Full Length Research Paper

Midwives care actions in the management of labour pain in Plateau State, Nigeria

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One of the major determinants of maternal satisfaction in labour is adequate pain relief or rather the woman being able to cope with the pain. Since midwives are the major health care providers attending to women in labour, this study explored women's validation of the care midwives provide in the management of labour pain in Plateau state Nigeria using a descriptive cross sectional design. Women (n=126) were recruited from a hospital in Jos city, Plateau State. Participants completed the "Client Perception of Caring Scale" and thereafter were interviewed using a structured interview, a day after their delivery; all these were for the women to validate the care given to manage labour pain by the midwives. Mean age of participants was 28 years with a Standard Deviation = 5.6. Majority of the participants that is, 125 (99.2%) are married, 116 (92.1%) are Christians while 67 (53.2%) are multigravid. Findings showed that only 71(56.3%) of the women gave an average score to the midwives, 28 (22.2%) said the nurses really gave them listening ears and reassured them that all will be well and 33 (26.2%) said the interventions were very effective in helping them cope with the labour. Linear regression analyses revealed that there is no association between selected demographic factors (Age, Parity and Ethnicity) and outcome of care given by midwife. Women validated their management of labour pain by midwives to be on the average hence training and retraining of midwives in the area of labour pain management is essential and hospital administrators must employ more midwives into the labour wards so that one on one support is encouraged hence improving the overall satisfaction of labour for any woman.

Key words: Mothers, validation, midwives' care, labour pain, management.

INTRODUCTION

For all women, Labour involves pain. Often the pain of labour is the most severe pain that a woman ever has to face. The woman experiences some degree of stress as her system responds to the physical changes that prepare her to give birth. The pain a woman experiences during labour and birth is subjective, individualized and caused by a number of interrelating factors (Zwellin et al., 2006). Physical, affective, psychosocial and environmental components all shape the pain experience. The perception of labour pain is highly unique and differs from one individual to another though the intensity of pain stimuli in all individuals are the same.

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However, most women rate the pain of childbirth as the most painful experience of their lives.

Therefore, the art of nursing has brought about caring interventions in labour pain management such as massage, touch etc for reasons stated as follows; that women wish to be treated as a whole person by health professionals, they wish to be active participants in their own care, they desire that the treatment should not be worse than the labour and they feel that Western health care does not meet all of their needs (Jansen and Stauffacher, 2010).

Care is an investment of oneself for the benefit of another (person, group, or institution) without regard for personal gain. In nursing, care is the investment of one's personal resources in another in order to promote well-being. The nurse's personal resources may include, but are not limited to, knowledge, expertise, time, and emotional energy (Strickland and Dilorio, 2003). Genuine caring focuses on the very nature of a nurses' way of being. To care for every woman in her genuineness is a dignity-protective action that seems to be the very motive of midwifery care for women. It focuses on women's value as genuine humans and, specifically, as prospective mothers (Berg, 2005). The process of caring in nursing can be conceptualized in four levels; acknowledgment of the need for care, a decision to care, the actions and behaviors of the nurse intended to promote the welfare of the other and lastly actualization of the caring experience is the ultimate result of the caring process. The realization that caring has occurred promotes growth and satisfaction in both the nurse and her client (Strickland and Dilorio, 2003).

Quality care is the ultimate goal of nursing. In health care, quality is defined as the degree to which health services increase the likelihood of desired health outcomes which are safe, effective, efficient, equitable and are consistent with current professional knowledge (Naylor, 2003) hence the role of the nurse/midwife as stated in various nursing theories speaks of assisting, intervening, advocating and educating in all effort to promote health. This includes the use of non-pharmacological measures to manage labour pain. It has been found that the use of non-pharmacological pain relief measures by nurses in helping women in labour is supported by 47% of the state board of nursing in the United Kingdom and these therapies have shown positive results with minimal or no adverse effects (Benfield, 2001). Non-pharmacological therapies are largely directed towards prevention of suffering, they include measures like relaxation, breathing techniques, positioning, massage, hot/cold application, music therapy and aromatherapy. However, despite the wide array of non-pharmacological methods available for use in the relief of labour pain, not much has been seen used or taught to women for their use when they have labour pain, the worst of it is the pervasiveness of negative attitude towards women undergoing labour pain and lack of nurses'

interest in caring which has become increasingly problematic to the nursing profession in Nigeria. As the very essence of nursing which is caring is not routinely honored in the day to day activities of professional nurses (Duffy, 2009), more and more of its traditional activities have been progressively given away to other health professionals and increasing reliance on task has emerged making nursing to lack a unique function (Duffy, 2009) in Nigeria.

The process of labour and delivery of a child can be very painful, over 90% of women experience severe/unbearable labour pain (Charlton, 2005). Severe labour pain has been implicated in contributing to long term emotional stress with potential adverse consequences on maternal mental health and family relationships (Charlton, 2005). However it has been observed that nurses pay little or no attention to managing the pain of labour, they go about their routine nursing activities of hourly vital signs check, hourly fetal heart rate check and four hourly vaginal examination but leaving the women to go on in agonizing pain, labour pain is actually seen as a natural phenomenon that nothing can be done about. These adverse consequences can be prevented if adequate pain management is given to the laboring woman by the midwife.

Nigeria's total fertility rate is among the highest in Africa at 5.7 births per woman, with a population of 166.2 million people and women of child bearing age constituting about 31 million; only about 40% of the deliveries are attended to by trained midwives (Onasoga et al,, 2012). According to the Nigerian Demographic and Health Survey findings in 2008, about 60% of pregnant Nigerian women attended antenatal care but only 35% of deliveries are in health care facilities (National Population Commission Nigeria, ICF Macro, 2009). This may not be unrelated to the fact that the quality of care in health facilities is often low and according to Natukunda (2007) women in labour complained of unfriendliness, rudeness, aggressiveness and abusive attitudes of midwives as a factor influencing their choice of delivery at the hospital. With the Nigerian government focusing on achieving the millennium development goals by 2015, more effort is concentrated on saving mothers and newborn lives hence less attention is given to the quality of care that these midwives render in labour. The midwives critical role of providing labour support which includes: Advocacy; tangible support; emotional support that provides reassurance; emotional support that promotes control, security, and comfort; emotional support that requires the nurse's caring behavior; and informational support, is not being met with at the end of the day. That is why validation is important for the assessment of ac-tions in order to establish that they are correct, complete and being implemented as intended and delivering the intended outcome. It involves testing in order to confirm that client's needs are satisfied, however empirical data about Nigerian women's validation of labour pain

management by midwives is limited, hence the thrust of this study is to validate midwives care actions in the management of labour pain in Plateau State. Therefore the specific aims of this study were:

1. To determine midwives care actions in the management of labour pain.
2. To assess how effective the care actions are in the management of labour pain.
3. To validate the care given by midwives in the management of labour pain.

METHODOLOGY

Design

A descriptive cross sectional design was used in this study.

Participants

A simple random sampling technique was used to select the women who delivered in the labour wards of the Hospital. Women with an uneventful pregnancy and delivery, women who had a past history of normal deliveries and women age between 16 to 45years were included in the study while women with high risk pregnancies like multiple pregnancies and women with history of complications in past pregnancies were excluded from the study. The sample size estimates for the women was based on the anticipated proportion of women that come to deliver within 6 months in the hospital, having done a power analysis with 80% power, alpha of 0.05 and using a moderate effect size of 0.5, the estimated sample size needed was calculated to be 126 (Cohen, 1992).

Measures

The first instrument used for the study was a structured interview. According to Drucker in Duffy and Hoskins (2003), "Quality in a product is not what the provider puts in, it is what the customer gets out" hence the interview was used after delivery to validate the effects of the care given to the respondents by midwives and to ascertain whether the midwives were really of help to them in pain management hence providing better understanding of the responses of the participants and thereby increase credibility of the findings. Interviewing skills like communication and probing were used to get information from the respondents. The interview was developed by the researcher and employed only open ended questions. The interview was divided into two sections; Section A consist of the Demographic Proforma which asked questions as regards respondents age, marital status, professional qualification and highest academic qualification; Section B consist of questions aimed at determining midwives attitude to labour pain, the kind of care that was given and how effective was the care given in relieving labour pain.

The second tool used is the client perception of caring scale. It is a questionnaire designed to measure the client's response to the caring behaviors of the nurse. It was suggested that to study "only empirical indicators of caring from the nurse's perspective would not get at the essential structure of the caring interaction as experienced by the client". The items were developed from studies describing the reactions of clients to nurse–client interactions (Strickland and Dilorio, 2003). The content validity index for the client perception of caring scale was determined to be 1.00.

Construct validity was determined by using the LaMonica Empathy Profile. This tool, formerly known as the LaMonica Empathy Construct Rating Scale, is a 30-item self-report using a forced-choice format. Scores are obtained on five subscales: responding verbally; nonverbal behavior; respect of self and others; openness, honesty, and flexibility; and perceiving feelings and listening. The reliability index for this tool as a self-report was estimated by a coefficient alpha of .96 (Strickland and Dilorio, 2003).

The instrument was subjected to test before the actual administration. The reliability of the study instrument (Interview) was measured using the internal consistency reliability where a single measurement instrument was administered to a group of women on one occasion to estimate reliability, in effect the reliability of the instrument was judged by estimating how well the items that reflect the same construct yield similar results. Hence what was being looked for is how consistent the results are for different items for the same construct within the measure. 10 women from the hospital were interviewed after they delivered on the care they received from midwives (These women were not part of the study). The responses were analyzed to ascertain the reliability of the instrument. The correlation coefficient was 0.88 thus making the instrument reliable for use. The reliability of the client perception of caring scale was determined by the internal consistency approach. The standardized item alpha coefficient was calculated at .81. Item-to-total correlation averaged .41 for this scale (Adapted from Strickland and Dilorio, 2003).

Procedure

Approval for the study was obtained from the Hospitals' Institutional Review and Ethical Board. Verbal and written information about the study were provided and written informed consent was obtained from the participants. Midwives helped in identifying women who met the inclusion criteria for the study. The interview was conducted on the participants a day after their delivery; this was done in order to give them ample time to rest after the labour process. Privacy was ensured by meeting the women when they are alone and no health workers around during the interview process. The Client Perception of Caring Scale was administered to the client following the interview. The tool consists of 10 items that are rated on a 6–point summated rating scale. Each item value was summed to obtain the score. Items 5 and 8 are perceptions associated with non caring behaviors of the nurse, and the item value is reversed before being summed (Strickland and Dilorio, 2003). The study was conducted from September to November, 2012.

Analysis

Data were analyzed using the Statistical Package for Social Sciences (SPSS) version 16.0. Demographic data were analyzed using frequency and percentages. Analyzed data were presented in the form of tables, graphs and figures. Interview was recorded and transcribed. Statistical significance was set at $p < 0.05$. A linear regression model was used to test for an association between selected demographic variables (Age, ethnicity and Parity) and the outcome of midwives' care.

RESULTS

Demographic characteristics of participants

Table 1 shows that in total, 126 mothers participated in the study. Mean age of participants is 28 years. Majority

Table 1. Participant characteristics (n = 126).

Demographic characteristic	Frequency (%)
Age	
<20	12 (9.5)
21 – 30	79(62.7)
31 – 40	31(24.6)
41 – 50	4(3.2)
Marital status	
Married	125 (99.2)
Single	1(0.8)
Religion	
Christian	116 (92.1)
Christian	10 (7.9)
Parity	
Primigravida	52(41.3)
Multigravida	67(53.2)
Grandmultigravida	7(5.5)
Highest qualification	
No School	4(3.2)
Primary	79(62.7)
Secondary	11 (8.7)
Tertiary	10 (7.9)
Ethnic group	
Yoruba	6(4.8)
Hausa	102 (81.0)
Igbo	11 (8.7)
Others	7(5.5)

79 (62.7%) of the women are between ages 21 to 30 while 12 (9.5) are bellow age 20. Of the participants, 125 (99.2%) are married while only 1(0.8%) was single. Majority 116 (92.1) of the women are Christians while about 10 (7.9%) of the women are Moslems. Quite a good number of the women are multigravida with a frequency of 67(53.2%), primigravida had a frequency of 52 (41.3%) while 7 (5.5%) are grandmultigravida in parity. Majority of the women are primary school holders with a frequency of 79 (62.7%), 33 (26.2%) are secondary school holders, 10 (7.9%) have tertiary level qualification while only 4 (3.2%) did not go to school at all. Majority 12 (81.0%) of the respondents are Hausa, 11 (8.7%) are Igbo, 6 (4.8%) are Yorubas while 7 (5.5%) are from other Nationalities.

Mother's response to type of midwife care received for labour pain

Figure 1 shows the different interventions carried out by midwives on women to manage labour pain. 25 (19.8%) of the women said they had massage carried out on them, majority 28 (22.2%) said the nurses really gave them listening ears and reassured them that all will be well, 21 (16.7%) of the women said they had known about the breathing techniques in labour from midwives which they used in labour, 18 (14.3%) of the women took up different positions in labour that is, positions that they felt was most comfortable for them at that time. Some of the women had a combination of methods. 9 (7.1%) said they had massage carried out on them by the midwives and they combined it with the breathing technique, 13 (10.3%) said they had the breathing and positioning carried out while about 7 (5.6%) said midwives carried out massage on them, they used the breathing technique and they also changed positions.

Reported effect of care strategies by mother's who used them in labour

Figure 2 shows the reported effect of care strategies given by midwives on the women. 38 (30.2%) of the women reported that the care strategies by midwives were somewhat effective in reducing the labour pain however 33 (26.2%) of the women said the interventions were very effective in helping them cope with the labour hence reducing the labour pain while 55 (43.7%) said the strategies were not very effective.

The client perception of caring scale

Table 2 shows the women validating the care given by midwives by using the Client Perception of Caring Scale. The total mean score of perception of care given by midwives was 32.08 (SD ± 5.68). The scores for the client perception of care have a range of between 10 to 60, so scores of ≥ 35 were considered as positive care given by the midwives in the management of labour pain. Table 2 showed that 4 (3.2%) of the mothers rated the care they received <20, 43(34.1%) rated them between 21 to 30. These 2 are below average. However, majority 71 (56.3%) rated the midwives between 31 to 40 and 8 (6.3%) between 41 to 50. Table 3 shows findings from the five subscale of the client perception of caring, the mean subscale score for responding verbally with item 'I felt free to talk to this nurse about what concerned me' was 3.42 (SD ± 1.01), majority 46 (36.5%) of the women felt the care was as expected. The mean subscale for non-verbal behavior with items 'I felt the nurse was more interested in her job than my needs' was 3.21 (SD ± 1.49), 'I felt that this nurse could tell when something was bothering' me was 3.38 (SD ± 0.96), 'I could tell this nurse care about me' was 3.20 (SD ± 1.04) and 'I could tell this nurse wanted to make me comfortable' was 3.26 (SD ± 1.03). The mean subscale for openness, honesty and flexibility with item such as 'I felt secure with this
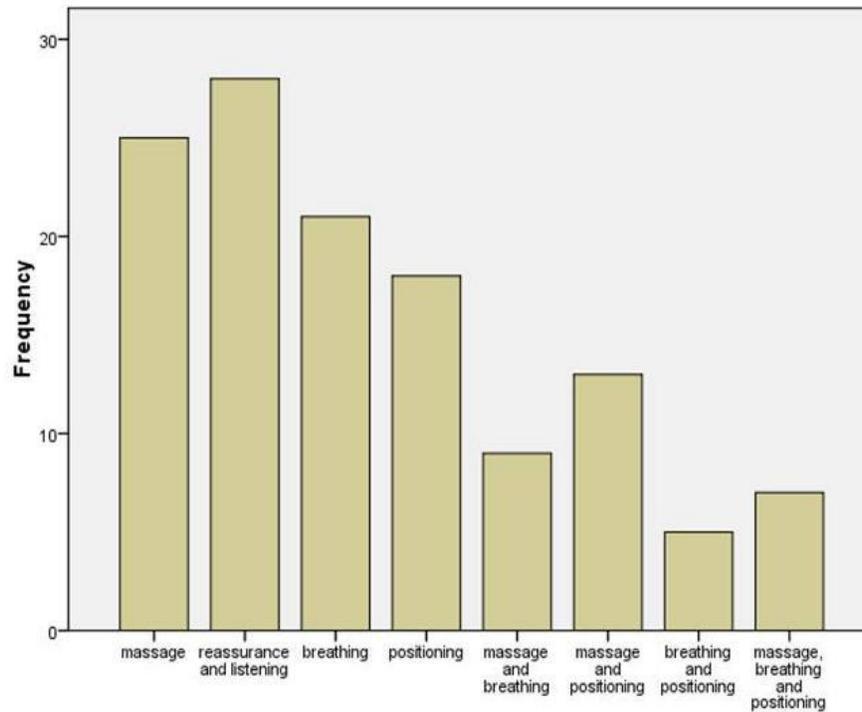
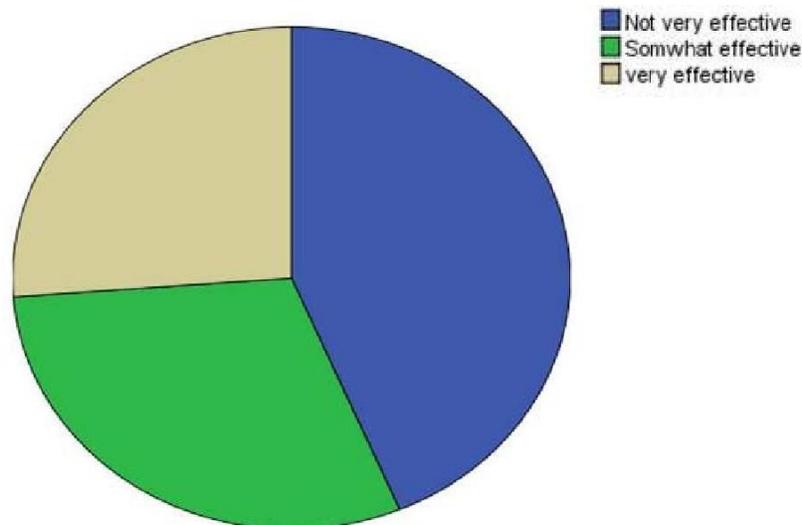**Figure 1.** Midwives interventions in managing labour pain.

Figure 2. Women's report of care given by midwives.

nurse taking care of me' was 3.30 (SD ± 1.03). The mean subscale for respect for self and others with items such as 'I felt the nurse really valued me' was 3.26 (SD ± 1.12), 'I felt frustrated with the nurse's attitude' was 3.28 (SD ± 1.63). While the subscale for perceived feeling and listening with items like 'I felt that the nurse listened to what I was saying' was 2.84 (SD ± 1.03), 'I felt reassured when this nurse cared for me' was 3.15 (SD ± 0.98).

Interview

Questions asked in the interview include; when in pain, what did the nurses do for you? Were the interventions carried out on you effective or not? What was the attitude of the nurse towards you while carrying out these interventions? Which intervention would you say is most effective? Positive statements made by the mothers

Table 2. Scores from client perception of caring Scale.

Scores/60	Frequency (%)
<20	4 (3.2)
21-30	43 (34.1)
31-40	71 (56.3)
41-50	8 (6.3)
51-60	0 (0)

Table 3. Client perception of caring scale, subscale and item means and standard deviation (n-126).

Characteristic	Mean	SD
Subscale 1: Verbal response (1 item)		
I felt free to talk to this nurse about what concerned me	3.42	1.01
Subscale 2: Non verbal behavior (4 items)		
I felt the nurse was more interested in her job than my needs	3.21	1.49
I felt the nurse could tell when something was bothering me	3.38	0.96
I could tell this nurse cared about me	3.20	1.04
I could tell this nurse wanted to make me comfortable	3.26	1.03
Subscale 3: Openness, honesty and flexibility (2 items)		
I felt secure with the nurse taking care of me	3.30	1.03
I felt the nurse really valued me	3.26	1.12
Subscale 4: Respect of self and others (1 item)		
I felt frustrated by the nurse's attitude	3.28	1.63
Subscale 5: Perceived feeling and listening (2 items)		
I felt that the nurse listened to what I was saying	2.84	1.03
I felt reassured when this nurse cared for me	3.15	0.98

during the interview, in validating care they were given by midwives include:

1. "Massage and breathing helped me to calm down and not feel so tense"
2. "I feel comforted by the nurse holding my hands and touching my leg"
3. "Therapies helped me feel relaxed"
4. "Presence of the nurse made me comfortable even though I was in pain"
5. "The fact that the nurses listened to me when I was in pain made me feel okay"
6. "I enjoyed the way nurses communicated with me in a calm manner"
7. "The nurses listened to me even when I was not making sense of the things I said"
8. "The nurses were really gentle when they were carrying out the massage"
9. "The nurses were of help to me in coping with labour pain"
10. "The nurses really encouraged me"

11. "They were nice and welcoming"

Factors associated with outcome of midwives care on labour pain

Linear regression analysis showed that selected demographic variables; Age (β = .092, t =1.005, p = .317), Religion (β = -.008, t = -.090, p = .928) and Parity (β = -.155, t = -1.720, p = .088) do not have any association on labour pain perception. Hence, there is no significant association between selected demographic variables and the outcome of midwives' care on labour pain (Table 4).

DISCUSSION

This study investigated mothers' validation of midwives care in the management of labour pain. Majority of the women in this study reported that they received reassurance from the midwives; midwives listened to

Table 4. Factors associated with midwives care on labour pain.

Model	B	Std error	Beta	t	Sig
(Constant)	2.461	.694	-	3.546	.001
Age	.014	.014	.092	1.005	.317
Religion	-.023	.252	-.008	-.090	.928
Parity	-.212	.123	-.155	-1.720	.088

them and then followed by massage. The care strategies used by midwives in this study is consistent with the study by Brown et al. (2001) on women's evaluation of intrapartum nonpharmacological pain relief methods used during labour, the common methods are breathing 42 (91.3%), relaxation 40 (87.0%), position change 26 (56.5%) and massage 25 (54.3%). However other studies have identified non pharmacological pain relief methods like movement and changes in position 66 (77.3%), counter pressure 48 (54.5%) and breathing exercises 56 (63.6%) as methods known and commonly used by midwives and other health care professionals (Almushait and Ghani, 2014). These techniques are meant to reduce painful stimuli and help the women cope with the labour pain. Little wonder that massage is seen to be the least commonly used method by midwives amongst the other methods in this study, this may be related to the fact that most of the labour wards in our Nigerian Hospitals are understaffed, the nurse-patient ratio is usually high hence carrying out massage for a woman in labour may take time and really hard to achieve.

Investigations have found these five non pharmacological methods, which include continuous labour support, touch, bath massage, maternal movement and positions to be very effective in reducing labour pain, increase maternal comfort and outcome of labour (Simkin and Ohara, 2004). A good number of the women in this study said the care strategies were "somewhat effective". This is consistent with other studies which reported that breathing techniques were the most effective pain relieving technique used during labor, followed by relaxation, and massage. The studies showed positive effects of therapies on pain relief and labour outcomes. A study particularly observed significant difference in pain relief after using non-pharmacological strategies, showing reduced pain as cervix dilation increased. It was concluded that the strategies were effective in reducing the intensity of pain in the studied parturient in labor for most of these studies (Brown et al., 2001; Keshavarz et al., 2008; Marie et al., 2009). However, many of the women in this study said the care strategies were "not effective", it is important to know that labor pain is a subjective multidimensional experience and not one specific technique or combination of interventions help all women or even the same woman throughout the labor experience (Brown et al., 2001). Evidence from high income countries have revealed that continuity of

midwifery care, continuous support during labour, a good relationship with their care giver and good support during labour and birth are more likely to require less pain, have an intervention free labour and birth, higher perception of control and be more satisfied with their intrapartum care (Hatem et al., 2008; Hodnett et al., 2009; Leap et al., 2010) hence when all these factors are not present, the likelihood of achieving an effective intervention is very slim.

In validating the care provided by midwives, majority of the women in this study reported an average satisfaction with the care they received from midwives in labour pain management. Previous studies in other countries revealed that perception of mothers showed that midwives played a pivotal role in preserving dignity during childbirth. The mothers appreciated feeling valued and respected and dignity was enhanced by nursing care that gave women their preferred level of control (Matthews and Callister, 2006) and others reported having received helpful nursing behaviours. These helpful labor-coping measures that were valued by participants included performing roles of emotional support providers, comforters, information/advice providers, professional technical skills providers, and advocates (Chen et al., 2001).

Even though women in this study felt on the average, it only sends a message and that is, midwives still have to work on their caring skills and attitude so as to have a better impact on managing women in labour. Midwives should be encouraged to reflect on whether they protect women's dignity or contribute to an increased amount of suffering. Protecting women's dignity does not require more time; rather, it demands a consciousness of the importance of a particular dimension in care. Borrowing from the words of Berg (2005), the care the midwife gives in the management of labour pain is "genuine caring in caring for the genuine" that is, a dignity-protective, caring relationship based on embodied knowledge and a balance between the medical and natural perspectives.

This study found that there is no statistically significant association between selected demographic variables and outcome of midwives care on labour pain. This agrees with the study by Bharathi (2010) on effective interventions on pain during labour among primi mothers and their findings which was that no significant association was found in post-assessment level of labour pain perception of experimental and control groups with selected demographic variables such as age, religion,

type of family, education, work pattern and area of residence. This is also in line with the study by Faponle et al. (2004) and Kuti et al. (2006) who found no significant relationship between parity and pain perception. Also in the study by Audu et al (2009), age (P = 0.4) had no significant influence on pain perception in labour; Onah et al. (2007) and Kuti et al. (2006) also found no correlation between maternal age, religion and pain perception. In Nigeria, factors like culture play a big role in a woman's response to labour pain and thereafter the management of the pain. For instance Fulani women must not express their pain no matter how bad the pain may be and most women believe that labour pain must just be tolerated hence may be the reason for factors like age, ethnicity and parity not being associated with outcome of labour pain management. The finding of this study however is in contrast with that of Olayemi et al. (2005) where parity was shown to significantly influence pain perception with those of low parity reporting more severe/agonizing pain compared with the grand-multipara. This contrast shows mixed findings which is consistent with so many other findings from other parts of the world.

Conclusion

Mothers validated the care they received from midwives in this study however care received was not so effective hence did not deliver its intended outcome. Health Care Boards of various hospitals should set up standards that will encourage the increase in the number of midwives working in the labour wards as this will improve the nurse-patient ratio thereby enhancing one on one support. Training and retraining of midwives on how to carry out these pain relief measures should also be encouraged as this will help midwives understand patients' needs and enable them provide better support during labor thereby preventing unhelpful nursing behaviors.

Conflicts of interest

The authors have no conflict of interest and no financial disclosure to report.

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