
Awareness and Willingness of Women to Utilize Non-Pharmacological Obstetric Analgesia in Reducing Labour Pain at Aminu Kano Teaching Hospital Kano

Umar Yunusa, Umar Lawal Bello*, Amina Suleiman Rajah, Ruqayya Hamza Usman, Idris Abdulrashid, Aisha Suleiman Abdullahi,

Department of Nursing Science, Bayero University Kano, Nigeria

Correspondent Author

Umar Lawal Bello,

Department of Nursing Sciences, Bayero University Kano, Kano Nigeria

ulbello.nur@buk.edu.ng

+2348036628115.

Abstract

With the advance in health care delivery, obstetric analgesia is now routinely administered in most developed countries; however, in developing countries including Nigeria, childbirth is still a painful natural process for most women. This study was conducted to assess the awareness and willingness of women within the reproductive age to utilize non-pharmacological obstetric analgesia in reducing labour pain. An explanatory mixed method design was utilized for the study. For the quantitative component, a validated interviewer administered questionnaire was administered to 247 randomly selected women that delivered at AKTH who were attending immunization clinics. The qualitative study utilized an interview guide to conduct 4 key informant interviews with core health care personnel. Quantitative data was analyzed using descriptive statistics while content analysis was used to analyze the qualitative data. Results showed that the respondents have a mean age of 28.30 ± 7.5 years. Less than one fifth 42 (17%) of the respondents were aware of the use of non-pharmacological analgesics in reducing labour pain. An overwhelming majority of the respondents 234 (94.7%) indicated their willingness to use of non-pharmacological obstetric analgesia. More than three quarter 195 (78.9%) of the respondents stated that they will prefer non-pharmacological obstetric analgesia to any other form of pain relief in labour. It was concluded that although majority of respondents were willing to utilize the non-pharmacologic analgesia in reducing labour pains if made available, the level of awareness was ironically low. The study therefore recommends the need to include the teaching of non-pharmacologic analgesia during antenatal sessions. This is with view of increasing the level of awareness of non-pharmacological analgesia among women.

Key words: Non-pharmacologic, Analgesia, Obstetric, Awareness, Willingness

1.0 Introduction

With the advancement of the health care delivery system in the developed countries, there has been a transition from the painful natural births to less painful medical birth. Even though, delivery is a natural phenomenon, it has been demonstrated that the accompanying pain is considered extremely severe in more than half of the cases (Gentz, 2004). Labour pain is the rhythmic pain of increasing severity and frequency due to contraction of the uterus at childbirth (Lally, Murtagh, Macphail & Thomson, 2008). Most developed countries now provide obstetric analgesia routinely. However, in developing countries including Nigeria, childbirth is still a painful natural process for most women without choice (Iliyasu, Galadanci, Abubakar,

Isah & Aliyu, 2012). Obstetric analgesia is defined as “the elimination of sensitivity to pain without loss of consciousness during labour, delivery and possibly the post-partum period” (Iliyasu et al, 2012). In order to reduce labour pain, pharmacological methods of pain relief are often one of the first interventions used by health care personnel. To enable women deliver with minimal pharmacological interventions for pain relief, there is need to utilize the continuous support and complimentary or alternative medicine (CAM) to help women cope with the pain (Cochrane, 2016).

A study conducted by James, Prakash, and Ponniah (2012) revealed that there is sufficient awareness that labour is painful and that there are ways to relieve labour pain. However there is a lack of knowledge regarding regarding the need for pain relief during labour

among women. According to 'Mungayi, Nekyon & Karuga (2008) the level of awareness of labour analgesia is still very low among women and the use of labour analgesia is also still quite low in comparison to the western World. A study conducted by Anarado, Ali, Nwonu, Chinweuba & Ogbolu (2015) revealed that breathing exercise was known by 51.8% of respondents, massages by 36.7%, position changes by 32.2 %, relaxation technique by 26.5%, psychological support by 24.5%, prayers by 18.8%, music therapy by 18.4%, hydrotherapy by 10.2%, ice or heat pack by 8.6%, aromatherapy by 4.5%, sterile water injection by 2.0%, acupuncture by 2.9%, Transcutaneous Electric Nerve Stimulation (TENS) by 2.0% and only 34.7% knew at least 4 non-pharmacological methods of obstetric analgesia.

Non-pharmacological therapies help to increase the individual control feeling, decrease the feeling of weakness, improve the activity level and functional capacity, reduce stress and anxiety, reduce the pain behaviour and focus pain level and reduce the needed dosage of analgesic drugs thus decreasing the side effects of the treatment (Yıldırım, 2012). Anarado et al. (2015) found that the need of women for labour pain relief in Enugu, Nigeria is unpopular. There is also deficient knowledge of the non-pharmacological analgesia to cope with the pain. It was therefore suggested that skilled birth attendants should give prenatal women adequate information and childbirth preparation on labour pain relief methods.

A recent study conducted in Brazil revealed that many pregnant women are increasingly resorting to a scheduled caesarean section in order to avoid labour pain (Pereira, Franco & Baldin, 2011). In the third world, especially in Africa, access to knowledge and the availability of medical care can influence attitudes to pain relief. Women of reproductive age may not even be aware that pain can be relieved. A study conducted in Lagos in 2005 revealed an acceptance rate for the use of non-pharmacological analgesia as 65.3% (Okeke et al., 2005), another in Benin reports it at 85.1% in 2006 (Imarengiaye & Ande, 2006), another study in Maiduguri in 2009 revealed an acceptance rate of 78.8% (Audu et al., 2009). And recently a study by Iliyasu et al. (2012) revealed an acceptance rate of 79.3%.

Despite the improvement in antenatal attendance recorded in Northern Nigerian, home deliveries are the norm with the assistance of traditional birth attendants or relatives. This is largely related to the cultural isolation and modesty practiced by women in the region (Iliyasu et al, 2012). In line with this it can be

argued that these factors contributes to low level of awareness and desire to utilize obstetric analgesia in reducing labour pains. The provision of safe obstetric analgesia could encourage deliveries in health facilities thereby reducing maternal and infant mortality. A study at Ibadan University College Hospital in Nigeria revealed that more than one quarter (27.1%) of the women were aware that labour pain could be relieved and close to three out of every ten (57.6%) were willing to accept analgesia if offered (Olayemi et al., 2003).

Findings from the reviewed literatures (Iliyasu et al, 2012; Anarado et al, 2015; Olayemi et al, 2003) showed that the level of awareness and utilization of non-pharmacological analgesia is low in Nigeria. This study was therefore conducted to determine the awareness and willingness to utilize non-pharmacological obstetric analgesia in reducing labour pains among women who deliver at Aminu Kano Teaching Hospital. This was with the view of exploring the strategies for improving the utilization of non-pharmacological analgesia among women in Northern Nigeria.

2.0 Methods

This study utilized an explanatory mixed method design. The design encompasses quantitative descriptive cross sectional survey with women who had their last delivery at Aminu Kano Teaching Hospital and are attending the immunization clinic in the same hospital. This was followed by qualitative interviews with key informants (Midwives and Doctors) who attended to the women during labour at the hospital. Ethical approval with reference number NHREC/21/08/AKTH/EC/1785 was granted by the Research Ethics Committee of Aminu Kano Teaching Hospital.

2.1. Target Population

This comprise of all women within the reproductive age (15 to 49 years) that have had normal Spontaneous Vaginal Delivery (SVD) in Aminu Kano Teaching Hospital.

2.2 Sample Size and Sampling Technique

A sample size of 247 was derived using the Cochran formula (1963) ($n = p \times (1-p) \times z^2 / d^2$ where n = sample size, $p = 0.80$, $z = 1.96$ and $d = 0.05$). A prevalence rate of 0.8 was used as in a previous study conducted at AKTH on desire for pain relief in labour (Iliyasu et al., 2012). For the qualitative survey, 4 key informant interviews were conducted with four health core health care workers (two midwives and two obstetricians) from the labour

ward of AKTH.

A systematic random sampling technique was used to recruit consenting women as they arrived at the immunization clinic. The sampling interval (3) was determined using the expected patient turnover (794) based on average of previous records for a period of two weeks. Random Number Generator was used to randomly select the first respondent. Subsequent respondents were obtained by adding that sampling interval (3) to the previous respondent's serial number. However, if the selected respondent is not eligible, she will be excluded and the next eligible respondent will be recruited. This process was done on daily bases for a period of two weeks when the required sample size was obtained.

2.2.1 Inclusion Criteria: Only women within the reproductive age (15 – 49years) who have had SVD in Aminu Kano Teaching Hospital are included in the study.

2.2.2 Exclusion Criteria: This comprise of all women that are outside the reproductive age (15-49 years), women that did not deliver in Aminu Kano Teaching Hospital and those that did not give birth through SVD .

2.3 Study Instrument

For the quantitative survey, an Interviewer Administered Questionnaire (IAQ) adapted from a similar study conducted by (Bitew, Workie, Seyum & Demeke, 2016) was used for data collection. The IAQ comprised of 3 sections which include; bio data, awareness of non-pharmacological obstetric analgesia, and willingness of the respondents to utilize non-pharmacologic analgesia in their future deliveries. An interview guide was used to collect data from key informants who include doctors and midwives attending to women who deliver at AKTH. The interview guide encompassed questions and probes targeted at eliciting responses centred on the utilization of non-pharmacological analgesia in AKTH. A tape recorder was used to record the interview sessions which lasted between 30 to 45 minutes. Data was collected within a period of two weeks.

2.4 Validity and Reliability of Research Instrument

An evaluation of the instrument by four (4) experts (two lecturers of Maternal and child health Nursing as well as two clinicians in the area of obstetric and gyneacology) in the area of study gave a face and

content validity of 80 percent. Pilot study was conducted using 25 (10%) of the sample size to test the reliability of the instrument. The internal consistency reliability test revealed a Cronbach's alpha value of 0.732. The pilot study provided an estimate of the period of time required to complete a questionnaire.

2.5 Data Analysis

The data collected from this study was analyzed using Statistical Package for Social Sciences (SPSS) version 20. Quantitative data were presented using Descriptive statistics, simple frequency tables and percentages. The mean and standard deviation for age and parity of the respondents was computed. Awareness on non-pharmacological obstetric analgesia was presented using pie chart. Qualitative data was analyzed using content analysis and presented in a triangulated format with the quantitative data

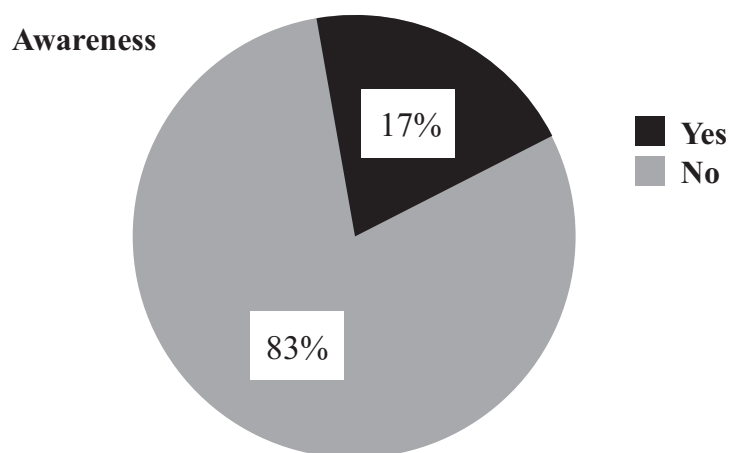
3.0 Results

A total of 247 questionnaires were administered, completed and analyzed. Findings from the study as indicated in Table 1 revealed that more than half 131 (53%) of the respondents are between the ages of 21-30years with a mean age of 28.30 ± 7.535 years. The Table further revealed that all (100%) of the respondents were married. About 3 out of every ten of the respondents 76 (30.8%) are primipara. More than half of the respondents 143 (57.9%) have attained tertiary education while more than one third of the respondents 87(35.2%) had secondary school education. Close to two fifth of the respondents 97(39.3%) are full time housewives and about one-quarter 58(23.5%) were unemployed. More than two- third 166 (67.2%) of the respondents are Hausa and about one-fifth 43(17.4%) are Fulani. The vast majority of respondents 229 (92.7%) are Muslims.

Figure I showed that more than eight out of every ten of respondents 205 (83.0%) were unaware of non-pharmacological obstetric analgesia in reducing labour pain. Only a few of the respondents 42 (17.0%) were aware of non-pharmacological obstetric analgesia in reducing labour pain.

Table 1: Distribution of respondents by Bio-demographic data N=247

| Variables | Frequency | Percentage (%) |
|----------------------------------|-----------|----------------|
| Age | | |
| 15-20 | 36 | 14.6 |
| 21-30 | 131 | 53.0 |
| 31-40 | 61 | 24.7 |
| 41-50 | 19 | 7.7 |
| Marital Status | | |
| Single | 0 | 0 |
| Married | 247 | 100 |
| Divorced | 0 | 0 |
| Parity | | |
| 1 | 76 | 30.8 |
| 2 | 75 | 30.4 |
| 3 | 44 | 17.8 |
| 4 | 18 | 7.3 |
| 5 and above | 34 | 13.8 |
| Educational qualification | | |
| None | 0 | 0 |
| Islamic (Only) | 0 | 0 |
| Primary | 17 | 6.9 |
| Secondary | 87 | 35.2 |
| Tertiary | 143 | 57.9 |
| Occupation | | |
| Unemployed | 58 | 23.5 |
| Housewives | 97 | 39.3 |
| Civil Servant | 49 | 19.8 |
| Business/Trade | 35 | 14.2 |
| Artisan | 8 | 3.2 |
| Ethnicity | | |

**Figure 1: Pie Chart showing the Awareness of women on Utilization of Non-Pharmacological Obstetric Analgesia in Reducing Labour Pain**

In line with the findings from the quantitative study, findings from the qualitative study revealed that all the key informants stated that the level of awareness of utilization of non-pharmacological analgesia to reduce labour pain among women that delivered at AKTH was low, with some of them agreeing that it was non-existent. An excerpt of their responses is stated below;

“The level of awareness on non-pharmacological obstetric analgesia is really poor when compared to that of pharmacological analgesia. Most of the women that come to deliver at AKTH are grossly unaware of these non-pharmacological methods”(**Key informant interview with Obstetrician**)

Table 2 revealed that more than three-quarter of the respondents 195(78.9%) stated that they will prefer non-pharmacological obstetric analgesia to any other form of pain relief in labour. The Table also indicated that an overwhelming majority of the respondents 234(94.7%) are willing to utilize non-pharmacological obstetric analgesia in reducing labour pains in their future deliveries.

Finding from the qualitative study corroborates that of the quantitative. The key informant interviews reported that most of the women demonstrated willingness to utilize non-pharmacological obstetric analgesia as they prefer it to the pharmacological because of its relative low side effect. Extracts of their responses are stated below;

“Most of the women are very curious about non-pharmacological method of pain relief because of its lack of side effects. So, yes most of the women have positive attitude towards it and are willing to use it if made available.”(**Key informant interview with midwife**)

“.....of course, they are. Most of the women are willing to use these methods if available but they need to be educated on it and the hospital needs to provide it”(**Key informant interview with Obstetrician**).

Table 2: Distribution of respondents by their Attitude and Willingness to Utilize non-pharmacological Obstetric Analgesia N=247

| Variables | Frequency | Percentage (%) |
|--|-----------|----------------|
| Preference of non -pharmacological to any other method of obstetric analgesia | | |
| Prefer | 195 | 78.9 |
| Undecided | 19 | 7.70 |
| Do not prefer | 33 | 13.3 |
| Willingness to utilize non-pharmacological in reducing labour pain | | |
| Willing | 234 | 94.7 |
| Undecided | 8 | 3.20 |
| Not willing | 5 | 2.00 |

4.0 Discussion

Findings from the study revealed that a reasonable proportion of the respondents are young adults, which may be due to the fact that early adulthood is the active age of childbearing. This is similar to findings of studies conducted at Kano and Enugu where the mean age of the respondents are

27.4±6.0 and 29.2±5.3 years respectively (Iliyasu et al., 2012; Anarado et al., 2015). All of the respondents were married which is in line with the cultural norm of women in Kano state where women within their early adult age are expected to be married. This finding validates that of studies conducted in Enugu and that at Kano (Anarado et al.,

2015; Iliyasu et al., 2012). As expected based on the ethnic distribution of people in Kano state and surrounding states, an overwhelming proportion of the respondents belong to the Hausa ethnic group and the vast majority of respondents are Muslims. It is therefore necessary to incorporate Hausa language in the education sessions provided to women during antenatal clinics. This result corroborates that of study conducted by Iliyasu et al. (2012) at AKTH in which most of the clients were Hausa or Fulani (71.8%) and belonged to the Islamic faith (80.8%).

A reasonable proportion of the respondents have tertiary education which is consistent to a similar study in Enugu (Anarado et al. 2015) but contradicts that obtained in AKTH Iliyasu et al. (2012). This may be due to location of the hospital in the city and being a teaching hospital, women utilizing the tertiary health facility are likely to be more educated. Though many women in Kano attend antenatal clinics when they were pregnant, majority of them give birth at home, so leaving only the few more enlightened women to deliver in the hospital. Findings from this study revealed that awareness of non-pharmacological obstetric analgesia by women who have delivered at AKTH was poor as less than one fifth of the respondents were aware of non-pharmacological pain relief in labour. This may be related to the seclusion system practiced in some areas of the state that may hinder women from access to information on the non-pharmacological analgesia. The practice of PURDA (seclusion of women) in some parts of Northern Nigeria prevent women from going to the hospital for antenatal care and also from mingling with other members of the society who may serve as source of information to them on non-pharmacological analgesia. It is also possible that some people may think that the natural painful birth process is a norm which every woman is expected to experience. This finding is slightly higher than that revealed by a similar study conducted at AKTH (15%) (Iliyasu et al., 2012) but less than earlier reports from North-East (18%), Ibadan (27.1%), Enugu (68.6%), Kenya (56%) and South Africa (56.3%) (Audu et al., 2009; Olayemi et al., 2003; Anarado et al., 2015; Mung'ayi et al., 2008 & Mugambe et al., 2007).

The general willingness to accept obstetric analgesia is increasing worldwide, as "Pain-free

labour" is becoming a popular concept. It is thus not surprising that such trends be reflected in this study, as a significant majority of the respondents strongly agreed that they preferred non-pharmacological obstetric analgesia to any other form of pain relief in labour. These findings are also very close to what was obtained in South Africa, where more than three-quarter of the women showed preference for non-pharmacological obstetric analgesia (Mugambe et al., 2007). Majority of the respondents were willing to utilize non-pharmacological obstetric analgesia if it is made available to them. This may be associated with the fact that non-pharmacological analgesia is associated with lesser or no known side effects compared to the pharmacologic analgesic. This findings validates that of Similar study conducted by Olayemi et al., (2003) which reported that 57.6 percent of the respondents in the study were willing to accept analgesia if offered.

5.0 Conclusion

The study concludes that the level of awareness about non-pharmacological obstetric analgesia is low, paradoxically there was a high demand for it as most respondents were curious about pain relief methods and are willing to use it if offered. The study concluded that utilization of non-pharmacological obstetric analgesia is an important step towards meeting the need for pain relief in labour which will encourage women to deliver in health facilities. It is therefore recommended that pregnant women should be educated during antenatal sessions by Nurses/Midwives on non-pharmacological pain relief in labour as this will help improve awareness on non-pharmacological pain relief in labour.

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