of studies have shown some pregnant women preferred to adopt birthing positions. For instance, findings from a mixed method study by Badejoko et al. (2016) in Ile-Ife, revealed that majority of the pregnant women expressed their preference for the squatting position and standing positions. Also, in a prospective trial by Moraloglu et al. (2017), the duration of the second stage of labour was found to be significantly reduced in pregnant nulliparous women who were assigned the squatting position; they were less likely to be induced, and their Visual Analog Scale score was lower than those who were assigned the supine position. According to Gizzo et al., 2014, no one position has to be legislated or regulated for most people giving birth. The United States midwives (2012) stresses importance of midwives to be flexible in allowing mobility during the process of childbirth as the woman's choice of birthing positions are critical to supporting natural and positive birth experience. Equally, WHO (2014) recommends that women in labour should choose whichever posture they like while avoiding lengthy periods of laying supine, as all ideal positions are extremely relevant to all women and should be part of any professional birth attendant's repertory. In addition, the Royal College of Midwives suggests using active and upright positions to aid labour and delivery, which will help reduce the number of expectant women who choose to give birth with inexperienced birth attendants. In addition, World Health Organization reports that upright birth postures during the second stage of labour may reduce episiotomy and instrumental vaginal births. (WHO, 2018; WHO, 2021).

Statement of the problem

The benefits of the different birthing positions in encouraging safe births with SBAs cannot be overemphasised. A study by Terry, Westcott, O'Shea and Kelly (2006), indicated that during labour and delivery, non-supine positions were discovered to have clinical benefits without putting the mother or the baby at danger. Improved integrity of the perineum, reduction in vulvar oedema, and decrease blood loss were among the improved maternal outcomes. However, in most health care facilities in the sub-Saharan including Nigeria, pregnant women who give birth are rarely allowed to make the choice to assume any preferred birth position during childbirth. Most parturient would usually have little or no information about the different birth positions and are made to assume the supine position by midwives during child birth irrespective of their decision and whether or not they are comfortable with the supine position (Zileni et al, 2017; Abubakar, Garba, Rabiu., 2020). Zileni (2017) specifically discovered that 99.2% of pregnant women in Malawi only knew about the supine positions. This implies that pregnant women were not knowledgeable about other birthing positions except the supine. Badejoko (2016), in their study also discovered that many women did not know about the different birth postures as only 0.6% had high knowledge, compared to 19.7% who had fair knowledge and the remainder 79.7% who had low knowledge. In Katsina, the authors noted that more women knew how to squat than in Ile Ife (Badejoko et al, 2016). However, in some health care facilities pregnant women who are aware and wish to choose a birthing position other than supine positionare denied their preferred choice. This situation has culminated to women patronising unskilled birth attendants such as Traditional Birth Attendants (TBAs), because of dissatisfaction with facility- based childbirth services. Consequently, contributing to the increase in maternal mortality in Nigeria from 815 in 2015 to a projected 917 in 2021 per 1000 live births (World health Organization, 2015; Nigeria Maternal Mortality Rate 2000-2021). This is worrisome and does not align with the tenet of safe motherhood and respectful maternity care (John, Duke, Esienumoh, 2020). In addition, there is

paucity of evidence to support the use of alternative birth positions aside the supine in the study area. It is based on this premise that the researchers were interested in assessing pregnant women preferred birthing positions in the University of Calabar Teaching Hospital, Calabar, Cross River State, Nigeria.

The study specifically sought to answer the following questions:

i. What knowledge do pregnant women assessing care in University of Calabar Teaching Hospital (UCTH), Calabar have on birthing positions?
ii. What types of birthing positions do pregnant women in UCTH prefer?
iii. What are the perceived factors that influenced pregnant women's preferred birthing positions?

Materials and methods

This study was a facility-based study that utilised the cross-sectional descriptive design to investigate pregnant women's preferred birthing positions. The setting for the study was the University of Calabar Teaching Hospital, Calabar Cross River State, Nigeria. This health care facility is the only tertiary health care facility in the state and serves as a referral centre for the primary and secondary health care facilities in the state. Evidenced-based and quality care is expected from this level of care which makes it suitable for the study.

The population of study comprised of all pregnant women who attended antenatal clinic in the University of Calabar Teaching Hospital, Calabar within the months of April and June, 2019. However, a total of 169 pregnant women who were available during the study period, and met the inclusion criteria were purposively selected and recruitment for the study. Inclusion into the study was premised upon physical and mental stability of the pregnant women, voluntary participation, and acceptance, and having given birth at least once. Nulliparous women and those unwilling to participate in the study were excluded.

The instrument for data collection was a structured and validated interviewer-based questionnaire. Section A was on socio demographic data; section B provided information on pregnant women's knowledge on birthing positions. Section C was to elicit data on pregnant women's preferred birthing positions, while section D contained information on the perceived factors that influenced pregnant women's preferred birthing positions. Furthermore, the questions comprised of multiple-choice questions for socio-demographic data, "yes' or "no" for section B, 4 point Likert scale for section C and 2-point Likert scale for section D. The instrument was scored as follows: for sections B, Yes=1, No= 2; Section C - Strongly Agree = 4, agree = 3, Disagree = 2, Strongly Disagree= 1. In section D, Agree was scored 2 and Disagree =1. Cronbach's alpha which measures the internal consistency of instruments was used to determine the reliability of the questionnaire. The reliability coefficient was 0. 82. The questionnaire was administered face-to- face by the nurse intern and 2 trained research assistants and the time required for completion of each questionnaire was about 20 minutes.

Permission was obtained from the UCTH, Calabar Nursing Services Department. A letter of permission for the study was submitted to the Director of Nursing Services, UCTH, Calabar, who granted permission for the nurses to allow data collection from the antenatal clinic and antenatal ward of the hospital. This was possible following detail explanation given on the objectives of the study. Participants were informed about the study and that they have the right to withdraw at any stage of the research without being penalized. Participation in the study was voluntary, and signed consent was obtained from all participants without force. To maintain anonymity, no names were written on the questionnaire, and the information gathered was entered into Microsoft excel using codes issued to each copy of the questionnaire. The completed copies of the questionnaire were placed in a sealed envelope to maintain confidentiality. As a result, hard copies of the study's data were kept under lock and key, while soft copies were password-protected electronically. Data were descriptively analysed, and the results were summarized in percentages and displayed in tables and charts.

Results

Data from Table 1 indicates that, from a total of 169 study participants, 13 (7.7%) were aged 16-20 years, 74 (43.8%) were aged 21-25years, 54 (32.0%) were between 26-30 and those aged 31 years and above were 28 (16.6%). On marital status, 23 (13.6%) were singles, 143(84.6%) were married, 3 (1.8%) were divorced/separated. Concerning their religion, 162 (95.9%) were Christians while Islam were 7 (4.1%). Educational status of the participants revealed that, 38 (22.5%) had primary education, those with secondary education were 74 (43.8%), tertiary was 38 (22.5%) and 19 (11.2%) had non-formal education. Also, data on parity shows that para1-2 were 31 (18.3%), Para3-4 were 86 (50.9%) while Para 5and above were 52 (30.8%). For participants' place of childbirth, 56(33.1%) indicated hospital, 26(15.4%) their homes and 87(51.5%) Traditional Birth Attendants' residence.

Table 1: Participant's socio-demographic characteristics (n = 169)

Variables	Response options	Frequency(N)	Percentage (%)
Age	16- 20 years	13	7.7
	21- 25years	74	43.8
	26 -30 years	54	32.0
	31years and above	28	16.6
	Total	**169**	**100**
Marital status	Single	23	13.6
	Married	143	84.6
	Divorced/separated	3	1.8
	Widowed	-	-
	Total	**169**	**100**
Religion	Christianity	162	95.9
	Islam	7	4.1
	Others	-	-
	Total	**169**	**100**
Educational status	Primary	38	22.5
	Secondary	74	43.8
	Tertiary	38	22.5
	Non-formal	19	11.2
	Total	**169**	**100**
Parity	Para 1-2	31	18.3
	Para 3-4	86	50.9
	Para 5 and above	52	30.8
	Total	**169**	**100**
Place of birth	In the hospital	56	33.1
	at home	26	15.4
	at the Traditional Birth Attendant's (TBA) house	87	51.5
	Total	**169**	**100**

Source: Fieldwork, 2019

Analysis of research questions

Research question 1: What knowledge do pregnant women have on birthing positions?

Table 2 revealed the knowledge on birthing positions among pregnant women attending antenatal clinic in UCTH, Calabar. Out of 169 study participants, 143 (84.6%) accepted that birthing positions were the physical postures that a pregnant mother may assume during childbirth while 26 (15.4%) said 'no'. As regards birthing position being upright or non-upright, 156 (92.3%) said 'yes' while 13 (7.7%) said 'no'. On whether upright birthing positions include standing, squatting, kneeling and sitting on a birth seat, 159 (94.1%) said 'yes' while only 10 (5.9%) said 'no'. One hundred and fifty-five, representing 91.7% said "non-upright birthing positions includes lying on the back and the sides" while 14(8.3%) said 'no'. On whether preferred birthing positions improved the satisfaction of women during childbirth, 159 (94.1%) said 'yes 'while 10 (5.9%) said 'no'. As regards allowing women to assume birthing position of their choice to reduce pain and time spent during labour, 162 (95.9%) said 'yes' and 7(4.1%) did not accept this statement. Furthermore, the final score for level of knowledge on birthing positions was obtained by adding up participants' scores on all items measuring knowledge. The minimum score was 6 while the maximum score was 9. Thus, scorers from 6- 7 were classified as poor knowledge while scorers between 8 and 9 were classified as having good knowledge on birthing positions. As a result, 151 (89.3%) had good knowledge on birthing positions, while 18 (10.7%) had poor knowledge on birthing positions. **Figure 1** reveals this summary.

Table 2: Pregnant women's level of knowledge on birthing positions (n = 169)

Statements	**Yes**	**No**
The physical postures that a pregnant mother may adopt during childbirth are known as birthing positions.	143 (84.6%)	26 (15.4%)
Birthing position can be upright or non-upright	156 (92.3%)	13 (7.7%)
Upright positions include standing, squatting, kneeling and sitting on a birth seat.	159 (94.1%)	10 (5.9%)
Non upright birthing positions include lying on the back and the sides.	155 (91.7%)	14 (8.3%)
Preferred birthing positions could improve the satisfaction of women during childbirth	159 (94.1%)	10 (5.9%)
Allowing women to assume the birthing position of their choice reduces pain and time spent during labour	162 (95.9%)	7 (4.1%)

Source: Fieldwork, 2019

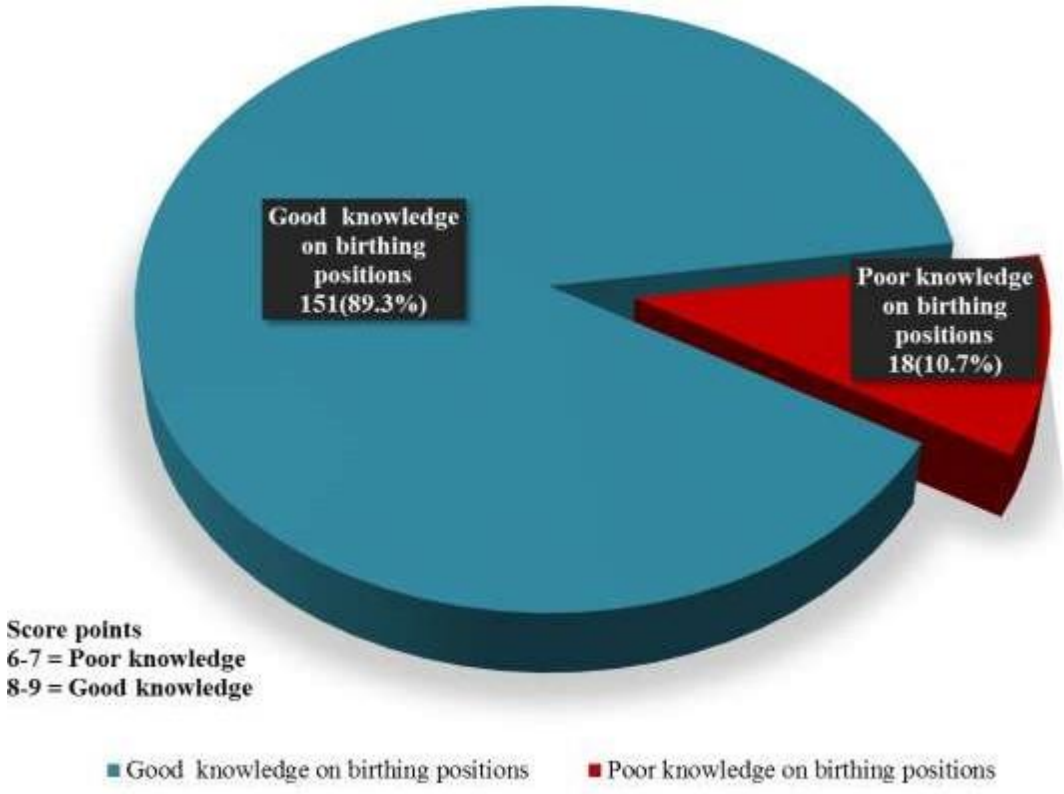
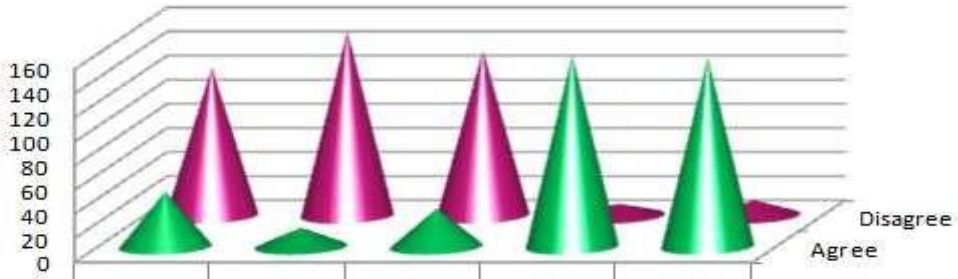


Figure1: An exploded pie chart showing summary of pregnant women's knowledge on birthing positions (n = 169)

Research question 2: What type of birthing positions do pregnant women prefer?

Result on the preferred birthing positions by pregnant women showed that out of 169 participants that took part in the study, 6 (3.6%) strongly agreed, 40 (23.7%) agreed, 97 (57.4%) disagreed and 26 (15.4%) strongly disagreed that they preferred to lie on their back during childbirth. Four, representing 2.2% strongly agreed that they preferred the standing position for childbirth, 12 (7.1%) agreed, 138 (81.7%) disagreed and 15 (8.9%) strongly disagreed to the statement. On preference to kneeling during childbirth, 13 (7.7%) strongly agreed, 19 (11.2%) agreed, 113 (64.9%) disagreed and 24 (14.2%) strongly disagreed. Also, on the choice for squatting position, 68 (40.2%) strongly agreed, 91 (53.8%) agreed, 7 (4.1%) disagreed and 3 (1.8%) strongly disagreed. Concerning the statement 'I prefer changing to different birthing positions for comfort during childbirth, 68 (40.2%) strongly agreed, 88 (52.1%) agreed, 13(7.7%) disagreed and none strongly disagreed to the statement. Subsequently, the scores for strongly agree and agree were collapsed into agree, representing participant's responses on preference to the various birth positions while those of strongly disagree and disagree were merged into disagree to indicate participant's non-inclination to the varied birth positions. This summary is provided in **Figure 2.**



	I prefer to lie on my back during child birth	I prefer the standing position for childbirth	I prefer to kneel during childbirth	I prefer the squatting position for childbirth	I prefer changing to different birthing positions for comfort during childbirth
Agree	46	16	32	159	156
Disagree	123	153	137	10	13

Source: Fieldwork, 2019

Figure 2: A conical bar chart showing summary of preferred birthing positions by the pregnant women (n = 169)

Research question 3: What are the perceived factors that influenced pregnant women's preferred birthing positions?

Statements	Agree	Disagree
Does a pregnant woman's degree of education impact her choice of birth position?	141 (83.4%)	28 (16.6%)
Is a pregnant woman's choice of birth position influenced by her age?	143 (84.6%)	26 (15.4%)
Does past childbearing experiences influence the birthing positions choice by pregnant women?	164 (97.0%)	5 (3.0%)
Does a midwife's support for a pregnant woman's desired birthing position influence her preferred birthing position during childbirth?	160 (94.7%)	9 (5.3%)
Is a pregnant woman's birth position influenced by her place of birth?	150 (88.8%)	19 (11.2%)

Table 3: Perceived factors influencing preferred birthing positions among pregnant women attending ante-natal clinic in UCTH, (n=169)

Table 3 shows the perceived factors that influenced preferred birthing positions among pregnant women. Pregnant women numbering 141 (83.4%) agreed that level of education influences pregnant women's choice of birthing position while 28(16.5%) did not agree. With regards to age influencing a pregnant woman's choice of birthing position, 143 (84.5%) agreed while 26 (15.4%) did not agree to this item. On whether past childbirth experiences could affect pregnant woman's choice of birthing position, 164 (97.0%) and 5(3.0%) agreed and disagreed respectively. Similarly, one hundred and sixty, representing 94.7% agreed that midwife's support towards pregnant women's choice of birthing position could affect their preferred birthing positions while 9(5.3%) did not agree with the statement. On whether place of birth could affect pregnant woman's preferred birthing position, 150 (88.8%) agreed while 19 (11.2%) did not agree to this statement.

Discussion

A satisfying childbirth experience is influenced by women's self-control, labour pain perception, expectations, and health care support. The possibility to change the position in labour might positively influence childbirth experience and also the good course and outcome of labour (Nieuwenhuijze, 2013).

Findings from table 2 revealed that majority of the participants had good knowledge on birthing positions. Knowledge on the upright (squatting, standing, kneeling and sitting on a birth seat) and non-upright positions (supine and lying on the sides) were significantly high. This finding corroborates the findings of Zileni et al. (2017) where 99.2% of pregnant women in Malawi knew about the supine positions. In contrast, the study by Badejoko (2016), revealed that majority of pregnant women in South western Nigeria had poor knowledge on the alternatives to supine position. However, participant's knowledge in the present study may not be unrelated to the fact that majority of the women had attained secondary education and could read and write. Also 30.6%, 45% and 24.3% of the women accepted giving birth in the hospital, their homes and TBA's home respectively.

As presented in Figure 2, most pregnant women preferred the squatting position. A good number of pregnant women preferred changing positions as they deemed comfortable with during child birth. This finding supports the result from the study conducted by Badejoko et al. (2016) in Katsina as most pregnant women in the study preferred the squatting position. The preference of the squatting position over other positions was also noted by Abubakar et al. (2020), that in their study of multiparous women in Kano, Nigeria, 60% of women who gave birth at home used the squatting position and were mostly helped by traditional birth attendants. Diorgu et al. (2016), in a survey of 110 mothers also discovered that 88% of women desired the alternatives to supine position. To the best of the researchers' knowledge, no study has been found to contradict the study findings. For obvious reasons, upright positions such as squatting, standing, kneeling and sitting have been found to have immense benefit to the child birth process (Moralogu,2017; WHO 2014; Terry et al,2006; De Jonge and Lagro-Janssen,2004; Gupta, 2018; Nieuwenhuijze,2013]. Therefore, it is recommended that pregnant women be allowed to assume their preferred birth position during childbirth for a positive birth experience.

Correspondingly, Table 3 indicates the various factors that influenced pregnant women preferred birthing positions. The identified factors include level of education, age, past childbirth experiences, midwives' support towards the choice of birthing position and the pregnant women's place of birth. These findings correspond with the result of a study conducted by (Nieuwenhuijze et al, 2013), which revealed that there was an association between higher level of education and women who desired alternative birthing positions. Also, previous homebirth experience and degree of pain during the second stage of labour was identified by the authors as factors that influenced women's choice of birthing positions in Netherlands (Nieuwenhuijze et al. 2012). De Jonge and Lagro-Janssen (2004) in a similar study discovered that sufficient guidance by midwives with regards to making available information on suitable birth positions was the most influential element in the selection of birthing positions by mothers. Therefore, the present study has shown that, women with higher education, older women and those who experienced childbirth with TBAs at ether their homes or TBAs' homes were more likely to prefer other birthing positions than the supine. This may be due to the fact that a significant number of pregnant women

(51%) put to bed at the TBAs' residence. The TBAs allow flexibility during childbirth as highlighted by Adatara (2020) and would provide an environment that will enable women adapt to the upright or non-upright birthing positions that they would prefer. Consequently, the women may feel satisfied with birthing experience provided by TBAs to the neglect of and return to the TBA's abode at other times for subsequent births. This implies that many pregnant women utilising facility-based antenatal services may eventually deliver either at their personal residence or the TBAs'.

On the overall, this study findings is consistent with various study findings (Ondeck, 2019; Declercq et al., 2007; Romano et al, 2008), which indicate that interfering with the normal physiological process of labour and birth in the absence of medical necessity increases the risk of complications for mother and baby. Some evidence-based care practices which promote physiological birth includes allowing freedom of movement for the labouring woman, providing continuous labour support, avoiding routine interventions and restrictions, and encouraging spontaneous pushing in no supine positions. Nurses and midwives are in a unique position to provide these care practices and to help childbearing women make informed choices regarding birthing positions based on evidence. Accordingly, using a variety of positions during second stage allows women to respond to the fetus' changing position as he or she descends, rotates, and moves through the birth canal. Standing, kneeling, and squatting help gravity bring the baby down and protect the birth canal and baby from excessive pressure.

Limitations

This study has limitations that may assist in the interpretation of findings. In the first instance, there was paucity of data on the study area. Also, study participants may not have been representative of the target population of study because of the utilisation of purposive sampling method, and this may limit the generalisation of findings.

Conclusion

This study concludes that pregnant women have good knowledge of birthing positions, and majority of them prefer squatting or changing to any convenient position during labour. However, pregnant women's choice of birthing positions are influenced by several factors, such as age, educational level of the woman, previous childbearing experience,midwife's support, and the birth environment. Studies reveal that encouragement to adopt a suitable and comfortable position during labour contributes to the woman's feelings of control with positive association with the birthing experienceand subsequent emotional well-being(Gupta, 2017;Priddis et al., 2012;Nieuwenhuijze, 2013).

Implication of study to midwifery practice

Midwives can contribute to women-centered care by proactively exploring women's preferences for birthing positions throughout pregnancy and birth, supporting women in developing well-informed choices and facilitating these choices where possible.

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Declaration of interest

The authors report no declarations of interest.

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