

CJBEHM. 2023 December; 6(1): 26-35 ISSN: 2818-0208 Published by www.cjbehm.ca

Factors That Influence the Acceptance of Induction of Labour among Pregnant Women Attending Antenatal Clinic at University of Benin Teaching Hospital

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Article info

Received: May19, 2023 Accepted: October 27, 2023 Published: December 18, 2023

Keywords

Hospital, Labour, Induction, Pregnancy, Women.



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ABSTRACT

Induction of labour is the stimulation of uterine contraction prior to the onset of spontaneous labour. Most women fall into labour naturally, others require a little bit of help to do so due to problems that may compromise the health of the mother or that of the fetus. It is carried out in order to reduce maternal and fetal mortality and morbidity. However, some pregnant women still frown at this practice. The aim for the study is to find out the factors that influence the acceptance of induction of labour by pregnant women in University of Benin Teaching Hospital. It will in turn be geared towards creating awareness through health education of pregnant women on induction of labour. A descriptive nonexperimental research design was used for this study which was carried out in the Antenatal Clinic in University of Benin Teaching Hospital, Benin city. A total of 80 questionnaires were administered to the sample of 80 respondents. Same were retrieved and analysed. The results were represented in tables and bar charts. The Null hypothesis, which states that there is no relationship between health education and acceptance of induction of labour, was tested using chi-square statistical method at 0.05 level of significance. It was deduced that there is a significant relationship between health education and acceptance of induction of labour as revealed by the calculated value of 12.8 which is greater than the critical value of 3.84. Based on the findings, factors that influence the acceptance of induction of labour includes previous successful induction, mothers request, prevents unplanned cesarean section, and saves life of mother and baby. It was therefore recommended that health education is the key to creating awareness about induction of labour in order to reduce maternal mortality and morbidity.

INTRODUCTION

Induction of labour is the stimulation of uterine contraction prior to the onset of spontaneous labour (Fraser and Cooper, 2019). It includes the stimulation of contraction in the presence of rupture of membrane without labour. Induction of labour has increasingly become part of modern obstetric practice. Most women fall into labour naturally others require a little bit of help to do so. This may be due to problem that may compromise the health of the mother or that of the fetus, for example, conditions like pre-eclampsia or post datism (exceeding the expected date of delivery) among others. Induction of labour is an obstetric intervention which should be used when elective birth will be beneficial to the mother as well as the fetus. It is carried out in order to reduce maternal and fetal mortality and morbidity rates. However, pregnant women still frown at this practice and are emotionally distabilized following the announcement of induction of labour to them. The

emotional reaction may be due to lack of proper information or education prior to induction of labour, fear of outcome, misconception among others (Blackburn 2020).

Over recent decades, more and more pregnant women around the world have undergone induction of labour (artificially initiated labour) to deliver their babies (Fraser & Copper., 2021). In developed countries up to 25% of all deliveries at term now involve induction of labour. In developing countries, the rates are generally lower, but in some settings they can be as high as those observed in developed countries (World Health Organization 2020). Induction of labour is usually performed by administering oxytocin or prostaglandin etc to the pregnant woman or by manually rupturing the amniotic membranes. Over the years, various professional societies have recommended the use of induction of labour in circumstances in which the risks of waiting for the onset of spontaneous labour are judged by Clinicians to be greater than the risks associated with shortening the duration of pregnancy by induction. These circumstances generally include gestational age of 41 completed weeks or more, pre labour rupture of amniotic membranes to prevent ascending infection to the fetus and reduce the incidence of morbidity to the woman, medical problems example diabetes mellitus which carry an increased risk of pregnancy loss. Obstetric history of previous still birth and placenta abruptio and other indication. Although currently available guidelines do not recommend this, induction of labour is being used more and more at the request of pregnant women to shorten the duration of pregnancy or to the time the birth of the baby according to convenience of the mother and/or health care workers, methods of inducing labour include both pharmacological, medication and mechanical or physical approaches (Clark, Feltovich, Janowski, & Caroll., 2020). Mechanical and physical approaches can include artificial rupture of membranes or membrane sweeping. The use of intrauterine catheters is also indicated. These work by compressing the cervix mechanically to generate increase in prostaglandins in local tissues. There is no direct effect on the uterus. Pharmacological methods are mainly using either misoprostol (prostaglandin E2) or misoprostol (a prostaglandin Elanologue). The American congress of obstetricians and gynecologist has recommended against elective induction before 41 weeks if there is no medical indication and the cervix is unfavourable. However, recent studies contradict this view. One recent study indicates that labour induction at term or post-term reduces the rate of caesarean section by 12% and reduce fetal death. The odds of having a vaginal delivery after labor induction are assessed by a "Bishop Score" (Mishanina 2019). Women who induction of labour is indicated for still frown/refuse and are afraid as a result of unknown outcome, hence, the researcher seeks to study factors that influence the acceptance of induction of labour among pregnant women in University of Benin Teaching Hospital.

The researcher in the course of her clinical posting observed that pregnant women are sometimes faced with the need to be induced, however some of them find it difficult to accept even when it is medically indicated, and this can result in serious complications such as fetal distress, prolong labour, intra uterine fetal death and maternal death amongst others.

If refusal of induction of labour can result in such serious complications, the researcher then decides to study to determine the factors that influence the acceptance of induction.

Research question

- 1. What is pregnant women awareness on induction of labour?
- 2. what are the factors that hinder the pregnant women's acceptance of induction of labour?
- 3. what are the factors that influence the acceptance of induction of labour?

LITERATURE REVIEW

Induction of labour has been linked to increased rates of prematurity and rising rates of cesarean birth. The purpose of this investigation was to evaluate current trends in induction of labor focusing on evidence-based factors that influence the practice of induction. Some women are pleased to be guaranteed delivery within specific time, while others are interested in achieving delivery by natural means, hence, dislike the suggestion of intervention. The decision to induce labour should only be made when it is clear that a vaginal birth is the most appropriate mode of delivery in this pregnancy for that particular woman and her baby. Labour should be interfered with, if the situation is indicated for any of the method outlined in her book to attain delivery within affixed range of time. It is an accepted medical scientific fact that by 37 weeks of gestation, baby in the womb is technically at term and therefore functionally mature and able to cope with the outside world. That is true for the overwhelming majority. However, spontaneous labour may not occur for another three or four weeks, even more, that which is sometimes too much for some to cope with. It is therefore, no surprise that these women, glamour for labor induction. Around 20% of all deliveries are preceded by labour induction, proportion that has not varied dramatically over recent years. Fetal death was the only indication for labour induction centuries ago, while this is 10 now a very rare indication, with prolonged pregnancy and maternal hypertensive disorders being the major indication for the last 50-60 years. Techniques for inducing labour has also changed from dietary delicacies and verbal threats giving way to physical stimulation mainly achieved by cervical stretching and amniotomy and more recently to sophisticated pharmacological manipulation using oxytocin and prostaglandins, based on our expanding knowledge of the physiological process involved in spontaneous parturition. The cervix is essential in maintaining uterine stability during pregnancy. To achieve this, the maintenance of cervical shape and consistency is imperative, since cervical ripening is a physiological process occurring throughout the latter weeks of pregnancy and is completed with the onset of labour. When delivery is necessary and ripening has not had time to occur, or has failed to be initiated, this natural process had to be accelerated (Smith 2020).

Over recent decades, more and more pregnant women around the world have undergone induction of labour (artificially initiated labour) to deliver their babies. In developed countries up to 25% of all deliveries at term now involve induction of labour, in developing countries, the rates are generally lower, but in some settings, they can be as high as those observed in developed countries (WHO, 2021). World Health Organization (2021) defined labour as low risk throughout, occurring between 37th and 42nd completed weeks of gestation, spontaneous in onset with the fetus presenting by vertex culminating in mother and child being in good condition following birth.

The induction of labour (IOL) rate in the National Health Service (NHS) in England is 20% and this rate was being slowly rising since 2018 (DH, 2020) making it an intervention that has become common practice in maternity units within the NHS. IOL is an intervention to initiate the process of labour by artificial means and is the term used when initiating this process in pregnancies in 24 weeks gestation, which is the legal definition of fetal viability in the UK, Royal College of Obstetricians and Gynecologists (RCOG, 2019). Where labour is being induced, a full assessment must be made to ensure that any intervention planed will confer more benefit than risk for the mother and baby. Induction of labour is an obstetric intervention which should be beneficial to the mother as well as the fetus. It is carried out in order to reduce maternal and fetal mortality and rates. However, pregnant women still frown at this practice and are emotionally destabilized following the announcement of induction of labour for them. This reaction is due to lack of proper information or education prior to induction of labour, fear of outcome, misconception is also a factor (Fraser and Cooper, 2020). Some women are pleased to be

guaranteed delivery within specific time, while others are interested in achieving delivery by natural means, hence, dislike the suggestion of intervention. The decision to induce labour should only be made when it is clear that a vaginal birth is the most appropriate mode of delivery in this pregnancy, for that particular woman and her baby. National Institute for Health and Care Excellence (NICE, 2019). Fraser and Cooper (2020) state that the purpose of induction is to affect the birth of the baby thereby reducing the pregnancy. He further says that parent should partake in the decision-making process, give their consent or approval based on full information about the alternative method of birth example caesarean section labour should be interfered with, if the situation is indicated for any of the method outlined in her book to attain delivery within affixed range of time. Induction of labour is considered when the maternal or fetal condition suggests that a better outcome, will be achieved by intervening in the pregnancy than by allowing it to continue. This most commonly applies to cases, where there are deviations from the normal physiological processes of child birth as a result of maternal problems for example hypertension or diabetes, or fetal problems such as fetal growth restriction or macrosomia. The mother may also request to have labour induced for social reasons. However, the ground on which the decision is made to induce labour must be sound enough to support the outcome whatever the outcome might be. There is no guarantee that induction of labour, will result in a vaginal birth.

Theoretical Framework: Health Belief Model (HBM)

Health belief model is one of the first theories of health behavior it was developed in the 1950s by a group of United State public health service psychologist who wanted to explain why so few people were participating in programs to prevent and detect diseases. Health belief model is a good model for addressing the problem of behavior that evoke health concern (e.g. high risk), sexual behavior and the possibility of contracting HIV (Blackburn 2020) The health belief model proposed that a person's health related behavior depends on the person's perception of four critical areas. The security of potential illness, the person's susceptibility to the illness, the benefit of taking a preventive action, and the barrier to taking the action.

The health belief model is popularly applied in Nursing especially in issues focusing on patient's compliance and preventive health care practices. The model postulates that health seeking behavior is influenced by a person's perception of the threats posed by a health problem and the value associated with action aimed at reducing such threats. It also addresses the relationship between a person's belief and behavior, it provides a way of understanding between a person's belief and behavior, it provides a way of understanding and predicting how clients will behave in relation to their health and how they will comply with health care therapies.

Concept and definition of Health Belief Model

There are six major concepts in health belief model which are:-

- **Perceived susceptibility:** Refers to a person's perception that a health problem is personally relevant or that a diagnosis of illness is necessary.
- **Perceived severity:** Even when one recognizes personal susceptibility, actions will not occur unless the individual perceives the severity to be high enough to have serious organic or social complication.
- **Perceived benefits:** Refers to patient's belief that a given treatment will cure the illness or help to prevent it.
- **Perceived barrier:** Refers to the complexity of duration and accessibility to treatment.
- **Motivation:** Include the desire to comply with the treatment and the belief that people do what they do.
- Modifying factors: This include personality variables, patients satisfaction and socio-

demographic factor.

Application

In the present study, the Health Belief Model (HBM) was adopted as a conceptual framework, to provide a sound theoretical basis for understanding the factors that influence women's childbirth decisions. The HBM can specify the relationship between health-related beliefs/factors and maternal behaviors, which can help in predicting the possibility of a woman choosing a particular mode of birth. Using this model, mode of birth and maternal choice and its determining factors can be explored within the five domains of the HBM, namely: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and cues to action.

Perceived susceptibility

Perceived susceptibility is a person's belief in his/her vulnerability to some medical condition. The more that a person believes he/she is at great risk, the more likely that person is to adopt a particular health-related behavior to minimize such risk. For instance, a negative experience in a previous birth could affect a woman's preference for a particular mode of birth in subsequent births, due to the belief that the negative experience could occur again.

Perceived severity

Perceived severity is defined as one's belief in the intensity of the medical condition and its undesirable outcomes. If it is believed that there are very serious or intolerable complications associated with a specific mode of birth, women are more likely to express a preference for an alternative method of delivery, so as to reduce their risk.

Perceived benefits

Perceived benefits are defined as one's belief that outcomes can be positively affected by engaging in a particular health behavior. The advantages of maternal and fetal health and a sense or anticipating fulfillment and satisfaction of sociocultural beliefs have been identified as important factors in maternal decision making.

Perceived barriers

Perceived Barriers refers to an individual's perception of the difficulties stopping them from following a specific health-related behavior. The desire to choose this is hindered by existing medical contraindications.

RESEARCH METHODOLOGY

The research design employed for the purpose of this project is the descriptive of the non-experimental research design. This study was conducted at the University of Benin Teaching hospital (UBTH), Benin City, Edo State, Nigeria which is located in Ugbowo quarters of Egor Local Government Area of Edo State. The University of Benin Teaching Hospital (UBTH) was established in 1973 and it is a referral Centre. It is located geographically in Ugbowo community between the boundaries of Egor and Ovia Local Government Area of Edo State. It is situated along Benin-Lagos express way. It shares boundary with federal Government girls College Road, it was founded in 1973, it is also made up of various department and wards. University of Benin Teaching Hospital is a tertiary health institution setup for the purpose of rendering health services to the general public and also for the training of nurses, midwives, medical doctors, and other health professionals.

A target population is the total group of individuals from which the sample might be drawn (Nwachukwu, 2015). This study involved only pregnant women attending the

antenatal clinic (ANC) of the University of Benin Teaching Hospital. According to the information retrieved from the ANC register, the target population for this study comprised of 100 pregnant women (source antenatal clinic medical record) The target population comprises of 100 pregnant women attending antenatal clinic in University of Benin Teaching Hospital, Benin City. Taro Yamane was used to get the sample size from the population.

$$n = \frac{N}{1 + N(e)^2}$$

$$n = 80$$
sample size is 80

The accidental non-probability sampling techniques were used.

Presentation of Data

Table 1: Percentage distribution according to Demographic data

Age	Frequency	Percentage (%)
16-25 years	28	35
26 - 32 years	30	37.5
33-38 years	18	22.5
39-45 years	4	5
Total	80	100
Marital status	Frequency	Percentage (%)
Single	7	8.75
Married	70	87.5
Divorced	3	3.75
Total	80	100
Occupation	Frequency	Percentage (%)
Civil servant	35	43.75
Self employed	25	31.25
Trader	5	6.25
House wife	15	18.75
Total	80	100
Educational level	Frequency	Percentage (%)
Primary	20	25
Secondary	12	15
Tertiary	48	60
Total	80	100
Religion	Frequency	Percentage (%)
Christianity	70	87.5

Islamic	8	10
Traditional	2	2.5
Others	-	-
Total	80	100

(Source: Fieldwork, 2023)

Table 1 shows that the highest age fall within 26 - 32 years (37.5%) followed by 16-25 years (35%) then 33 - 38 years (22.5%) and lastly 39-45 years (5%). 87.5% respondents were married, 8.75% single, 3.75% divorced. 43.75% are civil servant, 31.25% are self-employed, 18.75% are house wife and 6.25% are traders. 25% of respondents attained primary level of education, 15% secondary level of education while 60% attained tertiary level of education. 70(87.5%) of respondents are Christian, 8(10%) are Islam, and 2(2.5) traditional.

Table2: percentage distribution according to source of awareness

Response	Frequency	Percentage (%)
Friend	10	12.5
Midwife	20	25
Internet	20	25
Doctor	30	37.5
Total	80	100

(Source: Fieldwork, 2023)

Table 2 shows that out of 80 respondents who have heard about induction of labour, 10(12.5%) heard from a friend, 20(25%) from midwife, 20(25%) from internet while 30(37.5%) heard from a doctor.

Table 3: Percentage distribution according to respondents indication for induction of labour

Response	Frequency	Percentage (%)
Prolonged pregnancy	22	27.5
Diabetes in pregnancy	10	12.5
Hypertension	22	27.5
Maternal request	16	20
Fetal death	10	12.5
Total	80	100

(Source: Fieldwork, 2023)

Table 3 shows that out of 80 respondents who said they have been induced 22(27.5%) of respondents were induced due to prolong pregnancy, 10(12.5%) due to diabetes in pregnancy 22(27.5%) due to hypertension, 16(20%) due to maternal request, and 10(12.5%) due to fetal death

Table 4: Percentage distribution on what the complication to the mother was

Response	Frequency	Percentage (%)
Cord prolapse	10	12.5
Placenta abruptio	30	37.5

Uterine rupture	18	22.5
Post-partum haemorrhage	22	27.5
Total	80	100

(Source: Fieldwork, 2023)

Table 4 shows that out of 80 respondents that said they had complication, 10(12.5%) had Cord prolapse, 30(37.5%) had Placenta abruptio, 18(22.5%) had Uterine rupture and 22(27.5%) had Post-partum hemorrhage

Table 5: Percentage distribution on what the complication to the fetus was

Response	Frequency	Percentage %	
Fetal distress	30	37.5	
Intracranial haemorrhage	15	18.75	
Fetal hypoxia	18	22.5	
Still birth	17	21.25	
Total	80	100	

(Source: Fieldwork, 2023)

Table 5 shows that out of 80 respondents that said there was complication to the fetus, 30(37.5%) had fetal distress, 15(18.75%) had Intracranial haemorrhage, 18(22.5%) had fetal hypoxia and 17(21.25%) had still birth.

DISCUSSION OF FINDINGS

The discussion of relevant findings from data presented and analyzed. Structured questionnaire was used to elicit information from the respondents. The number of respondents was 80 pregnant women in University of Benin Teaching Hospital, Benin City, Edo State.

Awareness of pregnant women on induction of labour

The study established that 60(75%) respondents show high level of awareness of induction of labour and source of information being from friends, midwife, doctor and internet. Minority 20(25%) of respondents are not aware of induction of labour. It can be inferred that most pregnant women of University of Benin Teaching Hospital show high level of awareness of induction of labour. This is in line with WHO (2011) which stated that, over recent decades, more and more pregnant women around the world have undergone induction of labour (artificially initiated labour) to deliver their babies.

However, most of the respondents are aware of induction of labour and yet some refuse induction, hence, there is need to know the factors that influence women's acceptance of induction of labour.

Factors that hinder the pregnant women's acceptance of induction of labour

It was observed that 30(37.5%) of respondents said that degree of pain hindered their acceptance, 18(22.5%) said misconception, 14(17.5%) said fear of the unknown while 18(22.5%) said previous experience. This is in agreement with Fraser and Cooper (2020) who stated that pregnant women still frown at this practice and are emotionally destabilized following the announcement of induction of labour for them. The emotional reaction may be due to lack of proper information or education prior to induction. Fear of outcome, and misconception is a factor.

Factors that influence the acceptance of induction of labour

From the study it was also observed that out of 80 respondents who have been induced previously, 59(73.75%) said health education has a role to play in the acceptance of induction of labour. It can be inferred that health education has a great influence in acceptance of induction of labour. This corresponds with Fraser and Cooper (2020) who state that patients should partake in the decision making process, give their consent or approval based on fill information about the alternative method of birth. Labour should be interfered with if the situation indicated arises.

Implication to Midwifery

Induction of labour like any other procedure requires the full consent of the patient. Lack of awareness or absence of meaningful information about procedures was evident in all studies where IOL took place for low-risk postdates pregnancies as part of usual care. Information was given but not adequate or women did not remember it being given at all or it was given in a rush or too close to the time of induction. Meaningful individualized conversations with healthcare practitioners were absent. Women sought information from other sources including the internet and friends and family (Coates et. al 2019). This study will help to improve the knowledge of nurses and midwives on factors responsible or contributing to the acceptance of induction of labour as compared to normal onset of labour which will enable them to provide appropriate care needed by these women. Induction of labour is an obstetric intervention which should be beneficial to the mother as well as the fetus.it is carried out in other to reduce maternal and fetal mortality rates. The decision to induce labour should only be made when it is clear that a vaginal birth is the most appropriate mode of delivery in the pregnancy.

CONCLUSION

It was discovered that majority of respondents are aware of induction of labour. It is important and beneficial especially when indicated, to ensure survival of mother and the baby. Misconceptions about induction of labour contribute to non-acceptance which can result to loss of life of the pregnant women and foetus. Adequate information to correct misconception goes a long way to influence women's acceptance of induction of labour.

Recommendations

Based on the findings, the following recommendations were made:

- Public enlightenment on the dangers associated with refusal of induction of labour.
- The federal and state government should participate in creating awareness through adequate publicity in the mass media.
- Health educating the populace on the advantages of induction of labour as a method of child birth.
- To health personnel: They should provide adequate information and give opportunity to client to air their view, express doubt and concerns about the procedure. Anxiety should be allayed and misconception corrected.
- To the client: The client should be receptive to advice that the doctors and nurses have for them bearing in mind that induction of labour when suggested is done to save her life and that of her baby.

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