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## Factors associated with preterm births in sacred heart hospital, Lantoro, Abeokuta, Ogun state

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### Abstract

This research was carried out to ascertain the factors associated with preterm births in Sacred Heart Hospital, Lantoro, Abeokuta, Ogun State, Nigeria. The Objectives were to assess the Knowledge of mothers on the causes of preterm labour during ANC, assess causes of preterm birth in Sacred Heart Hospital, Lantoro, Abeokuta, determine the socio-demographic factors that influence preterm delivery in mothers attending Sacred Heart Hospital, Lantoro, Abeokuta and Investigate the possible options to the management of preterm labour. The significance of this study is to empower clients and health care professionals to understand and prevent preterm births, minimize the complications of preterm births and give better care to premature babies. Nurses could educate pregnant women based on the findings of this study to avoid practices that predispose them to preterm births. Early detection and prompt treatment of disease conditions associated with premature births. It will also serve as a base-line for future studies. Research design was retrospective/cross sectional study. Data was collected from the records of women who delivered in the hospital between January 2016 and December 2018. Sample size was determined by the use of Cochran's formula to select 162 respondents from the ANC using self-structured questionnaire. Quantitative data was collected using abstract form questionnaire with 4 sections on socio-demographic, knowledge of causes of preterm births, preterm delivery among respondents and available options for the management of preterm births. Findings from the analysis revealed that 62% of nursing mothers have heard of preterm births, 57.1% have poor knowledge of causes. Majority (89.3%) were married and from monogamous homes (89.3%). Previous preterm births (78.6%) and pre-eclampsia (82.1%), the highest risk factor. Eighty-nine percent of mothers had babies with low apgar score while 80% had slow development. Almost all mothers (100%) opted for Kangoro Mother Care. Recommendations were made based on the findings that nurses should update their knowledge and skills on the causes, prevention and special care of preterm babies so as to guide the mothers aright thereby reducing infant morbidity and mortality associated with premature births.

**Keywords:** retrospective study, factors, preterm births, association

### Introduction

Approximately 15 million babies were born preterm worldwide in 2010 and in England in 2014 there were 52 249 preterm births. Preterm babies are at increased risk of poor outcomes and this can put enormous strain on the family (Henderson *et al.*, 2018) <sup>[58]</sup>. More than 60% of preterm births occur in Africa and South Asia, but preterm birth is truly a global problem. In the lower-income countries, on average, 12% of babies are born too early compared with 9% in higher-income countries. Within countries, poorer families are at higher risk. Hence, the number of preterm births could be reduced significantly if all of the risk factors/causes are of preterm births are identified and eliminated. Elimination of the risk factors and causes are not possible unless they are known and given priority attention according to the contribution each makes towards preterm births. The priority list can be used to target interventions to ameliorate and/or eliminate risk factors and causes (Kaewluang, 2015) <sup>[59]</sup>. Preterm birth is defined by the World Health Organization (WHO, 2016) <sup>[67]</sup> as babies born alive prior to 37 weeks gestation. The most important outcome of preterm labor is a premature neonate. Previous studies have estimated that 11.1% of all live births are preterm worldwide, ranging from about 5% in several European countries to 18% in some African countries (Nabavizadeh, 2012) <sup>[60]</sup>.

During the last decades, a gradual increase of maternal age has been observed worldwide. In the United States, between 1970 and 2006, the proportion of pregnant women aged over 35 years has increased almost eight times and therefore researchers have been interested in outcomes of pregnancy in women of advanced age. Pregnancy complications such as placenta previa, intra-uterine growth restriction or fetal demise, gestational diabetes, hypertensive disorders of pregnancy and caesarean delivery are well known to be more common in older pregnant women.

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Therefore, guidelines have emerged, both in North America and Europe, for the management of pregnancy in patient with advanced maternal age (Fuchs *et al.*, 2018)<sup>[61]</sup>. Preterm birth is the largest risk factor for infant morbidity and mortality, not only in the immediate neonatal period but also in infancy, childhood, and even adulthood. It can affect physical health, cognitive and behavioral dimensions, making it one of the most significant challenges for modern public health (Leal, 2016)<sup>[62]</sup>. Preterm birth is associated with health, socioeconomic, and psychological consequences. It exerts enormous strain on the resources of families, health care systems and the society at large (Henderson *et al.*, 2015)<sup>[63]</sup>. It predisposes to long hospital stay following delivery and increased probability of neonatal death before discharge from hospital. It is a leading cause of neonatal death worldwide accounting for 1.1 million neonatal deaths annually and the second most common cause of under-five mortality after pneumonia (Iyoke *et al.*, 2015)<sup>[64]</sup>.

Preterm birth is the most important factor determining neonatal morbidity and mortality, and has a major impact on it. However, in literature, the association between prematurity and advanced maternal age remains controversial. A study on more than 80,000 women revealed that 36% of the increase in prematurity, between 1990 and 1996 in Canada, was attributable to the change towards increasing maternal age (Fuchs, 2018)<sup>[61]</sup>.

Premature labor is a serious worldwide problem that can cause neonatal death and other serious disorders. Therefore, this study aimed to find out the most important factors related to preterm births in sacred heart Hospital, Abeokuta which in recent time seem to be having an upsurge in premature births from booked and un-booked cases.

### Statement of problem

Nearly 10 percent of babies in the U.S. are born prematurely and the rates of premature birth are going up, a new government report shows (For, 2017). According to the WHO (2017)<sup>[65]</sup>, more than 60 per cent of premature births occur in Africa and South Asia, but preterm births is truly a global problem. In the lower-income countries, on average, 12 per cent of babies are born too early compared with nine per cent in higher-income countries (allAfrica.com, 2017)<sup>[68]</sup>. Nigeria is placed third among the ten countries with the highest number of preterm births with 773,600, according to latest figures from the World Health Organization (WHO, 2017)<sup>[63]</sup>. The researcher therefore will like to investigate the factors responsible for the increasing rate of preterm births in Sacred Heart Hospital within the past two years.

### Objective of the study

1. assess the Knowledge of mothers on the causes of preterm labour during ANC
2. assess causes of preterm birth in Sacred Heart Hospital, Lantoro, Abeokuta
3. determine the socio-demographic factors that influence preterm delivery in mothers attending Sacred Heart Hospital, Lantoro, Abeokuta
4. Investigate the possible options to the management of preterm labour

### Research Question

1. What is the knowledge of mothers on the causes of preterm labour during ANC?

2. What are factors that contribute to premature birth occurrence?
3. Which socio-demographic characteristics influence preterm delivery among mothers attending SHH?
4. What are the possible options to the managements of preterm labours?

### Methodology

The type of research design used is a retrospective/cross sectional study using secondary data collected from the cards, register and files of patient who delivered in Sacred Heart Hospital (booked and Un-booked) between January 2016-December 2018 to determine the factors associated with preterm births in Sacred Heart Hospital, Abeokuta and primary data from a structured interviewer administered questionnaire; used to determine the knowledge of women attending ante-natal clinic on preterm labour and preterm birth. Secondary data was extracted by three persons who worked together as data collectors for 4 hours daily at a time for two weeks to maintain intra-rater reliability.

### Research setting

Data was collected from the Department of records and statistics of Sacred Heart Hospital, Lantoro, Abeokuta, and Abeokuta South Local Government Area of Ogun State of Nigeria. The hospital was established in 1895 being the oldest hospital in Nigeria. It has the status of a general hospital with all departments in full operation. Although the hospital started as a maternity, it has grown to include O&G, Pediatric ward, Neonatal Unit, Medical and surgical wards, Out patients Department, Theater, Emergency, APIN Unit, Chest Unit, Physiotherapy, Laboratory Department, Endoscopy unit, Ultrasound, ECG, Pharmacy department etc. It has 300 beds. It has a school of general nursing which began in 1998 but was formerly school of Midwifery which began in January, 1950 but metamorphosed into school of Nursing in 1985. The hospital operates 24hrs daily serving the needs of people in Abeokuta Metropolis and environs. Being the first hospital here, staffed with qualified health care providers and with basic facilities as well as being a faith-based, none profit making, patients are attracted to the institution and occasionally patients are referred not only from private hospitals but even General hospital for logistic reasons as they often say. Most of the cases referred are O&G and Special care baby unit-Nursery. The hospital is also accredited for post graduate studies for Doctors in family medicine.

### Target population

The target population are pregnant women who attend antenatal care in the hospital and the record of those who delivered in the hospital both booked and un-booked or referred from other hospitals and clinics in parts of Ogun and Lagos State from January 2016 to December 2018.

### Sample technique

Women who had preterm birth were selected out of all registered births between January 2016 to December 2018.

Determination of Sample Size

The sample size was determined using Cochran's formula.

$$n = \frac{Z^2pq}{d^2}$$

Z = Standard normal deviate corresponding to confidence level; at 95% confidence level (1.96 for a two-tailed test).

P = 12%; Prevalence of pre-term delivery at University of Ilorin Teaching Hospital <sup>[1]</sup>.

$$q = 1.0 - p$$

d = degree of accuracy required (0.05)

$$n = 1.96^2 \times \frac{0.12(1 - 0.12)}{0.05^2}$$

$$n = \frac{3.842 \times 0.12 \times 0.88}{0.0025}$$

$$n = \frac{0.4057}{0.0025}$$

$$n = 162.28$$

$$n = 162.$$

### Consideration for non-response

In adjusting the sample size for non-response or improperly filled questionnaire, an additional 10% of the questionnaire was added to the minimum sample, thus increasing the sample size to 178.

### Research instrument

Data collection: Quantitative data was collected using an abstraction form/questionnaire with four sections thus; Section A: Comprises socio-demographic information of the mothers; Section B: Comprises the questions on knowledge of causes of preterm births; Section C: gathered information on causes of preterm delivery among the respondents; Section D: information on the options available for the management of preterm deliveries at SHH.

### Validity of the instrument

Validity of an instrument is the ability of an instrument to measure what it is designed to measure and whether the measurement process yields the same results. The questionnaire was designed by the research and modified where necessary. These two concepts are validity and reliability. There are four different types of validity-face, content, criterion and construct. Face validity is an assessment of whether a measure appears, on the face of it, to measure the concept it is intended to measure. Content validity concerns the extent to which a measure adequately represents all facets of a concept. Criterion-related validity applies to instruments that have been developed for usefulness as indicator of specific trait or behavior, either now or in the future. Construct validity concerns the extent to which a measure is related to other measures specified by theory or previous research.

### Reliability of the instrument

Reliability is concerned with questions of stability and consistency such as does the same measurement tool yield stable and consistent result when repeated over time. It is the ability to use research tools and procedures that yield

consistent measurements, researchers would be unable to satisfactorily draw conclusions, formulate theories or make claims about the generalization of their research. There are four key types of reliability-equivalent, stability, internal consistency and interrater reliability. Equivalent reliability is the extent to which two items measure identical concepts at an identical level of difficulty. Stability reliability (Test-re test reliability) is the agreement of measuring instruments over time. Internal consistency is the extent to which test or procedures assess the same characteristics, skill, or quality. Interrater reliability is the extent to which two or more individuals (codes or raters) agree.

### Method of data collection

A permission letter was obtained by the researcher from West African College of Nursing which was duly signed by the Executive Secretary of the college and presented to the Ethical Committee of the hospital who in turn gave verbal permission. The study used cards and register (secondary) data of women who delivered in sacred hospital, Abeokuta from January 2016 to December 2018, both full term and preterm babies were recorded but with special attention to the preterm births which is the focus of the study. Verbal permission was sought from head of Department of record and was granted before data was collected. A total of 178 questionnaires will be distributed to respondents at various antenatal clinics.

### Method of data analysis

Data collected will be analyzed using descriptive and inferential statistics to establish associations between prematurity and various risk factors using chi-square analysis while a multivariate logistic regression will be used to determine the factors independently associated with preterm birth. Presentation of data will be done using tables, charts and graphs.

### Ethical consideration

Express permission was obtained from the ethical committee of Sacred Heart hospital, Abeokuta. The respondents were informed about the research and its purpose in clear terms. They were told they have the right to refuse to participate and could opt out at any stage they feel uncomfortable. There is full confidentiality about patients and data obtained and no falsification.

### Results

One hundred and seventy-two nursing mothers attending Sacred Heart Hospital, ante-natal clinic (ANC) were recruited and one hundred and seventy completed the questionnaire giving a response rate of 98.8%. The mean (SD) age of the nursing mothers was 28.93 (5.11) years with the majority of the respondents (95.9%) married while 6 (3.5%) were single and 1 (0.6%) was widowed. Also, most (106, 62.4%) of the nursing mothers were traders while 1 (0.6%) was a full-time housewife. There were more nursing mothers of Yoruba ethnicity (145, 85.3%) while other tribes like Edo (2.4%), Akwa-ibom (0.6%), Marghi (1.2%) and Igala (1.8%) were also present. There were more Christians (93, 54.7%) than Muslims (74, 43.5%) and Traditional worshippers (3, 1.8%) (Table 1).

**Table 1:** Socio-demographic characteristics of the respondents

Variables	Frequency (N=170)	Percentage (%)
<b>Age group (years)</b>		
18-25	49	
26-35	102	28.8
>35	19	60.0
Mean age±SD	28.93±5.11	11.2
<b>Marital status</b>		
Married	163	95.9
Single	6	3.5
Widowed	1	0.6
<b>Occupation</b>		
Trader	106	62.4
Civil servant	44	25.9
Artisan	19	11.2
Housewife	1	0.6
<b>Ethnicity</b>		
Yoruba	145	85.3
Igbo	12	7.1
Hausa	1	0.6
Others (Edo, Ibom, Esan, Igala, Marghi)	12	7.1
<b>Religion</b>		
Christianity	93	54.7
Islam	74	43.5
Traditional	3	1.8

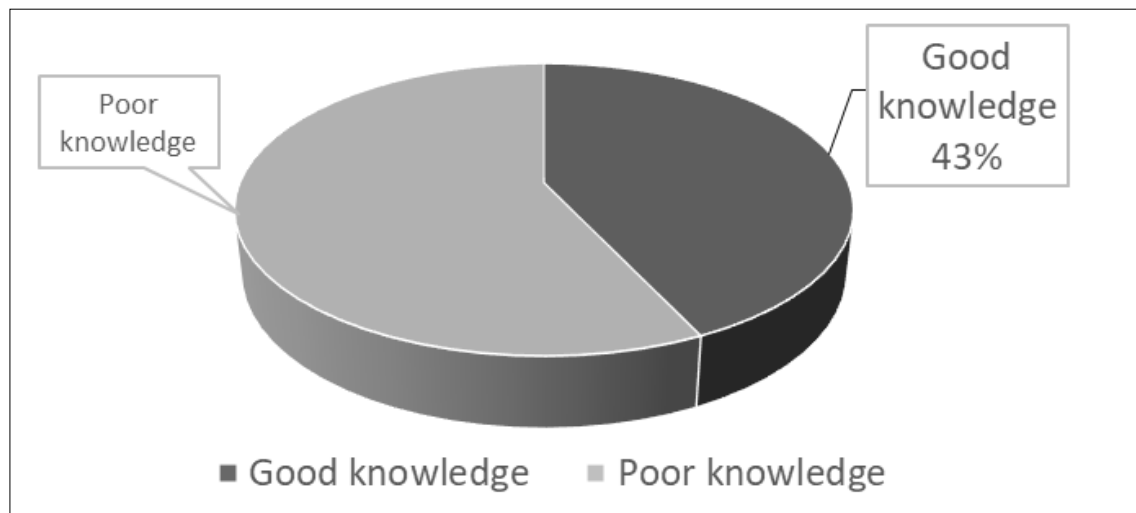
**Table 2:** Level of awareness of the respondents on preterm labour and preterm birth

Variables	Frequency (N=363)	Percentage (%)
<b>Aware of preterm birth</b>		
Yes	107	62.9
No	50	29.4
Not sure	13	7.6
<b>Source of information about preterm birth (n = 107)</b>		
Social media	32	29.9
Obstetrician	12	11.2
Friends	37	34.6
ANC	20	18.7
Previous experience	5	4.7
Others	1	0.9
<b>Aware of preterm Labour</b>		
Yes	117	68.8
No	36	21.2
Not sure	17	10.0
<b>Source of information about preterm birth (n = 117)</b>		
Social media	33	28.2
Obstetrician	16	13.7
Friends	36	30.8
ANC	24	20.5
Previous experience	7	6.0
Others	1	0.9

Table 2 shows the awareness of preterm birth and preterm labour among nursing mothers attending ANC of Sacred Heart Hospital, Lantoro. One hundred and seven (62.9%) of the nursing mothers have heard of preterm birth while others have not (50, 29.4%) or not sure (13, 7.6%). Of the respondents' who have heard about preterm birth, the most source of information was by friends (37, 34.6%) and social

media (32, 29.9%), ANC (20, 18.7%) and lastly by previous experience (5, 4.7%).

Furthermore, 117 (68.8%) of the respondents have heard of preterm labour and of those who have heard, their sources of information were friends (36, 30.8%) and social media (33, 28.2%), ANC (24, 20.5%) and lastly by previous experience (7, 6%).



**Fig 1:** Chart showing the distribution of knowledge among the respondents

The pie chart in figure 4.1 illustrates the description of knowledge among the respondents. Only 43% of the respondents have good knowledge on pre term labour and

delivery while majority of the respondents, 57% have good knowledge.

**Table 3:** Socio-demographic characteristics of patients with preterm birth at SHH

Variables	Frequency (N=28)	Percentage (%)
<b>Age group (years)</b>		
18 - 24	3	10.7
25 - 34	17	60.7
≥ 35	8	28.6
Mean age±SD	31.43±5.27	
<b>Marital status</b>		
Married	25	89.3
Single	3	10.7
<b>Occupation</b>		
Unemployed	3	10.7
Employed	8	28.6
Self-employed	14	50.0
Others	3	10.7
<b>Ethnicity</b>		
Yoruba	20	71.4
Igbo	5	17.9
Hausa	3	10.7
Others	0	0.0
<b>Religion</b>		
Christianity	16	57.1
Islam	12	42.9
Traditional	0	0.0
<b>Family type</b>		
Monogamous	25	89.3
Polygamous	3	10.7
<b>Nature of work</b>		
Stressful	19	67.9
Relaxing	9	32.1

Table 3 describes the socio-demographic characteristics of mothers with preterm deliveries at sacred heart hospital, Lantoro, Abeokuta. A higher percentage (17, 60.7%) of mothers with preterm delivery were of age 25–34 years while 3 (10.75) of them were less than 24 years. Majority (25, 89.3%) of the mothers were married, half (14) of them

were self-employed while 3(10.7%) were unemployed and 3(10.75) were full housewives. There were more mothers (20, 71.4%) of Yoruba ethnicity. More Christians (16, 57.1%), more mothers of monogamous family type (25, 89.3%) and more mothers (19, 67.9%) engaging in stressful work.

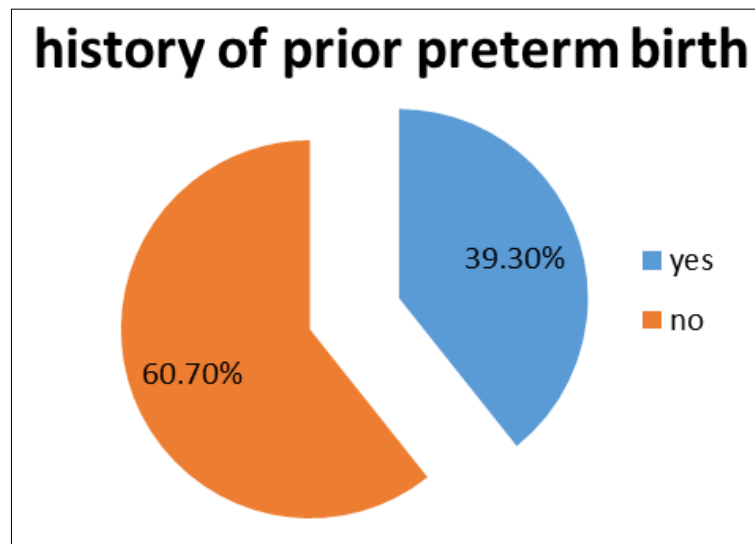


**Table 4:** Obstetric History of the respondents

Variables	Frequency (N=28)	Percentage (%)
<b>Number of previous pregnancies</b>		
0	3	10.7
1	6	21.4
≥2	19	67.9
<b>Duration between pregnancies (years)</b>		
< 1	6	24.0
1 -2	5	20.0
>2	14	56.0
<b>Number of previous births?</b>		
1	8	32.0
2-3	11	44.0
4-5	3	12.0
>5	3	12.0
<b>Previous abortion</b>		
Yes	0	0.0
No	28	100.0
<b>Prior preterm birth</b>		
Yes	11	39.3
No	17	60.7
<b>Weeks of prior preterm birth</b>		
<28	2	18.2
28 – 32	9	81.8
33 – 37	0	0.0
<b>Mothers age at previous preterm birth (years)</b>		
18-22	2	18.2
23–27	3	27.3
28-32	6	56.3
33-39	0	0.0
<b>Age of gestation signs started</b>		
<18	2	12.5
18 -22	2	12.5
23 – 27	9	56.3
28-32	3	18.8
33-39	0	0.0
<b>Premature rupture of membrane</b>		
Yes	26	92.9
No	2	7.1
<b>Multiple pregnancy</b>		
Twins	8	28.6
Triplet	0	0.0
Others	0	0.0
None	20	71.4
Delays in decision in Abruption placenta	14	50.0
Problems with Uterus cervix	25	89.3
History of infections during pregnancy	0	0.0
Any sexual activity before labour	3	10.7
Signs of preterm birth experienced	8	28.6
Contractions	28	100.0
Drainage liquor	0	0.0

Table 4 describes the obstetric history of mothers with preterm delivery at sacred heart hospital, Lantoro, Abeokuta. While 3 (10.7%) of the mothers had no previous pregnancy, 19 (67.9%) of them had 2 or more previous pregnancies. Most of the mothers (14, 56%) of them had more than 2 years gap between pregnancies and 6 (24%) of

them had less than 1 year gap. There were more mothers (11, 44%) with previous birth between 2 and 3. Also, 11 (39.3%) of the mothers had prior preterm births and 9 (81.8%) of the mothers with prior preterm births. Nine (81.8%) of the prior preterm births were between 28–32 weeks and most of the mothers were at 28–32 years of age.

**Fig 2:** History of prior preterm birth

The pie chart on figure 4.2 illustrates medical history of mothers as regard previous incidence of preterm birth. Majority of the respondents (60.70%) claimed they had no

previous history of pre term birth while others (39.30) had history of pre term birth.

**Table 5:** Medical History of mothers with preterm birth

Variable	Frequency (N=28)	Percentage (%)
<b>High Blood Pressure (HBP)</b>		
Yes	14	50.0
No	14	50.0
<b>BMI</b>		
Underweight	0	0.0
Normal	22	78.6
Overweight/Obese	6	21.4
<b>Disease</b>		
Infections	0	0.0
Malaria	0	0.0
Urinary Tract Infections	6	21.4
Sexually transmitted disease	0	0.0
Dysentary	0	0.0
Diarrhoea	0	0.0
None	22	78.6

Table 5 describes the medical history of mothers with preterm births. Half (14, 50%) of the mothers had history of high blood pressure (HBP). Approximately one-fifth (6,

21.4%) of the mothers were either overweight or obese and one-fifth (6, 21.4%) had medical history of urinary tract disease (UTD).

**Table 6:** Habits of mothers with preterm births

Variable	Frequency (N=28)	Percentage (%)
<b>Smoking</b>		
Yes	0	0.0
No	28	100.0
<b>Drinking</b>		
Yes	0	0
No	28	100.0
<b>Alcohol</b>		
Yes	0	0.0
No	28	100.0
<b>Use of prescribed drugs</b>		
Yes	28	100.0
No	0	0.0
<b>Use of traditional drugs</b>		
Yes	11	39.3
No	17	60.7

In table 6, habit (lifestyle) of mothers with preterm deliveries was described. While there was no history of smoking or alcohol in mothers that could be risk-factors to

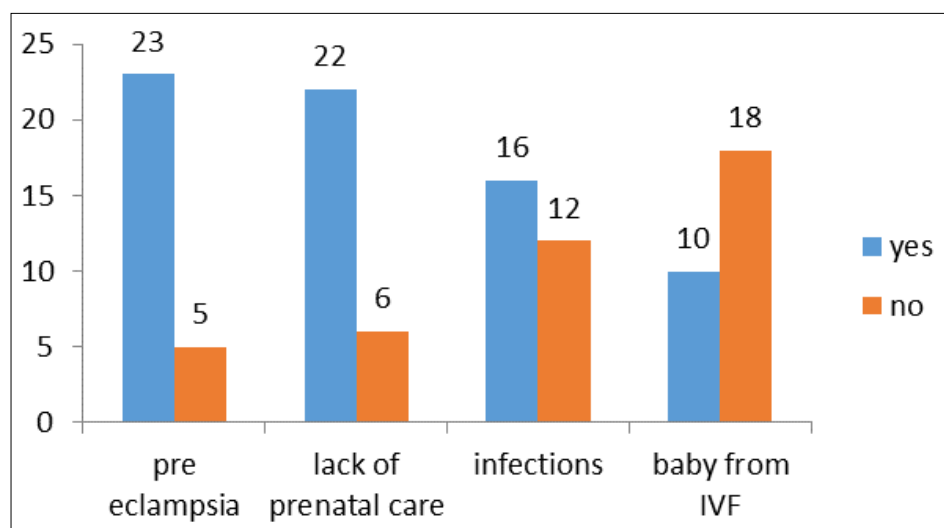
preterm delivery, approximately 40% (11) of the mothers used traditional drugs while in pregnancy.

**Table 7:** Risk factors of preterm births among mothers with preterm delivery at SHH

Variable	Frequerency (N=28)	Percentage (%)
<b>Pre-eclampsia</b>		
Yes	23	82.1
No	5	17.9
<b>History of preterm birth</b>		
Yes	22	78.6
No	6	21.4
<b>Lack of prenatal care</b>		
Yes	22	78.6
No	6	21.4
<b>High BP</b>		
Yes	22	78.6
No	6	21.4
<b>Infections</b>		
Yes	16	57.1
No	12	42.9
<b>Congenital abnormality in baby</b>		
Yes	16	57.1
No	12	42.9
<b>Maternal age</b>		
Yes	13	46.4
No	15	53.6
<b>Pregnant with 2/more babies</b>		
Yes	10	35.7
No	18	64.3
<b>Getting pregnant too soon</b>		
Yes	10	35.7
No	18	64.3
<b>Blood clotting disorder</b>		
Yes	10	35.7
No	18	64.3
<b>Baby from IVF</b>		
Yes	10	35.7
No	18	64.3

Table 7 shows the risk factors of preterm birth as identified from the mothers with preterm birth at sacred heart hospital (SHH), Lantoro, Abeokuta. The most frequent risk-factor of preterm delivery among mothers with preterm birth at SHH is pre-eclampsia with 23, 82.1%) of the mothers. Others include; history of preterm birth (22, 78.6%), lack of

prenatal care (22, 78.6%), High blood pressure (22, 78.6%), infections (16, 57.1%). and the risk factors less frequent with 10 (35.7%) of the mothers are pregnancy with multiple babies, getting pregnant too soon after having a baby, blood clotting disorder and being pregnant with baby from IVF.



**Fig 3:** Risk Factors of Preterm Birth among Mothers of Preterm Delivery



The bar chart in figure 4.3 describes the perception of respondents towards some risk factors of preterm birth among mothers of preterm delivery. Preeclampsia, lack of prenatal care, infections and birth from IVF are the most significant risk identified with majority of the respondents 23 (82.1%) agreeing to pre eclampsia as a risk while 5

(17.9%) disagreed, lack of prenatal care was supported by many as well, 22 (78.6%) while 6 (21.4%) said no, 16 (57.1%) of the respondents supported infection as a risk while 12 (42.9%) opposed it. However, only 10 (35.7%) sees birth by IVF as a risk while 18 (64.3%) believes otherwise.

**Table 8:** Foetal factors of preterm births among mothers with preterm delivery at SHH

Variable	Frequency (N=28)	Percentage (%)
<b>Low apgar score</b>		
Yes	25	89.3
No	3	10.7
<b>Slow development</b>		
Yes	22	78.6
No	6	21.4
<b>Jaundice</b>		
Yes	13	46.4
No	15	53.6
<b>Anaemia</b>		
Yes	28	100.0
No	0	0.0
<b>Sepsis</b>		
Yes	19	67.9
No	9	32.1
<b>Hemolytic disease of new born</b>		
Yes	16	57.1
No	12	42.9
<b>Intracranial bleeding</b>		
Yes	9	32.1
No	19	67.9
<b>Hydrocephalus</b>		
Yes	6	21.4
No	22	78.6

Table 8 describes the foetal factors that could have led to preterm delivery at sacred heart hospital, Lantoro, Abeokuta. Twenty-five of the mothers (89.3%) had low apgar score prior to delivery. Approximately 80% of them had slow foetal development, Jaundice was recorded in 13

(46.4%), sepsis in 19 (67.9%), Hemolytic disorder of newborn in 16 (57.1%), intracranial bleeding in 9 (32.1%) and hydrocephalus in 6 (21.4%) of the preterm birth cases recorded. All (28, 100%) the newborns had anaemia as a foetal risk factor which could have prone preterm delivery.

**Table 9:** Management options preterm births among mothers with preterm delivery at SHH

Management options	Frequency (N=28)	Percentage (%)
<b>Postnatal care</b>		
Yes	28	100.0
No	0	0.0
<b>Hygiene</b>		
Yes	28	100.0
No	0	0.0
<b>Breastfeeding</b>		
Yes	28	100.0
No	0	0.0
<b>Care seeking</b>		
Yes	21	75.0
No	7	25.0
<b>Special care for preterm babies</b>		
Yes	28	100.0
No	0	0.0
<b>Immediate Kangaroo mother care</b>		
Yes	28	100.0
No	0	0.0
<b>Supportive care from relations</b>		
Yes	28	100.0
No	0	0.0

The management options used among mothers with preterm birth at Sacred heart hospitals include; immediate Kangaroo

Mother Care (KMC) for all preterm babies (100%), postnatal care (100%), good hygiene practices (100%),

breastfeeding and special care for preterm babies (100%) and supportive care from relations. Also, three-quarter (21) of the mothers sought care after preterm delivery (Table 9).

### Discussion of Findings

This chapter consist of discussion of findings, conclusion, summary, limitations of the study, suggestion for further study, implications for nursing and recommendation,

### Discussion of Findings

This research was designed to determine the factors associated with preterm births in Sacred Heart Hospital, Abeokuta with the aim of assessing the knowledge of mothers on the causes of preterm labour during Antenatal clinics, assessing causes of preterm births in Sacred Heart Hospital, determining the socio-demographic factors that influences preterm delivery in mothers attending Sacred Heart Hospital as well as investigating the possible options to the management of preterm labor in Sacred Heart Hospital, Abeokuta.

The findings revealed that 62.9% of the nursing mothers have heard of preterm birth. However, of the respondents' who have heard about preterm birth, the most source of information was by friends and social media which shows the awareness of preterm birth and preterm labour among nursing mothers attending ANC of Sacred Heart Hospital, Lantoro is above average and have a common source of information and despite their awareness about preterm birth, more than half (57.1%) of the respondents had a poor knowledge on the causes of preterm labour during ANC. This was supported by (W.H.O., 2018) <sup>[69]</sup> which stated that, "Events leading to preterm births are still not completely understood, although the etiology is thought to be multi-factorial? It is however unclear whether preterm births result from interaction of several pathways or the independent effect of each pathway.

The most frequent risk-factor of preterm delivery among mothers with preterm birth at SHH is pre-eclampsia (82.1%) of the mothers. Others include; history of preterm birth, lack of prenatal care, High blood pressure, infections and the risk factors less frequent with 35.7% of the mothers are pregnant with multiple babies, getting pregnant too soon after having a baby, blood clotting disorder and being pregnant with baby from IVF. This was supported by (Beck, 2010.) <sup>[66]</sup> which states that it is not clear whether preterm birth results from interaction of several pathways or the independent effect of each pathway. However, there are known risk factors of premature delivery, these include; Having a previous premature birth, pregnancy with twins, triplets or other multiples, an interval of less than six months between pregnancies, conceiving through *in vitro* fertilization, problems with the uterus, cervix or placenta, smoking cigarettes or using illicit drugs.

It was observed that a higher percentage (60.7%) of mothers with preterm delivery were of age 25–34 years while (10.75%) of them were less than 24 years. Majority (89.3%) of the mothers were married, half (14) of them were self-employed while (10.7%) were unemployed. There were more mothers (71.4%) of Yoruba ethnicity. More Christians (57.1%), more mothers of monogamous family type (89.3%) and more mothers (67.9%) engaging in stressful work. Extreme stress, poverty and malnutrition (poor nutritional state) which are indicative that social-demographic factors such as extreme ages, occupation,

religion and ethnic group have effects on the occurrence of preterm births and delivery in Sacred Heart Hospital. This was supported by (Beck, 2010) <sup>[66]</sup> which states that, for unknown reasons, black women are more likely to experience premature birth than are women of other races. But premature birth can happen to anyone. In fact, many women who have a premature birth have no known risk factors-factorial.

All efforts are made when preterm labor is established through history taking, ultrasonography, persistent contractions, and lower abdominal pain without corresponding cervical dilatation to stop labor progressing by using several measures like immediate Kangaroo Mother Care (KMC) for all preterm babies, postnatal care, good hygiene practices, breastfeeding and special care for preterm babies and supportive care from relations although few of the mothers sought care after preterm delivery. This was supported by (Ralston 2015) that Special care are given to preterm babies soon after delivery such as establishing respiration, keeping them warm and preventing hypoglycemia. Most preterm babies are taken to the nursery for observation depending on their condition at birth.

### Implications to Nursing

Helps to empower clients and health care professionals to understand and prevent preterm births, minimize the complications of preterm births and give better care to premature babies.

Provides education for pregnant women based on the findings of this study to avoid practices that predispose them to preterm births.

Enhances early detection and prompt treatment of disease conditions associated with premature births.

Provides more knowledge on the existing method on causes and management of preterm birth and delivery.

### Summary

This is a retrospective cross-sectional study carried out to determine factors associated with preterm births in Sacred Heart Hospital Abeokuta. Data was gathered from patients register and cards as well as from respondents from the ANC.

Chapter one dealt with introduction of the study, objectives of the study, statement of the problem, research questions, hypothesis, significance of the study, scope and operation definition of terms.

Chapter two comprises types of preterm births, causes of preterm births, epidemiology of preterm births, countries struggling with preterm births, factors that trigger preterm births, management of preterm labor and births, immediate management of preterm baby, conceptual framework of factors influencing preterm births adapted from proximate determinant framework. Theoretical framework and health promotion model by Nola J Pender and factors that may affect the prevention of preterm delivery/birth and Personal factors.

Chapter three comprises research methodology which includes research design, sampling technique, the study setting, instruments used for data collection (records and questioner), and method of data analysis, validity and reliability of the study.

Chapter four summarizes the collation and analysis of data collected using tables, figures and descriptive statistics.

Chapter five finally highlights discussion of findings,

implication for nursing, summary, conclusion, recommendations by researcher and suggestions for further study.

### Conclusion

Based on the findings, it was discovered that eclampsia and social-economic status are major causes of preterm births.

### Limitations

These were time and financial constraints as well as gaining the cooperation of the respondents.

### Recommendations

Based on the findings of this research, the following recommendations were made;

Nurses should create adequate time to health educate patients/clients on the causes of preterm birth and how to prevent them.

Patients with premature rupture of membranes (PROM) should not be allowed home under any pretense.

### Suggestions for further study

There should be further studies on kangaroo nursing and the importance of exclusive breastfeeding for preterm births.

There will be need to carry a study on the relationship between none attendance of ANC and preterm births.

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