PREVALENCE OF CAESARIAN SECTION AND ASSOCIATED FACTORS AT CHAWAMA FIRST LEVEL HOSPITAL, IN LUSAKA URBAN DISTRICT, ZAMBIA

BY

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A Dissertation submitted to the University of Zambia in partial fulfilment for the award of the Master of Science Degree in Midwifery and Women's Health

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DECLARATION

I, Justina P. Banda hereby declare that this Dissertation represents my own work and that all the sources I have quoted have been cited and acknowledged by means of complete references. I further declare that this Dissertation has not been previously submitted for a degree, diploma or other qualification at this or another University. It has been prepared in accordance with the guidelines for Master of Science in Midwifery and Women's Health Dissertations of the University of Zambia

Candidate:…….

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I, Prof. Catherine M Ngoma, having supervised and read through this Dissertation, am satisfied that this is the original work of the author under whose name it is presented. I also confirm that the work has been completed satisfactorily and approve this Dissertation for final submission

Supervisor's Name:…….

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Name……...

Signature…… Date……

CERTIFICATE OF APPROVAL

The University of Zambia approves this Dissertation on "the Prevalence of cesarean section and associated factors at Chawama First Level Hospital Lusaka Urban District "in partial fulfillment for the award of Degree of Master of Science in Nursing.

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Signature……Date……

Examiner 3

Name…….

Signature……Date……

ABSTRACT

Introduction: Caesarean section (C-section) is a major obstetric life-saving intervention for the prevention of pregnancy and childbirth related complications. The goal of Caesarean section is to improve maternal and neonatal outcomes leading to reduced maternal and neonatal deaths. Globally Caesarian section is increasing, as well as in in Zambia. This study identifies the prevalence of C-section and bio-demographic, socioeconomic, health care seeking and socio-culture factors of C-section among women at Chawama First Level Hospital in Zambia.

Methodology: A descriptive cross-sectional study design was used. Data was collected from 219 participants who were randomly selected for interviews using systematic sampling method. A semi structured interview questionnaire and a checklist were used to collect data from the respondents. Data was analysed using SPSS version 20 computer software statistical package. Chi-square, Fisher exact test and binary logistic regression were performed to determine association between the dependent and independent variables. The level of significance was set at 0.05 with 95% confidence interval.

Results: The study shows that women aged 25-29 were 3.448 times likely to deliver through caesarian section while those aged 30-34 were 3.692 times likely to deliver through caesarian section. In this study, maternal education was significantly associated with Caesarian section with the p value of 0.006c. This study also showed a significant association between maternal income and Caesarian section with the p- value of 0.014. The current study showed a significant association between birth weight and Caesarian section with the p-value of 0.002c. The study showed a significant association between Caesarian section and parity. Women with high income were 2.494 times more likely to deliver through caesarian section as opposed to those with low income. Women aged 25-29 were 3.448 times likely to deliver through caesarian section while those aged 30-34 were 3.692 times likely to deliver through caesarian section. Births which involved big babies were 5.022 times likely to be caesarian section deliveries as opposed to small and normal babies. Normal birth weight babies showed odds of caesarian section delivery to at 2.334. Primipara women were 1.431 times likely to give birth through caesarian section as opposed to multipara women.

Conclusion: The prevalence of cesarean section was high and the predictors of cesarean section were Age, maternal education, Parity Income and Birth weight.

Keywords: Prevalence, Caesarian Section, Associated factors.

DEDICATIONS

I dedicate this study to God for giving me knowledge and strength throughout the study.

To my husband and my children who have been a source of inspiration and encouragement throughout the study.

To my family members; for their tireless encouragement and support, I say thank you so much.

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Contents

LIST OF ACRONYMS AND ABREVIATIONS

CS : caesarean section

CSR : cesarean section rate

LMICs : Low- and medium-income countries

MOH : Ministry of Health

EMOC : Emergency Obstetric Care

WHO : World Health Organisation

ZDHS : Zambia Demographic Health surveys

ANC : Antenatal care

MNCH : Maternal Neonatal and Child Health

VD : Vaginal delivery

SDGs : Sustainable Development Goals

MMR : Maternal Mortality Ratio

UN : United Nations

EOC **:** Essential Obstetric Care services

HIC : High-Income Countries

SSA : Sub-Saharan Africa

MMR ; Maternal mortality rate

CHAPTER ONE: INTRODUCTION AND BACKGROUND

INTRODUCTION

The general objective of this study is to determine the prevalence of caesarian section and associated factors at Chawama first level hospital, in Lusaka urban district, Zambia. Cesarean section is a surgical procedure in which a baby is born through a cut made in the mother's abdominal wall and uterus (Betran et al,2016). The baby will need to be born by cesarean section if there are serious problems that prevent the baby being born by a normal vaginal birth. The increase in caesarean section birth rate without clear evidence of concomitant decreases in maternal or neonatal morbidity or mortality raises significant concern that cesarean section delivery is being overused (Louis 2023). Chapter one provides background information for the study, statement of the problem, justification of the study, research objectives, conceptual and operation definition of terms, and study variables.

1.1 BACKGROUND INFORMATION

By the end of year 2015, the Sustainable Development Goals (SDGs) emerged with a target to bring a reduction in maternal mortality ratio (MMR) to less than 70 per 100,000 live births worldwide, and to ensure healthy lives for all at all ages by 2030 (UN General Assembly,2018) Despite the immense global interventions to reduce the problem of mother and child deaths due to complications in pregnancy and delivery, the magnitude of maternal mortality remains unabated specifically in sub-Sahara Africa region (Yaya et al., 2016). This implies the necessity to provide evidence-based, quality and high-impact maternal healthcare services, particularly; universal access to emergency gynecological and obstetric care be made a priority on the global health agenda. Predominantly, developing countries are known to account for approximately 99% of the estimated 303,000 maternal deaths that occur per year worldwide, where access to antenatal care, family planning, postnatal care and emergency obstetric services have been reported inadequate (WHO 2018). In the quest to achieve SDG-3, equity and equality in availability to emergency obstetric care including assisted vaginal delivery together with safe caesarean section (CS) is exceedingly essential (Chu et al., 2017).

Caesarean section (CS) is a life-saving intervention for women and newborns when complications occur, such as antepartum haemorrhage, fetal distress, abnormal fetal presentation and hypertensive disease. CS is the most common major surgical intervention in many countries (Biccard et al., 2018). Rates of CS have been rising during the last three decades to levels well above recommended CS rates of 10-15%, driven by major increases in non-medically indicated CS in many middle- and high-income countries (Betran et al., 2016). Yet, population caesarean rates above 20% have not been shown to improve perinatal outcomes (Betran et al., 2016). At the other end, many low-and middle-income countries still have population CS rates well below 10%, which is considered indicative of inadequate access to medically-indicated CS, (Molina et al, 2015). In addition, large differences in CS rates have been observed between births in the poorest and richest wealth quintiles within many low- and middle-income countries (Boatin et al., 2018) There is an increasing attention that CS rates have consistently been on the rise, regardless of race, age, medical condition and gestational age. Global attention over such upsurge have persuaded World Health Organization (WHO) to recommend that CS prevalence should not surpass 15% (WHO, 2015), with numerous evidences signifying that CS prevalence beyond 15% were not linked to further reduction in maternal and child morbidity and mortality.

Cesarean section (CS) was introduced in clinical practice as a lifesaving procedure both for the mother and the baby. As other procedures of some complexity, its use follows the health care inequity pattern of the world: underuse in low income settings, and adequate or even unnecessary use in middle- and high-income settings (Ronsmans et al., 2013). Several studies have shown an inverse association between CS rates and maternal and infant mortality at population level in low income countries where large sectors of the population lack access to basic obstetric care (Althabe et al., 2015). On the other hand, CS rates above a certain limit have not shown additional benefit for the mother or the baby, and some studies have even shown that high CS rates could be linked to negative consequences in maternal and child health (Hall et al., 2017).

Bearing in mind that in 1985 the World Health Organization (WHO) stated: "There is no justification for any region to have CS rates higher than 10-15%", (WHO, 2016) we set out to update previous published estimates of CS rates worldwide (Althabe et.al., 2015),

and calculate the additional number of CS that would be necessary in those countries with low national rates as well as the number of CS in excess in countries in which CS is overused. In addition to understand the resource-use implications of the 'needed' and 'excess' procedures, we performed a global costing analysis of both categories of CS.

A caesarean section (CS) is a major procedure in the management of complications during pregnancy and labour. In countries in the Global South, it accounts for the vast majority of obstetric interventions regardless of whether the indication is absolute, necessary or prudent. Ensuring quality access to CS is a key challenge for the millennium (UN, 2015), and the next sustainable development goal to reduce maternal and infant mortality. As with any surgical procedure, a CS involves risks and complications and should therefore be performed in an approved way and not used excessively. Although the optimum CS at population level is difficult to assess, the World Health Organization (WHO) recommends that the national CS rate should not exceed 10% to 15% (WHO,2015) however, in many countries the CS rate is rising (Declercq et al., 2018). Studies on the relationship between the CS rate and maternal and perinatal mortality and morbidity have concluded contradictory results, (Ye et al., 2016). Maternal mortality has a significant impact on the surviving family, the broader community, healthcare providers and society in general. It is also frequently used as a regional or national public health indicator to assess a healthcare system's quality. Nearly 300,000 women die every year as a result of a pregnancy or a CS or vaginal delivery. Approximately 99% of these deaths occur in developing countries (Dujardin et al., 2020). Systemic action is therefore needed to reduce maternal mortality. These efforts are real but remain insufficient, particularly in Zambia, which is among the sub-Saharan African countries making the slowest progress in combating maternal mortality (Chu et al., 2015).

Although globally the lifetime risk of dying due to maternal death is 1 in 180, Africa's high MMR of 540 per 100,000 live births coupled with high fertility levels translates into a lifetime risk of dying from maternal causes of 1 in 37 (WHO, 2015). Therefore, achieving equity and equality in availability of emergency obstetric care services including assisted vaginal delivery and safe caesarean section (CS) is exceedingly key in the attainment of SDG3 (Chu et al., 2017). Moreover, the population-based caesarean section is used as a process indicator in maternal health to monitor progress. (Teguete et

al., 2016). Despite being a lifesaving intervention, caesarean section is not without complications that could lead to maternal, neonate, and infant morbidity and mortality and development of chronic non-communicable diseases. Its high cost may lead to unnecessary expenditure to the already overburdened and economically hard-hit families, especially in the developing countries (Fabien et al., 2017). The World Health Organization has thus declared that for CS to have an optimal impact, it must be between 5 and 15%. WHO worldwide ecological studies have shown that below a caesarean section rate of 10%, maternal and neonatal mortality decreased when caesarean section rates increased. As caesarean section rates increased above 10% and up to 30%, no effect on mortality rates was observed (WHO, 2016). Despite that, there has been a tremendous increase in population-based all-cause CS rates globally ranging from 0.4 to 51%. Worth noting is that a continuous rise in the trend has been observed during the past 30 years (Rahman et al., 2018).

When medically indicated, CS has the potential for reducing maternal/neonatal mortalities and morbidities including delivery complications such as obstetric fistula (WHO, 2015). However, a non-medically indicated CS has no associated additional benefits for mothers and newborns, rather like any surgery, it carries both short-term and/or long-term health risks (Betran et al., 2016). Caesarean delivery is over-utilised in many middle-income to high-income countries. (Betran et al., 2016). For instance, the rate is as high as 25.9% in China, 32.3% in Australia/New Zealand and 45.9% in Brazil. (Gibbons et al., 2015). It has been argued that many of the caesarean deliveries in these countries were in excess, medically unjustifiable and thus unnecessary (Gibbons et al., 2015). However, in several low-income countries, where over 60% of the world's births occur, the population-based prevalence of CS is low—for example, 3.0% in West Africa. (Betran et al., 2016). This low prevalence may reflect poor availability of-/accessibility to comprehensive essential obstetric care services (EOC) in the countries/region (Gibbons et al., 2015). Comprehensive EOC refers to a package of clinical services for managing pregnancy/childbirth-related complications of which CS is a critical component (WHO, 2016).

At the top of the World Health Organization's (WHO) agenda regarding maternal mortality is improving the availability, accessibility, quality, and use of services for the

management and treatment of complications of pregnancy, labor, and delivery It should be noted that CS is considered essential treatment for antepartum hemorrhage, prolonged or obstructed labor, preeclampsia or eclampsia, and intrapartum fetal distress (WHO, 2016). It is in these situations that CS can avert major obstetric complications that lead to maternal, neonatal, and/or fetal death.

Epidemiology per WHO, it has been established that CS is an essential treatment in pregnancy and is recommended at a rate of 5–15 % of all births (WHO, 2015). Epidemiologic studies have shown that in high-income (HIC) and some low- and middle-income countries (LMIC) alike, CS is being provided at higher, and sometimes much higher, rates than recommended. A WHO publication reports that between 1990 and 2014 the global average CS rate increased from 12.4 to

18.6 % with rates ranging, depending on region, between 6 and 27.2 %, and rising at an average rate of 4.4 % per year (Betran et al., 2016). The lowest rates were found in Africa (7.3 %), followed by Asia (19.2 %), Europe (25 %), Oceania (31.1 %), and North America (32.3 %) with Latin America and the Caribbean having the highest rates at 40.5 % (Betran et al.,2016). While all the other regions showed an increase in CS, there was a small, but real increase in the CS rates in Sub-Saharan Africa (SSA) over that time period, as well.

Cesarean section (CS) is the delivery of the fetus, placenta, and membranes through an incision made on the mothers abdominal and uterine walls after 28th weeks of gestation (WHO, 2015). CS is the most common surgical procedure during pregnancy and labor to save both the life of the mother and the newborn (Betrán et al., 2016). Despite its advantage, CS is associated with adverse maternal and neonatal outcomes including long term sequels, with appropriate clinical indication significantly saves the life of the mother and the newborn as well. In contrast, CS performed without any medical indication increases the trend without giving any advantage for the patients (WHO,2015). Increased CS rate has an important negative implication for health coverage nationally and internationally (Gibbons et al., 2018). Cesarean section performed with aseptic technique, appropriate anesthesia, the applicability of lower transverse uterine segment cesarean section, safe and rapid availability of blood products collectively decreases the morbidity and mortality associated with cesarean section (Gregory, 2016). The rate of cesarean

section is twice higher in private than in public hospitals (Neuman et al., 2014). The global cesarean section rate (CSR) is 18.6% ranging between 6.0% to 27.2% in developing and developed world respectively, Latin American and Caribbean accounts the highest proportion of cesarean section rate (40.5%) and the lowest rate is in Africa (7.3%), particularly in western Africa (3%) (Betrán et al., 2016). The major obstetrical indication for cesarean section is obstructed labor, previous CS scar, non-reassuring fetal heart pattern, malpresentation, malposition, antepartum hemorrhage and failed induction, cesarean section rate more than the WHO threshold (15%) cause morbidity and mortality than giving any advantage, so routine use of antibiotics for all women undergoing CS decreases the morbidities associated with CS (Daniel, 2015).

Identification of the factors influencing the CS is critical to minimize the unnecessary practice of such lifesaving intervention and increase its access to those who needs it the most. Studies showed that factors related to childbearing women, families, communities and the broader society and factors related to health system stimulate the increased demand and supply of CS related health services (Begum et al., 2018). Health care-seeking behaviours such as seeking antenatal care (ANC), occurrence of health complication during pregnancy and labour and types of facility where childbirth takes place, are strongly associated with women having CS in Bangladesh (Leone et al., 2008, Jacob et al., 2016, Al Rifai., 2017). In the absence of clinical justification for CS, there is evidence for women's personal preference playing crucial role in decision making for CS (Barber et al., 2011). Such individual preference for CS is found to have a link with sociodemographic characteristics of pregnant women such as their age (Dweik et al., 2014), education (Rachatapantanakorn et al., 2009), occupation (Jansen et.al, 2010), household income and asset (Ronsmans et.al. 2013). Recent lancet series showed that there were large differences in CS use between women in the poorest and the richest wealth quintile in 82 LMICs (Boerma et al., 2018). Cultural and environmental differences in different geographic areas of a country play a major role in shaping these factors and may also influence the CS practice in those areas. Bangladesh has diverse geographical features which include remote regions with difficult terrains, communication is a major challenge in these regions. However, there is paucity of data on the topic in

Zambia. Therefore, the current study was aimed at determining the prevalence of cesarean section and associated factors at Chawama level I hospital in Lusaka urban district.

1.2 PROBLEM STATEMENT

The adequate population-based prevalence for cesarean section intervention remains a subject of strong contentions, worldwide, revealing a lack of consensus (WHO, 2015). However, prevalence of cesarean sections (C-sections) has become a significant public health concern globally, with various factors influencing the decision to perform this surgical intervention. An analysis of raw data from Chawama for the years 2019, 2020, and 2021 reveals a concerning trend in the rates of C-sections, with recorded figures of 2019-497 (7 %,) 2020-782 (11%) and 2021 -798 (12%) respectively. This upward trajectory raises questions about the underlying factors contributing to the prevalence of C-sections in this population. Despite this, evidence suggests that a population-based CS prevalence <5% indicates unmet needs (lack of access to women in need of it), while prevalence >15% may show no additional benefit for mothers and babies (Gibbons et al., 2015). In 1985, the WHO recommended CS rates—as a percentage of live births between 10% and 15% as the optimal range, with a declaration that there is no justification for caesarean section rates in any region to be higher than 10%–15%. However, the prevalence and associated factors at Chawama General Hospital are not clearly understood. The data from Chawama presents an opportunity to explore the prevalence and factors in depth. The purpose of this research is to develop an empirical body of knowledge for professions in order to improve on the way CS is handled.

1.3 JUSTIFICATION OF THE STUDY

The study of the prevalence and associated factors of cesarean sections at Chawama Hospital is justified by its potential to provide valuable insights into maternal health, inform clinical practices, guide policy development, and empower women in their childbirth choices. The findings will not only contribute to the existing body of knowledge but also serve as a foundation for future research and interventions aimed at improving maternal and neonatal health outcomes in the region. Additionally, Knowledge gained from this study on prevalence and associated factors of C-section factors will help in making recommendations regarding the development of appropriate health education and treatment strategies to empower the women on the importance of caesarean section. The

information will be used to develop guidelines and education materials that may be used in counselling before patients are taken for C/S during and post operatively. The findings would contribute to the review of the EMOC treatment protocols and policies, related in-service education for Health personnel and review of health education programs for emergency cases for ANC mothers so as to improve their management and improve the health of the mothers and babies.

1.4 OBJECTIVES OF THE STUDY

1.4.1 General Objectives

The aim of this study is to determine the prevalence and factors associated with caesarean delivery at Chawama General Hospital in Lusaka, Zambia

1.4.2. Specific Objectives

The following are the specific objectives of the study to:

Determine the prevalence of caesarian section at Chawama General Hospital

Determine factors associated with caesarian section at Chawama General Hospital

1.5 RESEARCH QUESTIONS

What factors association with the prevalence rate of caesarian section at Chawama General Hospital?

What is the prevalence of C/S among postnatal women at Chawama Hospital?

1.6 RESEARCH HYPOTHESIS

Null Hypothesis: There is no association between CS among postnatal women and the following factors: Bio-Demographic factors, socio-economic factors, health seeking/support factors and socio-culture factors.

Alternative Hypothesis: There is an association between CS among postnatal women and the following factors: Bio-Demographic factors, socio-economic factors, health seeking/support factors and socio-culture factors.

1.7 CONCEPTUAL DEFINITIONS OF TERMS

Prevalence - Prevalence is a statistical concept referring to the number of cases of a disease that are present in a particular population at a given time (Medical Dictionary, 2012).

C-section- Cesarean section, C-section, or Cesarean birth is the surgical delivery of a fetus through a cut (incision) made in the mother's abdomen and uterus **(** Krans, **2018)**

Fetus: An unborn offspring, from the embryo stage (the end of the eighth week after conception, when the major structures have formed) until birth (Medical Dictionary, 2012)

Factors: A factor is defined by the Oxford Advanced Learner's Dictionary (2000) as one of the several things that cause or influence something.

1.8 OPERATIONAL DEFINITION OF TERMS

Prevalence of Cesarean section – is the proportion of cesarean sections performed in a hospital to the total number of live births in a study area.

Demographic factors: These are factors that are used to define the characteristics of a person or population such as age, marital status, income, race educational level among others.

Obstetric factors: obstetrics characteristic or cofactors that are likely to influence cesarean section for example attendance of antenatal care during pregnancy, history of still birth, history of discourage, history of abortion, ectopic pregnancy, previous history of preterm delivery, mode of delivery, birth weight.

1.9 THEORETICAL FRAMEWORK

The Study was guided by the ecological framework, a theory-based framework for understanding the multifaceted and interactive effects of personal and environmental factors that determine behaviour. I thought that this model would be useful to understand the interaction of personal, health system, and environmental factors that affect the C-section in care of postnatal women at Chawama General Hospital, in Lusaka. Figure 1 below indicates the different components (levels) that constitute the socio-ecological model. The ecological perspective epidemiology emphasises the interaction between, and interdependence of, factors within and across all levels of a health problem. Two important perspectives that guide the ecological perspective are that behaviour affects and is affected by multiple levels of influence and that individual behaviour shapes and is

shaped by the social environment. As illustrated in Figure1 below, these levels are (1) intrapersonal or individual factors, (2) interpersonal factors, (3) institutional or organisational factors, (4) community factors, and (5) public policy factors (McLeroy, et al, 1988). The ecological framework is based on evidence that no single factor can explain health seeking behaviours or a health related problem and highlights the importance of people's interactions with their physical and sociocultural environments in determining their health behaviours (or perpetuating the health problem). Therefore, the ecological framework recognizes multiple levels of factors that influence a person's health behaviours. In this way, the framework considers the interaction between factors at the different levels as being of equal importance. The model assumes that appropriate changes in the social environment will produce changes in individuals and that the support of individuals in the population is essential for implementing environmental changes (McLeroy, et al., 1988). '

1.9.1 Conceptual framework

The key Concepts of the ecological model will be applied as follows:

Intrapersonal or Individual Factors - Factors identified at the intrapersonal or individual level relate to personal history and biological factors that influence the client to do c/s or not. Not having adequate knowledge on the benefits of C/S or an individual may just feel the only good mode of delivery is C/S because she will not pass through the painful process of Child bearing due to lack of knowledge. Age plays an important role as the client may feel they are mature yet they are still young or too old to have children.

Interpersonal Factors - Factors classified under the interpersonal level relate to barriers that emanate as a result of patients haring and interpersonal relationships with various persons or groups such as family, friends, intimate partners, and peers. Based on the data, the following themes could be identified going for C/S even when not indicated or refusal of C/S even if it is indicated.

Institutional Related Factors - Institutional related factors speak to the health system factors and these factors relate to the way health services are organised and delivered and relates to access to the facility and to medication, the overall environment of the facility, the patient–provider relationship, and support services that are incorporated into care. The

following health system factors like staff shortage, lack of equipment and lack of ambulance services for easy referral if the case is complicated. Factors like obstetric factors, maternal and fetal factors are very cardinal here.

Community Related Factors - There is need for the health care workers to educate the target group patterning CS. The mediating structures in the community needs to have a know-how of what is involved in CS. Some of these groups are the SMAGS (safe motherhood action groups).

Relationships among organisations and groups within a defined area- there is need to ensure that all the organisations in the catchment area are able to determine the signs of a client who is supposed to go for CS early so that they are referred on time for quick management and action. Each health worker should know their role in ensuring that the client has a safe delivery both vaginally and CS.

Policy Factors - Based on the ecological model, aspects of policy are very important when examining the factors affecting the implementation of the public health intervention or programme. Nevertheless, the World Health Organization has thus declared that for CS to have an optimal impact, it must be between 5 and 15% (WHO, 2016).

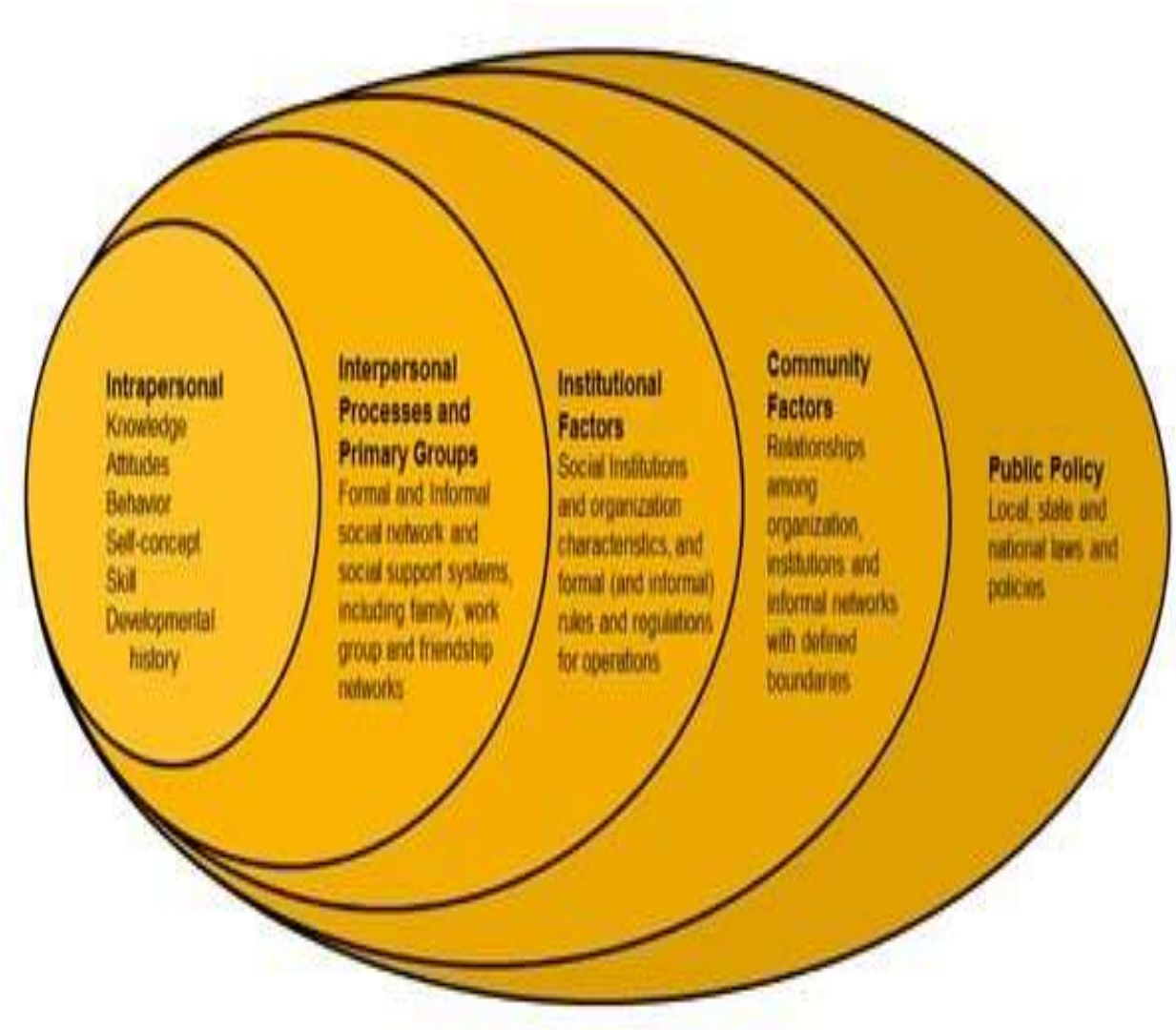

Fig1: **Conceptual Framework**. Adapted from McLeroy, K. R., Steckler, A. and Bibeau, D. (Eds.) (1988). The social ecology of health promotion interventions. *Health Education Quarterly,* 15(4):351-377.

1.9 MAJOR VARIABLES OF STUDY

Dependent variable

This is a variable which depends on the independent variable or that is hypothesized to depend on or to be caused by another variable (Polit and Beck, 2006).

The dependent variable in this study is prevalence of Caesarian section.

Independent variables

Bio-demographic factors

Maternal age

Marital status

Residence

Maternal religion

Parity

Birth interval

Birth weight

Socio-economic factors

Maternal education

Maternal working status

Husband /partner education status

Husband /partner working status

Economic level

Health seeking/ support factor

ANC visits

Place of delivery

Distance to facility

Socio-culture factors

Use of herbs

Genital cutting

Table I: Variables, Indicators and Cut-off points

Variable	cut off points	Indicator	Question NO.	Level of Measurement
Dependent variable				
Caesarean Section	CS	Yes/No	12	Nominal
Independent variables				
Age	<18 years		1	Ordinal
	18-19 years			
	20- 24 years			
	25- 29yrs			
	30- 34 years			
	>35 years			
Marital status	Never married nor cohabited	1	2	Nominal
	Married	2		
	Formerly married/cohabited	3		
	Currently married/cohabiting	4		
	Divorced	5		
Maternal education	Tertiary	High	4	Nominal
	Secondary	Medium		
	Primary	Low		
	None	Very low		
Husband/partner education	Tertiary	High	6	
	Secondary	Medium		Nominal
	Primary	Low		
	None	Very low		

Maternal working status	Not working	Low	5	Nominal
	Working	High		
Husband/partner working status partner	Not working	Low	7	
	Working	High		
Economic status	Able to afford scan and able to pay for other tests		8	Nominal
	Able to afford a scan			
	Not able to afford a scan			
Maternal religion	Christianity	Yes /No	3	Nominal
	Islam	Yes /No		
	Others- specify			
Parity	1	Very good	9	Ordinal
	2-3	Good		
	4 or more	Poor		
Large baby	Above 3.5kg	Yes	10	Nominal
		No		
Birth interval	< 24 months	Yes /No	11	Nominal
	24 months or more	Yes /No		
Birth type	Single	Yes /No	13	Nominal
	Multiple	Yes /No		
ANC visits	None	Bad		

	1-3 contacts	Good	18	Ordinal
	4- 6 contacts	Very good		
	7- 8 contacts	Excellent		
Place of delivery	Home	Poor	10	Nominal
	Hospital	Good		
Distance to facility	Less than 2km	Near	24	Nominal
	Less than 5km	Far		
	More than 5km	Very far		
Use of herbs	Score of 1	Yes	25-26	Nominal
	Score of 0	No		
Vaginal cutting	Score of 1	Yes	27-28	Nominal
	Score of 0	No		

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This Chapter focuses on relevant literature on CS done by other researchers in order for the researcher to have good understanding of the research topic. The focus of the literature that was revealed on CS and associated factors. Many countries, particularly in Sub-Saharan Africa, report rates that fall below this threshold, often due to a combination of inadequate healthcare infrastructure, limited access to skilled birth attendants, and socio-cultural barriers (Betrán et al., 2016). In Zambia, the cesarean section rate remains low, with estimates suggesting that only about 5% of births occur via CS, reflecting both systemic healthcare challenges and cultural perceptions surrounding childbirth (Zambia Ministry of Health, 2020). The sources of literature review is focused on published information, research papers, books and unpublished research proposals, Government reports and records that have been written on this subject. The literature review is arranged according to the study variables. The variables were grouped into four categories namely socioeconomic, biodemographic, health-seeking/support and sociocultural factors.

2.2. Caesarean section among deliveries conducted in facilities

Caesarean section (CS) was introduced in clinical practice as a lifesaving procedure both for the mother and the baby. As other procedures of some complexity, its use follows the health care inequity pattern of the world: underuse in low income settings, and adequate or even unnecessary use in middle- and high-income settings (Althabe et al., 2017). Caesarean section (CS) is a surgical procedure which is performed to reduce the risk of mortality or morbidity in the mother and fetus. The World Health Organization (WHO) recommends a CS rate of 10 to 15%, irrespective of geographical region, because, from a health point of view, there is no justification to have a rate of CS higher than this (WHO, 2015). Experts emphasize that, because of the risks associated with it, CS should be performed only based on medical indications (Souza et al. 2010). In spite of this, CSs are regularly carried out without clear medical indications (Souza et al., 2010). At a population level, a rate of CS higher than 10-15% is not associated with a reduction in maternal and new-born mortality rate (WHO, 2015). Nevertheless, it is advanced obstetric

care which has been gaining popularity in the modern world particularly in urban settings (Boerma et al., 2018).

The adequate population-based prevalence for this essential obstetric intervention remains a subject of strong contentions, worldwide, revealing a lack of consensus (WHO, 2015). However, evidence suggests that a population-based CS prevalence <5% indicates unmet needs (lack of access to women in need of it), while prevalence >15% may show no additional benefit for mothers and babies (Gibbons et al., 2010). Several studies have shown an inverse association between CS rates and maternal and infant mortality at population level in low income countries where large sectors of the population lack access to basic obstetric care (Betrán et al., 2016). On the other hand, CS rates above a certain limit have not shown additional benefit for the mother or the baby, and some studies have even shown that high CS rates could be linked to negative consequences in maternal and child health. (Belizán et al., 2006). On the one hand, a huge rise in CS use, often for non-medical reasons, is harmful for both mother and baby. On the other hand, inadequate access to CS in most low-income countries and several middle-income countries is a major health issue. Underuse of CS (< 5-10%) leads to perinatal morbidity and mortality (Betran et al., 2016). Thus, the WHO statement on caesarean section rates emphasises that CS should be undertaken when medically essential, rather than striving to attain a specific rate and every effort should be focused on providing CS to all women in need (WHO, 2015).

Concerted actions need to be taken to offer timely CS to women in need and to advocate for a rationale use of CS in countries with a surplus and unnecessary use of this procedure. One possible outcome of this approach would be to progressively engage professional associations, health care organizations and the general public in richer countries to support programmes aimed at providing emergency obstetric care in very low resource settings. The argument of some countries having more of what others totally lack, which for example has been used in the past to generate awareness and stimulate international action in cases of food crisis and famine in the third world, could apply to the lack of CS and emergency obstetric care as well (WHO, 2015).

In a study done in Ghana to assess awareness, perceptions, and attitudes towards caesarean section amongst antenatal care (ANC) attendees who had never had any previous surgical operation, preferred vaginal delivery against caesarean section. The majority said that vaginal delivery was the natural way to deliver, is safer, cheaper, has reduced postpartum morbidity, and resulted in early hospital discharge. The 3.5% who preferred CS did so because they wanted to avoid the labour pains (Adageba et al., 2018). Like in the study above, most women preferred vaginal delivery (VD) since CS was very risky whose success depended on the will of God. This finding is also in agreement with studies done outside Africa. A study in Chile revealed 91.5% of interviewed women in antenatal preferring to have a vaginal delivery (Deneux et al., 2016). In a study involving180 mothers in Chile, 77.8% of the women preferred vaginal delivery, while in another carried out in Australia amongst 290 gravid mothers, 93.5% preferred VD (James, 2017).

2.3 Bio-demographic factors

Bio-demographic factors play a significant role in the decision to perform a cesarean section. Age, parity, and maternal health status are critical determinants. Younger women and those with higher parity are often less likely to undergo cesarean deliveries, as they may be perceived as lower risk (Murray et al., 2019). In Zambia, the prevalence of teenage pregnancies and the associated health risks may also contribute to the underutilization of cesarean sections, as younger mothers may not seek timely medical intervention when complications arise (Chama et al., 2021). Birth size represents the perception of mothers on the size of their babies at birth as captured in the 2013 NDHS. In line with practice in previous studies (Manashan et al., 2013) the variable was used as a substitute for birth weight in the present study given that substantial information on birth weight was missing in the NDHS data. This substitutionary use is, however, justifiable as evidence indicates that mean birth weight values are closely related to birth size estimates, (Ologunde et al., 2014). Other biodemographic factors were maternal marital status (never married nor cohabited, formerly married/ cohabited (divorced, widowed, separated), currently married/cohabiting), religion (Christianity, Islam, and other). Some known factors associated to preferring a cesarean section without medical indication by women, is maternal age over 35 years, a previous negative birth, childbirth fear, perceptions about

safety of mother and baby, previous negative birth experiences, poor care and perceived inequalities in care (McCourt et al., 2017).

There was a positive association between maternal age at childbirth and having a caesarean section. A review of 3 demographic health surveys (1990–2002) from Jordan showed a positive association between maternal age ≥ 35 years at birth and having a caesarean section (Khawaja et al., 2017). Similarly, in Egypt Kuwait, Lebanon, Qatar, Syrian Arab Republic, West Bank and Gaza Strip, and Bahrain, there was a > 5% disparity in caesarean birth rates between older and younger women.

In Kuwait, for example, the caesarean birth rate among women aged ≥ 35 years was 17.3% compared to only 4.8% among women aged 15–35 years. This was in contrast to the UAE, which had higher caesarean section rates at younger ages, possibly due to the high rate of teenage pregnancy (Khawaja et al., 2017). A similar pattern was observed in Saudi Arabia; women aged ≥ 35 years had a caesarean birth rate of 11% compared with 7% for younger women (WHO, 2016).

Several pieces of research have demonstrated that the chance of caesarean delivery is higher among older mothers (Bayrambour et al., 2010). Similarly, our data found that the probability of delivery by caesarean increases with rising age of the mother. While the reasons for the increased number of caesarean deliveries among older women are still uncertain, it is believed that older mothers are more prone to pregnancy complications that may lead to caesarean deliveries (Lin et al., 2004). In Pakistan, the rising trend among women of getting married or conceiving at a later age due to their orientation towards career, educational, financial and other goals tends to increase their chances of undergoing caesarean delivery (Hanif, 2011). Thus, this may possibly be a factor in the upsurge in the rate of caesarean sections in Pakistan.

High parity at birth was linked with an increase in repeat caesarean birth rate in Saudi Arabia and Iraq, where large families are the norm (Al Rowaily et al., 2014). This was in contrast to Egypt, where women with < 3 live births were twice more likely to undergo caesarean birth than women with higher parity (Yassin et al., 2015). A positive correlation has been found between C-section and the number of times of deliveries (Wang et al., 2016). As maternal age increases, chances of C-section also increase (Isa et al., 2012).

Few other studies also demonstrated the relationship between cesarean section and maternal age (Kenny et al., 2013). Even some other studies find out that, birth weight, parity, maternal height and history of antenatal care visit (ANC) to be factors associated with cesarean section (Thomas et al., 2015).

2.4 Socio-economic factors

Some studies have identified socio-demographic risk factors that contribute to an increased risk of CS in certain populations. A study from Ethiopia noted that women with a secondary or higher level of education were nearly two times more likely to undergo CS than women with no or only a primary education, that 'rich' women were significantly more likely to receive CS than women from 'poor' or 'middle' income households, and that women who delivered in private institutions were twice as likely to be delivered by CS than their counterparts who delivered in public institutions (Gebremedhin, 2014).

In this study, the women's socio-economic status affected their tendency toward cesarean delivery. Socio-economic status includes occupation, literacy, and income and differentiates the individuals from each other (Saroukhani, 1996). Thus, the people who pay more attention to their appearance are ready to pay any price for performing this surgery (Marmoot, 2008). This is in line with the study conducted by Wen Wei Cai in Shanghai in 1998. That study which was entitled "The effect of mother's occupation and method of paying the hospital charges on cesarean" showed a significant relationship between the increase in cesarean delivery and complications of the pregnancy period, fetus' weight, mother's age, and mother's level of education. Also, cesarean delivery had increased more among the employed mothers (Wen Wei Cai, 1998).

Recent lancet series showed that there were large differences in C-Section use between women in the poorest and the richest wealth quintile in 82 LMICs (Boerma et al., 2018). Therefore, the individuals in higher categories cannot stand suffering and can easily pay for cesarean surgery compared to those in lower categories. According to Marx, the individuals' life style, behavior, and attitude depend on their financial status and their attitude is affected by the category to which they belong (Solasi, 2001). As far as the maternal socio-economic status was concerned, the probability of caesarean deliveries was higher among mothers belonging to the richest class, having higher education and

employed at professional/technical/managerial levels. Similarly, the odds of caesarean deliveries were higher among the mothers residing in urban areas (Aaisha et al., 2018).

Socio-economic factors further complicate the landscape of cesarean sections in Zambia. Women from lower socio-economic backgrounds often face barriers to accessing quality healthcare, including financial constraints, transportation challenges, and limited availability of healthcare facilities equipped to perform surgical deliveries (Graham et al., 2016). In rural areas, where healthcare resources are scarce, the reliance on traditional birth attendants can lead to delays in seeking appropriate medical care, exacerbating maternal and neonatal morbidity and mortality (Manda et al., 2020).

2.5 Health seeking/ support factor

Health-seeking/support factors were antenatal visit, place of delivery and distance to a health facility (Thaddeus et.al., 1994). Clinical studies have shown that antenatal care utilisation, pregnancy complications and mode of delivery are interlinked (Ashraf-Ganjoei et al., 2011). Keeping in view the significance of antenatal care utilisation in determining the mode of delivery, the WHO recommends every pregnant woman to have at least four antenatal care visits during her pregnancy [WHO, 2015]. Similarly, the literature explains that antenatal care serves as a precautionary measure to prevent complications which may lead to caesarean sections [Mishra et al., 2015]. In contrast, the data shows that mothers who received antenatal care more than four times delivered babies by caesarean section. Although the reason for this is still unclear, the risk avoiding behaviour of gynaecologists towards women who reported having pregnancy complications could be one of the reasons for this preference for caesarean delivery (Amjad et al., 2018).

Health care-seeking behaviours such as seeking antenatal care (ANC), occurrence of health complication during pregnancy and labour had higher chances of CS ((Begum et al., 2017; Rahman et al., 2017). Additionally, according to the study done in Pakistan women who had a high risk of pregnancy complication and received antenatal care more than four times had greater chances of delivering babies through caesarean section (Amjad et al., 2018).

2.6 Cultural factors

In general, apart from personal and medical factors, a number of socio-cultural issues are also involved in a pregnant woman's tendency towards a certain mode of delivery. Today, C-section in most countries seems to be the first option for pregnant women (Hart et al., 2000). There are many questions regarding the effects of personal, religious, and traditional health beliefs on one's preference for a mode of delivery for example, in Iran; most women in the city of Tonekabon consider vaginal delivery as a painful and exhausting experience with few complications. On the other hand, C–section is considered a painless and simple procedure, which is usually preferred due to fear of labor pain during vaginal delivery. Few qualitative studies have been conducted in

Iran to explore the conditions which influence women's cultural beliefs towards mode of birth. Latifnejad Roudsari et al. (2015) in a focused ethnographic study, found that cultural norms and values and social network are the factors encouraging the choice of cesarean delivery (Latifnejad Roudsari et al., 2015). Zakerihamidi et al. (2015) in a qualitative study, reported that participants in their study considered childbirth as something sacred because of their religious beliefs that affected their decision to choose vaginal delivery (Zakerihamidi et al., 2015). They reported in the same study that women perceived NVD as a facilitator of women's physical and mental health promotion, and saw cesarean section as a painless mode of delivery (Zakerihamidi et al., 2015). The study concluded that the women's socio-economic status affected their tendency toward cesarean delivery. Socio-economic status included occupation, literacy, and income and differentiates the individuals from each other (Saroukhani, 1996). Thus, the people who pay more attention to their appearance are ready to pay any price for performing this surgery (Marmoot, 2008: 180). This is in line with the study conducted by Wen Wei Cai in Shanghai in 1998 entitled

"The effect of mother's occupation and method of paying the hospital charges on cesarean" which showed a significant relationship between the increase in cesarean delivery and complications of the pregnancy period, fetus' weight, mother's age, and mother's level of education. In the same study, cesarean delivery had increased more among the employed mothers (Wen Wei Cai, 1998). Therefore, the individuals in higher categories cannot stand suffering and can easily pay for cesarean surgery compared to those in lower categories. Solasi (2011) states that the individuals' life style, behavior,

and attitude depend on their financial status and their attitude is affected by the category to which they belong.

Some cultural and social concerns also influence women's preference for delivery mode. In particular, the intention of choosing a lucky day for baby delivery had the most significant impact on the preference among Chinese. The lucky day, also known as "Auspicious day", is a social phenomenon specific to Chinese and some Asian populations (Yamasmit et al., 2012). The CS allows them to choose an expectant day for childbirth. Some other studies in China have also reported that the desire to select a specific day of birth was associated with the preference for CS (Shi et al., 2016). In addition, feeling it difficult to get pregnant increased the risks of preferring CS delivery and "no clear preference" response in our study sample. A baby successfully carried after mother experiencing a history of spontaneous abortion or a difficult time in becoming pregnant, was documented as a "precious fetus" on medical records in China (Feng et al., 2014). There was no clear clinical definition for "precious fetus", but the terminology was classified into "social factors" (Feng et al., 2014). The percentage of CS performed for "precious fetus" was increasingly reported on women's medical records in various hospitals in China, and even became a leading non-medical cause for CS in some hospitals (Zhuo, 2018).

Being an ethnic minority was another culture-related factor that increased the risk of preferring CS. The relative risk of preferring CS was two times among ethnic minorities than among Han Chinese compared with that of preferring VB. A consistent finding was reported in the USA, which showed that the ethnic groups were more likely to prefer CS (Janevic et al., 2014). Women's awareness of baby delivery was influenced by social norms, cultures, beliefs, and healthcare services (Kennedy et al., 2013).

The impact of FGM on obstetric outcomes has been investigated (Berg et al., 2013) Compared with women without FGM, evidence suggests that women living with FGM have an increased risk of cesarean delivery, postpartum hemorrhage, episiotomy, extended maternal hospital admission, infant resuscitation, and inpatient perinatal death. (Berggren et al., 2013). The mechanisms of association between FGM and an increased risk for cesarean delivery are unknown, but it has been suggested that this is due to varying

amounts of scar tissue (Banks et al., 2016). Scar tissue can restrict the vaginal opening but can also cause extensive vaginal and vulvar stenosis, resulting in differing degrees of obstructed labor (Banks et al., 2016). Scarring can result from FGM itself, or from prior difficult deliveries. FGM has been reported to be associated with difficult deliveries and fetal distress, which can also contribute to increased rates of cesarean delivery (WHO, 2015). Sixty-three percent of women with FGM underwent a caesarean section at cervical dilatation of up to 4 cm in a study done in Australian hospital (Nesrin et al., 2016).

Health-seeking behaviors are also influenced by cultural factors that shape perceptions of childbirth and medical intervention. In many communities, there is a strong preference for natural childbirth, which can deter women from opting for cesarean sections even when medically indicated (Mwanamwenge et al., 2018). Additionally, cultural beliefs surrounding childbirth may lead to stigma associated with cesarean deliveries, as they are sometimes viewed as a failure of natural birthing processes (Kavuma et al., 2021). This cultural context is crucial for understanding the low rates of cesarean sections in Zambia, as women may prioritize traditional practices over modern medical interventions.

2.7 Conclusion

The literature review shows that there is low prevalence of CS among pregnant women in sub-Sahara Africa as compared to the European countries. The various factors associated with CS pregnant women in various studies include socioeconomic, bio-demographic, health seeking/support and sociocultural factors. Literature shows that more has been done in the region and at global level. Literature available has also revealed that few studies have been done on Prevalence and associated factors that contribute to CS among pregnant women in Zambia. Therefore, as many hospitals are offering CS, it is vital to understand factors linked to prevalence of CS among pregnant women in Zambia. The strategies currently used to promote adequate prevalence need to be reviewed and further research is necessary to understand how best to improve the prevalence rate among pregnant women at Chawama General Hospital. Therefore, this study is intended to reinforce knowledge and assist on the manner how CS can improve in the provision of maternal health services to pregnant women in Zambia.

CHAPTER THREE

3.0 Methodology

3.1 Introduction

Chapter three presents the research methodology that was used in this study. In this chapter, the following are discussed, study design, study setting, study population, sampling, Sample size formula, data collection technique, tools, plans for data analysis, reliability, validity, ethical considerations, pilot study and budget.

3.2 Study design

A descriptive cross-sectional study design was used to determine the prevalence of CS and associated factors at Chawama General Hospital in Lusaka urban district. The descriptive design was chosen because it was suitable for describing the factors associated with C/S while a cross-sectional described and quantified the distribution of variables that lead to Caesarian section among postnatal women. The study designs provided information about the presence and strength of associations between variables thus provided information that was needed

3.3 Study Setting

The study setting was Chawama General Hospital, in Lusaka Urban District, because the numbers of CS are on the increase according to the data from 2019-2021. Chawama catchment covers the following health posts Kuku, John Haward, Msisi and Kamulanga of which all of these refer their ANC women to Chawama General Hospital for delivery and further management including CS. All the health posts in this area offer antenatal services to the expectant mothers but the delivery centre is only at Chawama General Hospital. Chawama General Hospital is located in Lusaka with a catchment population of 170 900 (CSO, 2020). Chawama was chosen because it is a significant healthcare provider in Lusaka, serving a substantial portion of the city. In addition, it's to allow for detailed analysis of prevalence and associated factors.

3.4 Study population

The study population were all women who gave birth during the period of study at Chawama General Hospital

3.4.1 Inclusion criteria

Post-natal mothers who gave consent to participate in the study and gave birth after gestation age viability (28 weeks) at Chawama General Hospital. The women were 15 years and above with no record or history of mental health problem, regardless of parity or marital status.

3.4.2 Exclusion criteria

Exclusion criteria- Mothers who underwent cesarian section for extra-uterine pregnancy were excluded in this study.

3.5 Sampling method

Systematic sampling method was used to select participants who are receiving their postnatal services. In this sampling procedure, each postnatal woman has an equal chance of being selected into the study and ensure the desired representation from the Hospital. The 550 is the number of women who give birth at Chawama per quarter so since the data collection was to be done within 3 months, the monthly attendance was added. The first thing I will do is to find the K, by dividing the population with the sample size in this case its 550/232 =2.371 and since we are dealing with human beings it is 2. This means that every number 2 that comes will be selected until the sample size is met.

3.6 Sample size calculation

The sample size was determined using a formula by Taro Yamene 1973 with 95% confidence level as indicated below:

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

Where N = population size n= sample size e =margin of error which is 0.5

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

Therefore $n = \frac{550}{1+550\ (0.05)2}$ $n = \frac{550}{2.575}$

Total sample size = 232

3.7 Data collection

Data collection is the process of gathering and measuring information on themes, in an established systematic fashion that enables one to answer stated research questions and evaluate outcomes (Weimer 1995). Similarly, Parahoo (1997:52) states that a research tool is something used to collect data. Primary data was collected using a semi structured interview schedule. Both closed and open-ended questions were used. This is because open ended questions enabled the researcher to get the perception, feelings and experiences from the subjects towards the topic.

3.8 Data collection tool

3.8.1 Semi structured interview schedule

A pretested semi-structured interview schedule designed by the Researcher was used to elicit self - report data to explain the relationship between dependent and the independent variables under study. The semi-structured interview schedule was adopted from previous studies and literature on CS. It was designed in English and then translated into the local language to ensure clear communication by avoiding ambiguities that can arise by translating during an interview, as this allows the interviewee to express themselves more naturally and accurately. In addition, it allows culturally sensitive issues to be handled well when translated in local language. The data collecting tool was chosen because it was relatively simple, quick and efficient method of obtaining data. The semi structured interview schedule comprised four sections. Section A contained question on bio-demographic data of the respondents, Section B had questions on socio-economic status and Section C had questions on health seeking factors Section D had questions on socio-cultural factors and Section E had questions on CS.

3.8.2 Checklist

The checklist was developed by the researcher and it elicited information the women's obstetric characteristics.

3.9 Validity

The researcher ensured validity by conducting extensive literature search of current literature on the study and ensure that all necessary information is included in the research instrument. The research instrument was constructed in a simple, clear and precise

language to avoid ambiguity and misinterpretation of questions. It was translated into a local language to ensure understanding of the questions by the respondents. The research supervisor and experts also examined the tool to determine whether it elicited the desired information. The researcher also consulted the supervisors and experts on the topic.

3.10 Reliability

Reliability ensured by using the same data collecting tool to collect data from all the participants. A pilot study was conducted before conducting the main study. The pilot study was conducted in an environment with similar characteristics as the one in which the main study was conducted. Reliability was also assessed by using a Cronbach alpha test with value of .80.

3.11 Data collection Technique

3.11.1 Face to face interviews

Data was collected using face to face interviews and the procedure were as follows:

Self-introduction of the researcher to the participant and explanation of the purpose of the study was done to gain cooperation. Reassurance of the participant on confidentiality and anonymity was explained to the clients, consent from postnatal women 18 years and above, and assent from the those below 18 years, the researcher read out the questions to the participants and the interview was conducted in privacy. Furthermore, each interview lasted for appropriate 20 to 30 minutes and the researcher asked the interviewee for any questions, comments or contributions regarding the study and then thanked the participants for taking part in the study. At the end the interview, the researcher went through the interview schedule to check for the consistency in the answers given and the completeness of the interview schedule, then the researcher entered the responses as given by the participants.

3.12 Data management and storage

The researcher checked the data collecting tools on daily basis for their completeness and accuracy. The collected data was kept under strict security conditions to avoid unauthorized access to the information contained in it. These measures include; keeping in a lockable cupboard, putting pass word on the computer to prevent access from the unauthorized persons.

3.13 Pilot study

A pilot study was carried out in Matero General Hospital using 10% of actual study sample. A pilot study was conducted to determine and measure the logical, space for answers, need for further instructions, appropriateness and clarity of the language used in constructing the questionnaire. The postnatal women were selected using systemic random sampling procedure. The adjustments that were made to the questionnaire where necessary like questions which were not clear on the questionnaire were adjusted to give a clear understanding to the participants.

3.15 Ethical considerations

Manovich (2001) postulates that there are several reasons why it is important to adhere to ethical norms in research, first, norms promote the aims of research, such as knowledge, truth, and avoidance of error. For example, prohibitions against fabricating, falsifying, or misrepresenting research data promote the truth and avoid error. The following ethical consideration were observed during the undertaking of this research and the consequent writing of the report.

The Ethical Review Committee of University of Zambia Biomedical Research Ethics Committee (UNZABREC) and the National Health Research Board reviewed and approved the study (Reference number 4099-2023). Permission was sought from the relevant authority at the study sites before the study was conducted and all participants were asked to give consent before they are involved in the study. Therefore, participation in the study was voluntary, in addition to this, participants were informed of their right to withdraw from the study at any point without need to give reason. Furthermore, participants' confidentiality was maintained throughout the study by giving an identification number on the data collecting tool and Respect for Intellectual Property: Patents, copyrights, and other forms of intellectual property was honored and was given credit where it is due when compiling data and also in processes of report writings. All the data to be collected was be used for any other purpose apart from the intended and communicated purpose.

CHAPTER FOUR

4.0 Presentation of findings

4.1 Introduction

This chapter presents results of quantitative and qualitative findings. It also highlights on how data was analyzed and interpreted. The purpose of this study was to determine the prevalence of caesarian section and associated factors at Chawama First Level Hospital among postnatal mothers. Data was collected using a semi structured interview schedule where two hundred and nineteen (219) respondents were interviewed and questionnaires were answered correctly. However, the calculated sample size was 232 but 13 participants declined to participate. The findings of the study have been presented using frequency tables on which demographic data: age, marital status, maternal education, maternal income, partner education and partner income.

4.2 Data processing and analysis

After completion of data collection, the data was manually checked for errors, corded and entered into a computer software; Statistical Package for Social Sciences (SPSS). Data was entered into excel then exported to SPSS version 20 and descriptive statistics was used to analyse data. Any value of $p < 0.05$ was considered significant with 95% confidence interval. Initially bivariate logistic regression was carried determine the association of each of the independent variables with the outcome variable.

4.5 Presentation of findings

The findings have been presented according to the demographic and study variables. This has been done to facilitate a better understanding of the study findings. The findings of this study have been presented in form of frequency tables, and cross tabulation tables to give a vivid picture of the findings. Tables were used to summarize the findings in a meaningful manner for easy understanding. Cross tabulations on the other hand were helpful in showing relationships between variables. The findings of this study have been presented under sections in line with the study objectives.

Table 1: Respondents sociodemographic data (n=219)

Variable	Frequency	Percent
Age		
<18	10	4.5
18-21	30	13.6
22- 25	74	34
26-29	53	24
30-34	29	13
>35	23	11
Total	219	100
Marital status		
Single	64	29
Married	154	70
Widowed	1	0.5
Separated	0	0
Total	219	100
Religion		
Christian	217	99
Moslem	2	1
Total	219	100
Maternal Education Level	45	20.5
Primary	153	70
Secondary	20	9
Tertiary	1	0.5
Never been to school	219	100
Total		
Maternal Income level		
Less than K2,000.00	110	50
K3,000.00 – K5,000.00	66	30
K6,000.00 –K 8,000.00	42	19
K9,000.00 –K11,000.00	1	1
Total	219	100

Table 1- continued

Variable	Frequency	Percent
Partner level of education		
Primary	18	8
Secondary	153	70
Tertiary	43	20
Never been to school	5	2
Total	219	100
Partners Income level		
Less than K2,000.00	57	26
K3,000.00 – K5,000.00	125	57
K6,000.00 –K 8,000.00	24	11
K9,000.00 –K11,000.00	14	6
Total	219	100

Approximately 34% of the respondents were between the ages of 20-24, 70% were married and were and 99% were Christians. About 70% of the respondents had attained secondary school level of education and 50% earned an income of less than K2000. Most (70%) of the respondents' partners had attained secondary school level of education with an income between 3000 - 5000 (57%) T**able1.**

From the total of 232 mothers sampled, 219 were included in the final analysis giving a 94.3% response rate. The rest 13 were discarded due to incompleteness of data. Approximately 34% of the respondents were between the ages of 20-24, 70% were married and 99% were Christians. About 70% of the respondents had attained secondary school level of education and 50% earned an income of less than K2000. Most (70%) of the respondents' partners had attained secondary school level of education with an income between K3000 - K5000 (57%) ,11% had the income between K6000- K8000 and 26% had the income levels of less than K2000.

OBSTETRICS CHARACTERISTICS OF THE RESPONDENTS

Table 2- Respondents for obstetric characteristics (n=219)

Variable	Frequency	Percent
Caesarean section		
Yes	44	20
No	175	80
Total	219	100
ANC visit		
3-4 Visits	71	32.4
5-6 visits	106	48.4
7-8 Visits	42	19.3
Total	219	100
Birth weight		
Small	71	32
Normal	80	37
Big	68	31
Total	219	100
Type of C/S		
Planned	2	5
Emergence	42	95
Total	44	100
Indications for C/S		
NRFHR	17	39
CPD	23	52
Malpresentation	1	2
Severe Preeclampsia	3	7
Total	44	100
Parity		
Primipara	100	46
Multipara	119	54
Total	219	100
Stillbirth		
Yes	13	5
No	207	95
Total	219	100

The findings in the table above shows that 80% of the respondents did not undergo caesarian section and 20% had C/S. 95% of those who had C/S had an emergency C/S. Most (48.4) of the respondents had visited the antenatal clinic 5 to 6 times during pregnancy. About 37% of the respondents had babies with normal birth weight, 54% of the mothers were Multipara and 95% had no still births **Table 2.**

Table 3-Association between C/S and socio demographic characteristics – (n=219)

Predictor	C/S =44	SVD =175	TOTAL=219	p- value
Maternal Age				0.309 [c]
<18	1(10%)	9 (90%)	10 (100%)	
18-19	4(13%)	26(67%)	30(100%)	
20-24	13(18%)	61(82%)	74(100%)	
25-29	9(31%)	20(70%)	29(100%)	
30-34	14(26%)	39(26%)	53(100%)	
>=35	3 (13%)	20(87%)	23(100%)	
Type of marriages				0.502 [c]
	10(19%)		64(100%)	
single	34(23%)	54(84%)	151(100%)	
monogamy	0	117(77%)	3(100%)	
polygamy	0	3(100%)	1(100%)	
widowed	0	1(100%)	0	
separated	0	0	0	
Divorced				
Religion				0.638[c]
Christianity	44(20%)	173(80%)	217(100%)	
Islam	0	2(100%)	2(100%)	
Maternal education				0.006[c]
	7(16%)	38(84%)	45(100%)	
Primary	27(17%)	126(82%)	153(100%)	
Secondary	10(50%)	10(50%)	20(100%)	
Tertiary	0	1(100%)	1(100%)	
No been to school				

Table 3 – continued

Predictor	C/S =44	SVD =175	TOTAL=219	p- value
Maternal				0.014[c]
income	12(19%)	52(81%)	64(100%)	
Good	25(28%)	64(72%)	89(100%)	
Average	7(11%)	59(89%)	66(100%)	
Poor				
Partner				0.378[c]
income	3(43%)	4(57%)	7(100%)	
Good	28(23%)	121(14%)	149(100%)	
Average	14(29%)	49(78%)	63(100%)	
poor				

The study shows no significant association between having cesarean section and age of the respondents as seen from the p-value of 0.309. In addition, the study showed no significant association between having caesarian section and marital status as this can be seen from the P-value 0.502c. Furthermore, the current study showed no significant association between C/S and religion with the P-value of 0.638fc

In this study, maternal education was significantly associated with C/S with the p value of 0.006c this is so because when a woman is educated, she is able to understand the benefits of C/S and the consequences that may come if they refuse to be attended to if indications are there for C/S. Women that are educated are able to make informed decisions on their own unlike waiting for the husband or relatives to make decisions for them because they understand the benefits of C/S. This study also showed a significant association between maternal income and C/S with the p- value of 0.014. Partner income showed no significant association with C/S with the P-value of 0.378.

Table 4 Association between C/S and obstetric characteristics – (n=219)

Predictor	C/S	SVD	Total	P- Value
ANC attendance				0.184[c]
Excellent	12(30%)	28(70%)	40(100%)	
Good	20(20%)	82(80%)	102(100%)	
Average	11(15%)	60(85%)	71(100%)	
poor	1(17%)	5(83%)	6(100%)	
Birth Weight				0.002[c]
Big	20(34%)	39(66%)	59(100%)	
normal	17(20%)	69(80%)	86(100%)	
small	7(9%)	67(91%)	74(100%)	
Parity				0.556[c]
Primiparous	20(20%)	80(80%)	100(100%)	
Multiparous	24(20%)	95(80%)	119(100%)	
Gestational age				0.336[c]
<37 weeks(preterm)	18(23%)	59(77%)	77(100%)	
37-42 weeks(term)	24(18%)	113(82%)	137(100%)	
>42 weeks (post term)	2(40%)	3(60%)	5(100%)	
Child spacing				0.321[c]
<12 months	4(21%)	15(79%)	19(100%)	
< 24 months	12(20%)	45(79%)	57(100%)	
> 24 months	28(19%)	115(79%)	145(100%)	

The predictor variable ANC showed no significant association with C/S in this study. The current study showed a significant association between birth weight and C/S with the p-value of 0.002c. In addition, the study showed no significant association between C/S and parity. Furthermore, gestational age and child spacing were not associated with caesarian section in this study, as shown from the p- value of 0.336c and 0.321c respectively.

Factors influencing Cesarean-Section

A logistic regression (Binary Logistic Regression) was performed to ascertain the effects of Income, Birth weight, Parity and Age on delivery by caesarian section. The logistic regression model was statistically significant, Chi-square (9) = 23.311, P-value < 0.05. The model explained 16 percent (Nagelkerke R^2) of the variance in delivery by caesarian section; it correctly classified 82 percent of the cases.

Table 4.1

VARIABLE	p-value	OR	95% CI	
			Lower	Upper
Income (Ref: Low) High	0.052	2.494	0.992	6.267
Parity (Ref: Multipara) Primepara	0.377	1.431	0.647	3.164
Birth Weight (Ref: Normal, Small baby) Big baby	0.001	5.022	1.867	13.512
Birth Weight (Ref: Big baby, Small baby) Normal baby	0.089	2.334	0.878	6.206
Age (Ref: <18, 18-19, 20-24,30-34) 25-29	0.091	3.448	0.820	14.500
Age (Ref: <18, 18-19, 20-24, 25-29) 30-34	0.087	3.692	0.828	16.465
Constant	0.000	0.020		

The above **table 4.1**, indicates a relationship between the predictors (Income, Birth weight, Parity and Age) and the outcome variable (caesarian section). Women with high income were 2.494 times more likely to deliver through caesarian section as opposed to those with low income. Women aged 25-29 were 3.448 times likely to deliver through caesarian section while those aged 30-34 were 3.692 times likely to deliver through caesarian section. Births which involved big babies were 5.022 times likely to be caesarian section deliveries as opposed to small and normal babies. Norma birth weight babies showed odds of caesarian section delivery to at 2.334. Primepara women were 1.431 times likely to give birth through caesarian section as opposed to multipara women.

Controlling for confounders in a binary logistic regression analysis

In the current study, it was assumed that variables that showed no significance could be possible confounders. To control for these variables, each variable was run into the model with the main variables (Variables that showed significance and fit the model i.e. Maternal Income and Birth Weight) of the study and the analysis proved that age and parity were the only confounding variables among the variables included in the study. This conclusion came as a result of the variables having an effect on the regression model by changing the odd ratios of the main variables by 10 percent. This was controlled for by keeping age and parity as part of the variables in the equation for the model. According to some scholars (Mohamad et al, 2012 ; Miguel et al 2002), this is referred to as the 10% rule, the rule states that when the Odds Ratio (OR) changes by 10% or more upon including a confounder in the model, the confounder must be controlled for by leaving it in the model. If a 10% change in OR is not observed, the variable can be removed from the model, as it does not need to be controlled for.

Binary Logistic Regression analysis of variables (Income, Birth weight, Parity and Age) contributing to Cesarean-Section (n=219)

FIGURE 4.2

VARIABLE	**p-value**	**OR**	**95% CI**	
			Lower	**Upper**
Income (Ref: Low) High	0.052	2.494	0.992	6.267
Parity (Ref: Multipara) Primepara	0.377	1.431	0.647	3.164
Birth Weight (Ref: Normal, Small baby) Big baby	0.001	5.022	1.867	13.512
Birth Weight (Ref: Big baby, Small baby) Normal baby	0.089	2.334	0.878	6.206
Age (Ref: <18, 18-19, 20-24,30-34) 25-29	0.091	3.448	0.820	14.500
Age (Ref: <18, 18-19, 20-24, 25-29) 30-34	0.087	3.692	0.828	16.465
Constant	0.000	0.020		

The above table indicates a relationship between the predictors (Income, Birth weight, Parity and Age) and the outcome variable (caesarian section). Women with high income were 2.494 times more likely to deliver through caesarian section as opposed to those with low income. Women aged 25-29 were 3.448 times likely to deliver through caesarian section while those aged 30-34 were 3.692 times likely to deliver through caesarian section. Births which involved big babies were 5.022 times likely to be caesarian section

deliveries as opposed to small and normal babies. Norma birth weight babies showed odds of caesarian section delivery to at 2.334. Primepara women were 1.431 times likely to give birth through caesarian section as opposed to multipara women.

Controlling for confounders in a binary logistic regression analysis

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CHAPTER FIVE

DISCUSSION AND RECOMMENDATION

5.1 Introduction

This chapter presents the findings of the study. The study was conducted to assess the prevalence of caesarian section and associated factors at Chawama Hospital in Lusaka District of the Republic of Zambia. This was a descriptive cross-sectional study. Data was collected using a semi structured interview question and a checklist. Data was analysed using statistical package for social science version 20.

5.2 Socio-Demographic Characteristics of Respondents

The current study revealed that most of the respondents (34%) were between the ages of 20-24 and were married (70%). Most of the respondents were married because marriage is culturally universal in Zambia, exists in all cultures. Almost all (99%) the respondents were Christians. This is because Zambia is a Christian nation. About 70% of the respondents has attained secondary School education. Most (70%) of the respondent's partner had attained secondary school education level. Half (50%) of the respondents had an income level less than 2000 kwacha and 57% of their partners earned an income between 6000-8000 Kwacha. The present study showed a significant association between age and caesarian section as women aged 25-29 were 3.448 times likely to deliver through caesarian section while those aged 30-34 were 3.692 times likely to deliver through caesarian section. However, the study showed no significant association between caesarian section and marital status as this can be seen from the P-value 0.502c. In addition, the current study also showed no significant association between C/S and religion with the P-value of 0.638.

The findings showed a significant association between maternal education and C/S with the p value of 0.006c this is so because when a woman is educated, she understands the benefits of C/S and the consequences that may arise if they refuse to be attended to quickly especially if C/S is indicated. Women who are educated are able to make informed decisions on their own unlike waiting for the husband or relatives to make decisions for them because they understand the benefits of C/S. This study also showed a significant association between maternal income and C/S with the p - value of 0.014 as most women

with high income are educated and have the knowledge of various issues patterning to their health. However, Partner income showed no significant association with C/S with the P-value of 0.378[c]

5.2 Prevalence of Cesarean Section

Of the 219 mothers who participated in this study, 20% (44/219) were delivered by CS. This is a facility-based CS rate at Chawama First Level Hospital which offers comprehensive emergency obstetric care (CEmOC) services. The prevalence may be high because the facility is a referral hospital hence the spike in the prevalence rate. This range is higher than the recommended WHO rate of 10- 15 % (WHO, 2015), However it is similar with a study that was undertaken to determine prevalence and indication of caesarian section in Ndola Central hospital showed a high rate of 20.7% (Nkhata et al., 2018) Furthermore the finding is similar to the results of a study done at a large East African referral hospital (Kilimanjaro Christian Medical Center) in Tanzania from 2005 to 2010 that revealed prevalence rate ranging from 29.9% to 35.5% (Worjoloh et al., 2002) and to a prevalence of 21.4% from the study at a teaching hospital in Lahore, Pakistan (Hafeez et al., 2016). Worth noting is that the Pakistan study was a cross-sectional review of the Pakistan Demographic Health Survey data rather than a facility-based one.

5.3 Respondents obstetric characteristics

The study showed that 48.4% of the respondents visited the ANC 5-6 times. This is attributed to the good sensitization and follow up of the ANC mothers in the community by the SMAGs and the Public Health Nurses. About 37% of the mother's babies had normal birth weight and 95% of the C/S was emergency. In addition, 52% of mothers who underwent C/S was due to Cephalopelvic disproportion (CPD) and 54% of the respondents were multiparous women. In addition, slightly more than half (54%) of the respondents were multipara and had not experienced any still births (95%).

In the present study, the predictor variable ANC did not show significant association with C/S. This may be due to the fact that most women who don't attend ANC contacts are not identified early so that they may be booked for C/S and they mostly deliver by chance for example. a woman with previous C/S who comes in second stage of labour. These findings are contrary to the findings in a study conducted in Ethiopia by Tesfaye et al., (2017)

which showed a significant relationship between Caesarian section and ANC attendance. The current study revealed that those mothers who had ANC follow up were more likely to have cesarean section compared to mothers who had no ANC visits. These findings are supported by a study done in Ghana by Manyeh et al., (2018). It might be due to the exposure of ANC utilizing and exposure of mother to healthcare worker during ANC visits that helped them identify more risk of pregnancy complication (Tesfaye et al., 2017). As per findings of previous clinical studies (Walker et al., 2001), frequent visits to antenatal care facilities, pregnancy complications and the mode of delivering a baby are strongly associated. Considering the importance of antenatal care in the reduction of complications, a new World Health Organization guideline emphasises that every pregnant woman should have at least eight antenatal care visits during each pregnancy (Amjah et al., 2018). The findings of previous studies also revealed that antenatal care is considered an important component of women's health during the course of pregnancy that can play a pivotal role in reducing the likelihood of caesarean deliveries (Majrooh et al., 2014). Although there is no clear reason behind this, it can be assumed that women with pregnancy complications, such as obesity, hypertension and diabetes, were asked by the gynaecologists to have frequent antenatal care visits in order to handle any undesirable obstetric risk.

In a study conducted in Gondar Ethiopia by (Abayneh, 2019) it was reported that ANC follow up and the number of ANC visit were significantly associated with cesarean section. Those mothers who hadn't ANC follow up in their last pregnancy were 75.2% less likely to have cesarean section compared with their contour part. Among respondents, those mothers who had ANC follow up of three times were more likely to have a cesarean section compared with those mothers who have one ANC visit. The present study also demonstrated that those mothers who had ANC follow up of three times were times, these findings are similar to the findings of a study conducted in Addis Ababa by (Aman, 2014). This could be attributed to the fact that when women have more ANC visit were more risk is going to be identified than those who do not have more ANC visit. Similarly, those women who had ANC visit of four were more likely to have cesareans section compared with mothers who had one ANC visit

Furthermore, the current study showed a significant association between birth weight and C/S with the p-value of $0.002^{c.}$ This is due to the fact that big babies are unable to pass through the birth canal as it is able to stretch to certain extent beyond the estimated size the woman will tear and cause more complications hence the need for C/S. In addition, this study showed a significant association between parity and C/S. Primipara were more likely to have C/S compared multipara women. This is because the muscles of the pelvis are still rigid, they are not yet stretched to allow the fetus to easily pass through the birth canal, and their pelvis is still contracted. Similar findings were found in a study on nulliparity as a risk factor for poor obstetrical and neonatal outcomes in Rwanda (Qublan, et al., 2014). These findings are contrary to the findings of a study done in South Africa by (Ayob,2015), where it was reported that multipara significantly increased the odds of having caesarean compared to nullipara. These findings were also consistent with a study conducted in South Africa by Inyang-Otu et al., (2014) where increase in caesarean section rates were increasing with parity. This could be explained by the tendency for babies to get bigger with successive pregnancies making the delivery process more difficult as the size of the mother's bony pelvis remains constant (Cunningham et al 2014). Furthermore, a study done in Brazil demonstrated that the odds of having CS among women who got pregnant two-four times were 3.26 times more likely to have CS compared with their counterpart (AOR =3.26, CI:1.48,7.16) (Vieira et al 2017). The present study showed that C-section deliveries were significantly different among age groups, with C-sections more common among nulliparity women. Gestational age and child spacing are not associated to caesarian section in this study as seen from the p-value of 0.336^{c} and 0.321^{c} respectively.

5.4 IMPLICATION TO NURSING

5.4.1 Nursing practice

In nursing practice, the implications of C-sections are significant. Nurses play a critical role in preoperative education, intraoperative support, and postoperative care. They must be skillful at recognizing potential complications associated with C-sections, such as infection, hemorrhage, and thromboembolic events. Furthermore, nurses are responsible for educating patients about the risks and benefits of C-sections, ensuring informed consent, and addressing any concerns or misconceptions. This necessitates a thorough understanding of the clinical guidelines and evidence-based practices surrounding C-sections. Additionally, the emotional and psychological impact of C-sections on mothers must be acknowledged, as nurses are often the primary caregivers who provide support during recovery and adjustment to motherhood**.**

5.4.2 Nursing administration

From a nursing administration perspective, the rising rates of C-sections necessitate the development of policies and protocols that promote safe and effective care. Administrators must ensure that nursing staff are adequately trained in the management of C-section patients and that resources are available to support both the physical and emotional needs of these patients. This includes implementing quality improvement initiatives aimed at reducing unnecessary C-sections and promoting vaginal birth after cesarean (VBAC) when appropriate. Furthermore, administrators must advocate for interdisciplinary collaboration among healthcare providers to enhance patient outcomes and streamline care processes

5.4.3 Nursing education

In nursing education, the implications of C-sections highlight the need for curricula that address the complexities of surgical births. Nursing programs should incorporate comprehensive training on the physiological, psychological, and sociocultural aspects of C-sections. This includes understanding the indications for C-sections, the surgical procedure itself, and the postoperative care required. Simulation-based learning experiences can enhance students' competencies in managing C-section patients, preparing them for real-world clinical scenarios. Additionally, fostering critical thinking

and evidence-based practice in nursing education will empower future nurses to advocate for best practices in maternal care.

5.4.4. Nursing Research

Nursing research plays a pivotal role in addressing the implications of C-sections. Research efforts should focus on identifying the factors contributing to the rising rates of C-sections and exploring the long-term outcomes for mothers and infants. Investigating the effectiveness of various interventions aimed at reducing unnecessary C-sections, such as labor support and patient education, is essential for informing practice. Furthermore, qualitative research exploring the experiences of women who undergo C-sections can provide valuable insights into their needs and preferences, ultimately guiding nursing care and policy development.

5.5 APPLICATION OF FINDINGS TO THE THEORETICAL FRAMEWORK

Intrapersonal or Individual Factors- Factors identified at the intrapersonal or individual level relate to personal history and biological factors that influence the client to do c/s are age and maternal income. Age plays an important role because if the client is less than 18 years of age, their reproductive organs are not yet developed hence the possibility of having C/S are high, in addition those above the age of 35 as they mostly have complications.

Interpersonal Factors- Factors classified under the interpersonal level relate to barriers that emanate as a result of patients haring and interpersonal relationships with various persons or groups such as family, friends, intimate partners, and peers. These are the factors where an individual goes for C/S because she has the knowledge that she heard from peers, friends and husband. Most of

Institutional Related Factors- Institutional related factors speak to the health system factors and these factors relate to the way health services are organised and delivered and relates to access to the facility and to medication, the overall environment of the facility, the patient–provider relationship, and support services that are incorporated into care. The following health system factors like staff shortage, lack of equipment and lack of ambulance services for easy referral if the case is complicated. Factors like obstetric

factors, maternal and fetal factors are very cardinal here. All these factors were available at the facility hence able to render the services promptly as seen from the prevalence.

Community Related Factors - There is need for the health care workers to educate the target group patterning CS. The mediating structures in the community needs to have a know-how of what is involved in CS. Some of these groups are the SMAGS (safe motherhood action groups). The community was well informed about C/S as seen from the prevalence of C/S because most of our community stakeholders have knowledge about C/S. Obstetricians and midwives also knew their role in ensuring that the client have a safe delivery both vaginally and C/S.

Policy Factors- Based on the ecological model, aspects of policy are very important when examining the factors affecting the implementation of the public health intervention or programme. Nevertheless, the World Health Organization has thus declared that for CS to have an optimal impact, it must be between 5 and 15% (WHO, 2016). However, the prevalence for this study was 20%, this may be due to the fact that the facility is a referral center. The results will help in decision making at the facility, district, provincial and ministry at large.

5.6 CONCLUSION

The study was conducted to determine Prevalence of Caesarian Section and associated factors at Chawama First Level Hospital among post-natal mothers in Lusaka Province in Zambia. A descriptive Cross-sectional study design was used in this study. Data was collected using a structured interview schedule on 219 randomly selected participants. The study revealed a c/s prevalence of 20 % and this was attributed to various factors. The common contributing factors to C/S were big baby, maternal age, maternal complications, maternal education and income, husband education and income. The findings showed that women with higher education and income were likely to have C/S as compared to those with low education. This could be attributed to the fact that these mothers know the benefits of C/S both to the mother and baby. Those with good economic status showed 70% chances of having C/S compared to those with low income who had 30% chances of C/S.

5.7 RECOMMENDATIONS

World Health Organization (WHO) recommends that CS prevalence should not surpass 15% (WHO, 2009), the prevalence in this study was 20%, and this may be due other facilities that refer their clients to Chawama level one hospital. There is need for capacity building for the staff to improve on their skill when handling antenatal women. Furthermore, there is need to intensifying on health education to the women in order for them to know some of the indications for C/S as this will help reduce the prevalence.

5.7.1 Ministry of Health

Chawama first level hospital is the only referral center for maternal cases in the sub district where C/S is done, hence there must be skillful at recognition of potential complications associated with C-sections, such as infection, hemorrhage, and thromboembolic events to improve on maternal and neonatal health. The Ministry of Health through the office of the provincial medical office should continue improving infrastructure and staffing to the district so that maternal services and C/S are offered at each facility to prevent delays that may lead to poor outcome of the maternal cases. Conducting in-service training for staff to improve on maternal outcomes and avoid delays in maternal cases.

5.7.2 Lusaka DHO

The District Health Office (DHO) through the office of the clinical care expert should intensify supervision of the staff working in Lusaka District just to ensure that all is happening as per stipulated guidelines. The labour ward and Maternal and Neonatal Child Health needs a lot of support in the area of knowledge and skills on identifying the clients for C/S. Management should make random checks to MCH and Labour words to assess on the indications for women going for C/S.

5.7.3 Chawama First Level Hospital

There is need to improve on the skill to identify factors leading to C/S and act promptly so that we improve on maternal and neonatal outcome. However, emphasis should be placed on what expecting mothers need to do when they come to the facility during ANC, labour and delivery, what they need to do in case they are told they have to go C/S to prevent maternal and neonatal mortality. Additionally, there is need to Identify and train

the obstetricians and midwives on factors associated with C/S at Chawama first level Hospital in order for us to have C/S percentage according to WHO of 5-15%.

5.7.4 Further research

A more rigorous study with a larger study sample could be carried out on the same research topic to enable generalization of findings to the rest of the country.

5.8 LIMITATIONS OF THE STUDY

The study could have several limitations. First as inherent in survey designs, associations are shown and these do not demonstrate causality. There may be potential recall bias or under-reporting of CS cases since this is a self-report study. Participants may not be willing to reveal information on CS. The study sample size was small due to limited resources in terms of funds and time availability. As a result of this small sample size, the results of the study should be generalized with caution to the rest of the women in Lusaka District or elsewhere. However, to minimize this, the researcher was trained in interviewing skills and ensured privacy and confidentiality of the respondents throughout the study. The study was a single center study with limited sample size.

5.9 STRENGTH OF THE STUDY

The study has a number of strengths, first the study used recent data from chawama first level Hospital and its results will be used immediately the findings are published in order to catalyze prompt improvement within the concerned organization. Furthermore, the study will minimize researcher bias through structured data collection and analysis hence providing statistically valid and liable results. Additionally, the study will improve on the selection of women going for C/S hence reducing the prevalence. It will also help obstetricians and midwives to improve on their skill on handling women who are supposed to go for C/S.

5.9 UTILISATION AND DISSEMINATION OF FINDINGS

After collecting and analysing data, presentation of the findings will be done to UNZA, School of Nursing Sciences (SON) graduate presentation fora. Bounded copies of the dissertation will be submitted to the UNZA Medical Library and University of Zambia

Library special collection. Other copies of the report will be submitted to Lusaka Province Health Office (LPHO) and Lusaka District Health Offices (LDHO) where the study was conducted from. The findings will also be disseminated to the public through presentation during workshops and clinical meetings. Finally, the findings will be published in a peer reviewed Journal to contribute to scientific body of knowledge.

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APPENDICES

APPENDIX 1: WORK PLAN

Table II: Work Plan

ACTIVITY	**DURATION**	**DATES**	**PERSON RESPONSIBLE**
Research proposal development	120 days	1st June 2021 to 30th September, 2021	Researcher
Literature Review	Continuous	Continuous	Researcher
Clearance from School and Authority **(UNZASOMUREC)**	16 days	13thJune 2023 to 27thJune 2023	Researcher
Pilot study	3 days	28th June 2023 to 1st July 2023	Researcher
Data collection	30 days	2nd July 2023 to 2nd August 2023	Researcher
Data analysis	30 days	3rd August 2023 to 2nd September 2023	Researcher
Report writing	20 days	3rd September 2023 to 23rd September 2023	Researcher
Submission of drafts research report to DNS	14 days	24th September 2023 to 7th	Researcher

		October 2023	
Finalising of report	15 days	8th October 2023 to 23rd October 2023	Researcher
Monitoring and Evaluation	Continuous	Continuous	Researcher and Supervisors
Dissemination of results	5 days	24th October 2023 to 29th October 2023	Researcher

APPENDIX 2: RESEARCH BUDGET

Table 111: Research Budget

Item	**Unit**	**Unit cost (ZMW)**	**Total cost (ZMW)**
Stationery			
Reams of paper	2	50	240
Pens (box)	1	30	30
Note books	1	20	20
Correction Fluid (box)	1	30	30
Staplers	1	50	50
Staples (box)	1	20	20
Perforator	1	50	50
Scientific calculators	1	250	250
Box files	5	50	250
Field bags	1	250	250
Disks (CD-ROM)	5	3	45
Memory stick 16Gb	1	150	150
Dairy	1	200	200
		Subtotal	**1,585.00**
Secretarial Services			
Typing of questionnaire	10 pages	10/ page	100
Research proposal typing and Binding	1	600	600
Questionnaire photocopying	3,000 pages	2	6000
Research report writing	1 x150	4	600

Binding of research report	4	150	600
Research report printing	400pages	2	800
		Subtotal	**10,200.00**
Personnel			
Lunch allowance for the researchers	30 days	135	4050.00
Snacks for respondents	232	20	4640
		Subtotal	**8, 690**
		Total	**K 20,475**
		Contingency (10%)	**K2,047.50**
Grand total ZMW K22,522.5			

BUDGET JUSTIFICATION

Budgetary allocations for this research was divided into four major components which were stationery, personnel, secretarial services and contingency. The budget was intended to serve as a guide for resource allocation and expenditure.

5.1.1 Stationery

Stationery in our research study was used for research proposal writing, preparation of questionnaires, data processing and analysis which is done both manually and electronically. The final research report writing also require stationery. The total cost of the money that was spent on stationery is ZMW **1,585** as outlined on the table above.

5.1.2 Personnel

Personnel related costs are incurred to carter for lunch allowance as researchers are required to work throughout the day especially during data collection. The other costs went towards refreshments for respondents. The total cost that was spent on personnel is ZMW **8690**

5.1.3 Secretarial services

Secretarial services are equally very important to our research study. These include typing, editing and printing. These services aim at the successful publication of our final research report. The total cost that was spent on secretarial service is ZMW **10,200**.

Transport

The researcher needed some funds for transport in the course of the research project.

5.1.4 Contingency

Contingency is the amount of money which serves to cushion the effects of inflation and to cover the shortfalls. It was calculated at 10% of the total budget and is added to the total amount to make the grand total which is ZMW **2,047.50**

5.2 Sources of funding

The source of funding for the research project is self.

Possible study limitations

The researcher anticipated encountering various challenges in the process of conducting this research as mentioned below:

Time: The research was conducted within limited time; the researcher relying, to a large extent on availability of free hours from study.

Finances: The research is not externally funded. The researcher used personal finances to meet the costs of the study to a limited extent.

APPENDIX 3: PARTICIPANT INFORMATION SHEET

Introduction

My name is Justina P Banda. I am a postgraduate student from the University of Zambia, School

of Nursing Sciences. Am doing a study on Prevalence of Caesarean section and associated factors among postnatal women in Lusaka urban district, Lusaka Province. The tittle of the Study is "Prevalence of Caesarean Section and associated factors with caesarean delivery at Chawama General Hospital in Lusaka, Zambia."

Purpose of the Research

The purpose of this study is to investigate the prevalence and factors associated with caesarean delivery at Chawama General Hospital in Lusaka, Zambia.

Procedure

If you interested to participate in this study, you will need to sign or thumbprint a consent form saying you agree to be in the study and the copy will be provided. Please note that you have the right to take part and withdraw from taking part in this study at any time, if you so wish. The study will involve interviews and the interview will take about 20 to 30 minutes and will be done in a private room in the clinic or any place of your choice.

Confidentiality

Be assured that the information collected from you in this research will be kept strictly confidential and all the data collection tools used will be destroyed thereafter. No name will be written on the questionnaire except your index numbers.

Risk and Benefits

There are no risks or discomfort involved in the participation of this study apart from the use of your time in answering the questionnaire, for about half an hour at your health centres. By taking part in this study, you will be able to provide us with information that would help relevant authorities and policy makers to come up with strategies and policies that would help in improving the care of patients in the health institutions. In the event

that any participant is injured emotionally during the administration of the questionnaire, the researcher will take full responsibility of the consequences to correct the situation.

Compensation/Reimbursement

The participation in this research has no provision for compensation/reimbursement. No monetary favours will be given in exchange for information sought. There will be no direct benefits to the participants in this study.

If you have any questions about the study please contact the following:

Justina P Banda (Principal Investigator),The University of Zambia, School of Nursing Sciences, P.O. Box 50110, Ridgeway Campus, LUSAKA, Contact number for the Researcher, Justina P Banda -0979097017

Prof. Catherine Ngoma **(Supervisor),** University of Zambia, School of Nursing Sciences, P.O, Box, 50110, Lusaka. Contact: +260966652879, Email: catherinengoma@yahoo.com

UNZABREC, Chairperson, Ridgeway Campus, P.O Box 50110, Lusaka, Tel: +260977925304, E-mail: s.munsaka@unza.zm

APPENDIX 4: INFORMED ASCENT

The information about the study has been read out and explained to me. I understand that taking part in the study is voluntary and that my privacy will be respected. All questions I had have been answered to my fulfilment. I choose to take part freely and voluntarily.

I ..... has given ascent for my child to take part in the study.

Signature of guardian or (Thumb print).....

Date...../...../.....

Data Collector/ Interviewer's Signature

The participant has understood the purpose and content of the study and has made informed ascent to participate in this study.

Name of Interviewer……

Signature……

Data……/……/……

APPENDIX 5: INFORMED CONSENT

The information about the study has been read out and explained to me. I understand that taking part in the study is voluntary and that my privacy will be respected. All questions I had have been answered to my fulfilment. I choose to take part freely and voluntarily.

I ..... has given consent to take part in the study.

Signature or (Thumb print).....

Date...../...../.....

Data Collector/ Interviewer's Signature

The participant has understood the purpose and content of the study and has made informed consent to participate in this study.

Name of Interviewer……

Signature……

Data……/……/……

APPENDIX 6: DATA COLLECTION TOOL (STRUCTURED QUESTIONNAIRE) FOR POST NATAL MOTHERS

TOPIC: PREVALENCE OF CAESARIAN SECTION AND ASSOCIATED FACTORS AMONG POSTNATAL WOMEN AT CHAWAMA GENERAL HOSPITAL

INTERVIEW SCHEDULE NUMBER ……

DATE OF INTERVIEW…….....

INSTRUCTIONS TO THE INTERVIEWER

Do not write the name of the respondent on the questionnaire.

Tick the chosen response, for questions with alternatives.

Write in the space provided for open ended questions.

Do not omit any questions unless there is need to do so

Write all responses clearly.

SECTION A: DEMOGRAPHIC DATA

For Official Use

How old were you on your last birthday? ……

<18 years

18-19 years

20- 24 years

25- 29yrs

30- 34 years

>35 years

What is your current marital status?

Single

Married (monogamous)

Married (polygamous) d. Separated

Divorced

Widowed

Co-habiting (not married but lives with a partner)

your Religious denomination?

Christianity

Islam

Others- specify …….

What is your highest level of education?

Primary education

b.Secondary education

c. Tertiary education

d.Never been to school

What is your occupation?

Employed full time

Employed part time

Farmer

Business/self-employed. e) Retired

f) Dependent

What is your husband's highest level of education

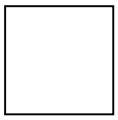
Primary education

Secondary education

Tertiary education

Never been to school

What is your husband's occupation?



Employed full time

Employed part time

Farmer

Business/self-employed.

Retired

What is your husband's income?

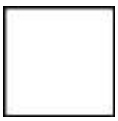
Less than K1000.00

K2, 000.00 – K6, 000.00

K7, 000.00 K10, 000.00

Above K10, 000.00

SECTION B: OBSTETRIC CHARACTERISTICS



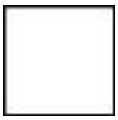
How many children do you have

a) 1

2-3

4 or more

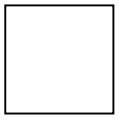
10. Where was the place of delivery?



a) hospital

b) Home

11. How was the spacing of your children

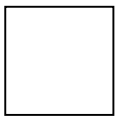


a) < 12months

b) < 24months

c) 24 months or more

12. What was the mode of delivery



Vaginal

Caesarian section

13. what was the type of delivery

Singleton

Twins

multiple

14.What is the number of your latest pregnancy?

One

Two

Three

Four and more

15. Have you had a still birth before

Yes

No

16.Have you had cesarean section before

Yes

No

17.If Yes how many C/S have you had

Once

Twice

Three times

18.What were the conditions that led to caesarian section

……..

……..

…….

19.How many ANC visits did you attend on this pregnancy?

1-3 contacts

4- 6 contacts

7- 8 contacts

20.What was the gestational age of the current pregnancy

34-37 weeks

38-42 weeks

Above 42 weeks

21.What was the indication for C/S in the current pregnancy

NRFHR pattern

Cephalo-pelvic disproportion

Previous C/S

Antepartum Haemorrhage

Malpresentation/malposition

Severe preeclampsia

22.Type of C/S

Elective/Planned

Emergency

23.What is the birth weight of the baby

<2500 g

2600-3500g

>3500 g

24.What is the distance to the hospital

2km

Less tham 5km

Less than 10km

Above 10km

25.Did you use any herbs during this pregnancy

Yes

No

26.If yes to the above what was the purpose of the herbs

Treatment

Quick delivery

To prevent any complications

27.Have you performed any vaginal mutilation

Yes

No

28.If yes to the above, what was the purpose of the mutilation

……..

…… ……

END OF INTERVIEW THANK YOU FOR YOUR COOPERATION AND PARTICIPATION

APPENDIX 7: CHECK LIST

TOPIC: PREVALENCE OF CAESARIAN SECTION AND ASSOCIATED FACTORS AMONG POSTNATAL WOMEN AT CHAWAMA GENERAL HOSPITAL

INTERVIEW SCHEDULE NUMBER …… DATE OF INTERVIEW……..... INSTRUCTIONS TO THE INTERVIEWER

Gravida …prim-100, multigravida-119……

Parity---prim-100, multipara-119----------

Previous history of still birth: Yes--------13--------- No----------

Previous history of C/S Yes: ……15…… No……..

Number of previous C/S……44……..

Number of ANC follow up-------219---------- Gestational age----------above 37 weeks----------Current indication for C/S-----44----------

Type of C/S----------2 planned, 42 emmegency----------

Fetal birth weight____above 3.5-68, normal 2.5-3.5-80, below 2.5-71_____

Fetal outcome_____live births_____

APPENDIX 8: CISULO CHOTHANZIRA KUKAMBA NDI AZIMZAI

MALAMULO KULI AWO OFUNSA MAFUNSO

Musalembe dzina lanu pa pepala iyi

Chongani yankho yamene mwasankha

Lembani yankho yanu pa malo yapatsidwa

Musajumpile yakho iliyonse pokhapo mutauzidwa

Lembani mayankho onse mukalembedwe kooneka

CHIGAWO CHOYAMBA – A ZACHIBADWE

Muli ndi zaka zingati ……..

<18 years

18-19 years

20- 24 years d .25- 29yrs

e. 30- 34 years

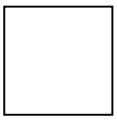
f.>35 years

Kodi ndinu okwatiliwa olo ai

Osakwatiliwa (osakwatiwa ndiponso simukhala ndi mwamuna)

Okwatiwa ku mwamuna umodzi

Okwatiwa ku amuna ambiri



Okwatiwa koma sitikhala limodzi

Chikwati chinasila

Amuna anamwalila

Osakwatiwa koma ndikhala ndi asumbali anga

Kodi mupempera kuti

Ku chisilamu

Ndinu a kristu

Ena makachisi tiuzeni……..

Munapata maphunziro kufika geledi bwanji ?

a) Pulaimali

Sekondale

Ninachita kosi

Sininapiteko ku sukulu

5. Kodi musebenza kuti

a) Munalembedwa ndi boma b) Nigwirako chabe ganyu c) ulimi d) zamalonda/kuzisebenzela e) litaya f) nisungiwa chabe

6. kodi amuna anu Munapata maphunziro kufika geledi bwanji ?

e) Pulaimali

f) Sekondale g) Ninachita kosi h) Sininapiteko ku sukulu

7. Kodi amuna anu musebenza kuti

a) Munalembedwa ndi boma b) Nigwirako chabe ganyu c) ulimi d) zamalonda/kuzisebenzela e) litaya f) nisungiwa chabe

kodi mupata ndalama zingati pa mwezi …….

Kodi mukwanitsa kudya kangati pa tsiku

a) Kamodzi

Kawiri

Katatu

Kanai

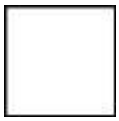
Kodi muli ndi ana angati

a) umodzi

awiri

atatu

apitlila anai



Kodi ana anu anali akulu bwanji pa kubadwa

Akulu kwambiri

Anali ndithu wa size

Anali wamung'ono

Kodi munali kupititapo zaka zingati mukalibe kukhala ndi mwana wina

Akalibe ku kwanisa chaka cimodzi b)

Pakati pa chaka cimodzi ndi ziwiri

c) Atakwanisa zaka ziwiri ndi kupyolapo

Kodi ana anu munabeleka motani

Kupitila pa njila ya muzimai

Kupitila muopaleshoni kuti achotse mwana.

Ngati yakho yanu ndi (b) chinalengesa kuti mupite ku opaleshoni ndi ciani

…….

……..

……..

……

Kodi munakumanapo ndizobvta pa mimba iyi

Inde

Ai

Ngati ansala yanu ndi inde pa funso

(15), kodi zobvuta zinzli zotani

…….

……

……

……

Kodi munabwelako kangati kuchipimo pa mimba yanu iyi

a) 1-3

4-6

7-8

Kupyola 8

Kodi ndi patali bwanji kuchoka kunyumba yanu kufika ku Chipatala

a) Kucepekela pa 2km

b) Kupitilila pa 2km

Kucepekela pa 5km

5km kupita patsogolo

Kodi munabwela ndi ciani kuchipatala pakubwela kupapa

Minibus

Galimoto yolipila

Galimoto yanga

muthuthuthu

Njinga

Ndinayenda ndi miyendo

Kodi munasebenzesako makhwala ya chiboyi pa mimba iyi a) Inde

b) Ai

Ngati ansala yanu ndi inde ku funso (20), nchito ya makhwala ya chiboyi inali yotani

…….

……

……..

……

……

…

Kodi muna Maopaleshoni ya mwana yakwana yangati tsopan

TASILIZA KUKAMBISANA ZIKOMO POTENGAKO MBALI

APPENDIX 9: CHECK LIST

TOPIC: PREVALENCE OF CAESARIAN SECTION AND ASSOCIATED FACTORS AMONG POSTNATAL WOMEN AT CHAWAMA GENERAL HOSPITAL

INTERVIEW SCHEDULE NUMBER …… DATE OF INTERVIEW……..... INSTRUCTIONS TO THE INTERVIEWER

Kodi ndi mimba ya nambala bwanji ……

Kodi muli ndi ana angati ----------

Kodi munakhalapo ndi mimba inapitilila : inde ---------- ai ----------

Kodi munakhalapo ndi mwana wa operation inde: …… Ai……..

Munakhalapo na maoperation angati pakubeleka……..

Kodi kuchipimo munabwelako kangati----------

Kodi pathupi ndi pa masabata angati---------- Kodi chomwe mwayendela ku operation ndi ciani ----------

Type of C/S----------

Kodi mwana alema bwanji pa sikelo_____

Kodi mwana abandwa wa moyo olo bwanji_____

TASILIZA KUKAMBISANA ZIKOMO POTENGAKO MBALI

APPENDIX 10: PERMISSION TO CONDUCT A PILOT RESEARCH STUDY IN LUSAKA DISTRICT

The University of Zambia Ridgeway Campus,

School of Nursing Sciences

P. O. Box 50110,

Ridgeway, LUSAKA.

13th October, 2020

The District Medical Office

Lusaka, District Medical Office,

P. O. Box,

LUSAKA.

U.F.S.

The Head of Department,

School of Nursing Sciences,

P. O. Box 50110, LUSAKA.

Dear Sir/Madam,

RE: PERMISSION TO CONDUCT A PILOT RESEARCH STUDY AT MATERO GENERAL HOSPITAL, LUSAKA DISTRICT

Am a postgraduate student at the University of Zambia, School of Medicine, Department of Nursing Sciences, pursuing masters in Midwifery. In partial fulfilment for the award of masters in Midwifery, am required to undertake a research study during my final year of training in my area of interest. My research title is "Prevalence of caesarean section and associated factors at Chawama General Hospital," I wish to conduct a pilot study at

Matero General Hospital. The target population will be women who have undergone Caesarean section from the said facility. I intend to collect data for the pilot study from 28th June 2023 to 1st July 2023.

Therefore, am requesting for permission to interview some women who have undergone caesarean section and delivered from the above-mentioned facility. I would be very grateful if my request to undertake this study is granted.

Thanking you in anticipation.

Yours faithfully,

Banda P. Justina

APPENDIX 11: PERMISSION TO CONDUCT A RESEARCH STUDY IN LUSAKA DISTRICT

The University of Zambia Ridgeway Campus,

School of Nursing Sciences

P. O. Box 50110,

Ridgeway, LUSAKA.

13th October, 2020

The District Medical Office

Lusaka, District Medical Office,

P. O. Box,

LUSAKA.

U.F.S.

The Head of Department,

School of Nursing Sciences,

P. O. Box 50110, LUSAKA.

Dear Sir/Madam,

RE: PERMISSION TO CONDUCT A RESEARCH STUDY AT CHAWAMA GENERAL HOSPITAL IN LUSAKA DISTRICT

Am a postgraduate student at the University of Zambia, School of Medicine, Department of Nursing Sciences, and pursuing masters of Science in Midwifery. In partial fulfilment for the award of masters of Science in Midwifery, am required to undertake a research study during my final year of training in my area of interest. My research title is "Prevalence of caesarean Section and associated factors among pregnant women at

Chawama General Hospital in Lusaka urban district, Zambia. I wish to conduct a pilot study at Matero General Hospital and the main study will be conducted at Chawama General Hospital. The target population will be women who have undergone caesarean section from the said facility. I intend to collect data for the main study from 2nd July 2023 to 2nd August 2023.

Therefore, am requesting for permission to interview some women who have undergone caesarean section and delivered at the above-mentioned facility. I would be very grateful if my request to undertake this study is granted.

Thanking you in anticipation.

Yours faithfully,

Banda P. Justina

THE UNIVERSITY OF ZAMBIA
SCHOOL OF NURSING SCIENCES
OFFICE OF THE ASSISTANT DEAN POSTGRADUATE

Tel: +260 211 252453
Fax: +260 211 252453
Website: www.unza.zm
Email: dean-nursingscience@unza.zm

School of Nursing Sciences Building
University Teaching Hospitals
P.O Box 50110
Lusaka, Zambia

10th November, 2022

The chairperson,
UNZABREC,
The University of Zambia,
Ridgeway campus,
Lusaka.

Dear Sir/Madam,

RE: SUBMISSION OF RESEARCH PROPOSAL TO UNZABREC

Following the presentation of Justina Banda's research proposal, **'Prevalence of Caesarean section and associated factors at Chawama General Hospital, Lusaka, Zambia'** the supervisor has confirmed that the necessary corrections to the research proposal have been done.

The student can now proceed and present to the UNZABREC
Yours faithfully

Ms. Brenda N. Sianchapa
ASSISTANT DEAN POSTGRADUATE

cc, Head, Department of Midwifery, Women's and Child Health

standard chartered

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DATE	TIME	TERMINAL ID
12-06-2023	02:50 PM	9220416718

AGENT ID: 35
TRAN NUM: 061212773022
STAN: 773022

CASH DEPOSIT
TRANSACTION SUCCESSFUL

Txn Amount.....ZMW 1,000.00
Txn Fee.....ZMW 0.00
Total Amount:...ZMW 1,000.00

Account No: 010011*****00
Account Name: UNZA-SCHOOL OF MEDICINE/REC
Purpose: student No 2019110351 Unza rec

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