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DIPLOMA PROGRAMMES

ASSESSING PREGNANT WOMEN'S KNOWLEDGE AND ATTITUDES TOWARDS EXERCISE DURING PREGNANCY AT HOLY FAMILY HOSPITAL-BEREKUM

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DECLARATION

We declare that the research for this paper came from our own efforts. We oversaw the study's execution, and its initial data gathered from participants at the Berekum Holy Family Hospital ANC department in Berekum.

Every information source and reference utilised in this research has been properly cited. We declare that the information and conclusions in this study are original to us and have not been submitted for publication in any other academic or research journal.

We further declare that this study complies with ethical norms and rules for research, guaranteeing the secrecy and privacy of all participants during the investigation.

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ABSTRACT

Introduction: Exercise during pregnancy is widely recognized as beneficial for maternal and fetal health, yet various barriers and cultural beliefs impact its practice. Understanding these barriers and perceptions is crucial for promoting safe and effective physical activity during pregnancy. **Objective**: This study assessed the knowledge, perceptions, and barriers to exercise among pregnant women. The study also explored cultural beliefs and environmental factors influencing exercise during pregnancy. **Method:** A cross-sectional survey was conducted among 50 pregnant women, collecting data through structured questionnaires. The responses were analysed using SPSS, with statistical analyses including frequency distributions and percentages. **Results:** The findings revealed that fatigue (28%) and physical discomfort (24%) were the primary barriers to exercise during pregnancy. Self-efficacy (24%) and social support (22%) were key environmental factors influencing exercise. Miscarriage (34%) and the belief that pregnant women are fragile (26%) were identified as major hindrances. Additionally, cultural beliefs indicated that exercise strengthens pelvic muscles (48%) and enhances labour outcomes (40%). **Conclusion:** There is a need for targeted educational campaigns to address misconceptions and promote the benefits of exercise during pregnancy. Enhancing social support and improving access to exercise resources can further encourage physical activity among pregnant women.

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LIST OF ABBREVIATION

ANC - Antenatal Care

WHO - World Health Organization

SPSS - Statistical Package for the Social Sciences

BMI - Body Mass Index

CVD - cardiovascular disease

PH - Physical Health

MHM - Maternal Mental Health

EFP - Exercise During Pregnancy

PM - Pelvic Muscles

SE - Self-Efficacy

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CHAPTER ONE

INTRODUCTION

1.0 Background of the study

Globally, health experts have given physical exercise during pregnancy a great deal of attention and support (Belachew *et al.,* 2023). It describes repetitive, systematic, and planned movements of the body meant to improve physical and general health. This includes a wide range of exercises, such as yoga, strength training, and swimming in addition to walking (Garber *et al.,* 2011). Exercise during pregnancy is essential for maintaining maternal health and preventing complications associated with pregnancy (Ribeiro *et al.*, 2022). Engaging in moderate physical exercise during this critical phase has several benefits, including increased cardiovascular fitness, lowered blood pressure, better weight control, and a lower chance of developing gestational diabetes (Guinhouya *et al.,* 2022). Exercise has also been shown to have a favorable effect on energy and mood, which may reduce the prevalence of prenatal depression and promote faster postpartum recovery (Kołomańska *et al.,* 2019).

Despite the clear advantages established by studies, the uptake of exercise among pregnant women continues to be notably inadequate. This disparity can be ascribed to various factors, such as cultural beliefs, misinformation, physical constraints, lack of motivation, and inadequate guidance from healthcare providers (Jahan & Anaiba, 2023). In localities like Berekum, where resource limitations in the healthcare system are common and cultural norms heavily shape lifestyle choices, pregnant women may not receive sufficient information or encouragement to integrate exercise into their daily lives (Nuamah *et al.,* 2019).

In many parts of Ghana, including Berekum, pregnancy is often viewed as a time for rest and minimal physical exertion. Cultural perceptions may dictate that physical activity could harm the

mother or the unborn child, a myth that is perpetuated through generations (Okafor & Goon, 2021). These cultural beliefs are compounded by the socioeconomic realities of many women in the area. For instance, access to safe places for exercise or resources like maternity sportswear can be limited (Adatara *et al.*, 2019). Moreover, the economic necessity for many women to continue working throughout their pregnancy without adequate maternal leave may also discourage exercise, either due to fatigue or a lack of time (Brunner *et al.*, 2023).

The level of understanding regarding the safety and advantages of exercise during pregnancy varies considerably among individuals. Health education, particularly within antenatal clinics, is essential for reshaping perceptions and behaviors surrounding this topic (Jahan & Anaiba, 2023). However, resource constraints in settings such as Holy Family Hospital can limit the scope and effectiveness of such educational initiatives. Without targeted educational campaigns, misconceptions and misinformation may persist, hindering pregnant women from considering exercise as a viable option for maintaining their health during and after pregnancy (Mprah *et al.*, 2017).

Healthcare providers play a crucial role in advocating for exercise among pregnant women, as their recommendations are often regarded as authoritative and reliable. However, if healthcare professionals harbor misconceptions about exercise during pregnancy or lack adequate training to offer guidance on this matter, their advice may inadvertently discourage exercise or fail to promote it sufficiently (Okafor & Goon, 2021). The training and resources available to healthcare professionals in less urbanized areas like Berekum may not fully cover the most recent guidelines on physical activity during pregnancy, exacerbating the knowledge gap (Asante *et al.*, 2022).

Therefore, this study aimed to assess the knowledge and attitudes towards exercise during antenatal at Holy Family Hospital-Berekum. This study also aimed to identify specific barriers preventing women from engaging in exercise. The anticipated outcomes include filling a critical gap in academic literature and providing a basis for culturally sensitive interventions that address both societal norms and structural barriers. This understanding is essential for guiding future research stages and developing sustainable interventions aimed at improving maternal and child health outcomes in Berekum and similar communities.

1.2 Problem Statement

Despite ample evidence supporting the positive impacts of physical activity on the health of both mother and child, many expectant mothers in Berekum exhibit minimal engagement in exercise routines throughout their prenatal periods through personal observation. This discrepancy is further compounded by deeply rooted cultural norms that perceive pregnancy as a time for rest and limited physical exertion, thereby perpetuating misunderstandings regarding the safety and benefits of exercise during this pivotal stage. Consequently, a lack of knowledge among pregnant women regarding the significance of exercise, along with inadequate guidance from healthcare providers due to resource limitations or cultural biases, exacerbates the issue.

Additionally, the restricted access to suitable facilities, equipment, and staff within the healthcare system presents hurdles to promoting exercise among pregnant women. This leaves expectant mothers susceptible to potential health risks associated with either undertaking physical activities without proper knowledge or entirely abstaining from exercise. As a result, there arises an urgent need to address these multifaceted challenges to safeguard the optimal health and well-being of pregnant women and their infants in Berekum.

1.3 Significance of the study

This study's significance lies in providing empirical data on pregnant women's knowledge and attitudes towards exercise at Holy Family Hospital, Berekum, and identifying specific gaps in knowledge and barriers to exercise so that healthcare providers can develop more effective educational programs and interventions. This could lead to improved maternal and fetal health outcomes, reduced pregnancy-related complications, and potentially lower healthcare costs related to prenatal and postnatal care.

1.4 Objectives of the Study

1.4.1 Main Objective

To assess the knowledge and attitudes towards exercise during antenatal periods among pregnant women at Holy Family Hospital, Berekum.

1.4.2 Specific Objectives

1. To assess the knowledge level on the benefits of exercise during pregnancy among pregnant women at Holy Family Hospital, Berekum.
2. To assess pregnant women's attitudes towards exercise during pregnancy at Holy Family Hospital, Berekum.
3. To identify the barriers faced by pregnant women in participating in exercise programs at Holy Family Hospital, Berekum.

1.5 Research Questions

1. What is the knowledge level on the benefits of exercise during pregnancy among pregnant women at Holy Family Hospital, Berekum?
2. What are pregnant women's attitudes towards exercise during pregnancy at Holy Family Hospital, Berekum?

3. What are the barriers faced by pregnant women in participating in exercise programs at Holy Family Hospital, Berekum?

1.6 Scope of the Study

The study focused on pregnant women who are receiving antenatal care at Holy Family Hospital, Berekum. It involved participants from diverse socio-economic backgrounds attending the hospital's maternity clinic.

1.7 Organisation of the Study

The study is organized into five chapters. Chapter One provides an extensive overview of the research background, problem statement, significance, objectives, research topic, scope, and definition of terms. Chapter Two delves into the literature review, examining both theoretical and empirical perspectives within the existing body of knowledge. Chapter Three outlines the methodology, detailing aspects such as study design, site selection, population demographics, sampling techniques, data collection methods, validity and reliability, analysis approaches, and ethical considerations. Chapter Four presents and discusses the study's findings, including data presentation, descriptive and inferential analyses, and an interpretation of results vis-à-vis the research questions. Finally, Chapter Five encapsulates the study's conclusions drawn from the findings. It also offers recommendations for future research or practice, summarizing research objectives, findings, implications, and suggestions for further investigation or application.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

For ages, pregnant women's attitudes toward exercise have been shaped by cultural, societal, and medical viewpoints on physical activity during pregnancy (Okafor & Goon, 2021). Pregnancy has always been associated with a delicate state requiring little physical activity and rest. Greeks and Romans, among other ancient cultures, believed that hard physical labour during pregnancy might be harmful to the health of the mother and the unborn child (Katz, 2018). Centuries of warning advice about physical activity during pregnancy were based on these early beliefs. However, as medical knowledge increased and women's rights organisations gained traction in the early 20th century, attitudes about exercising during pregnancy changed (Downs *et al.*, 2012).

Studies clarifying the various advantages of exercise for pregnant women and their unborn children have surfaced in the last few decades. Regular physical exercise during pregnancy has been linked to several health benefits, including improved cardiovascular health, decreased risk of gestational diabetes and hypertension, relief from common discomforts including back pain, and improved psychological well-being (Guinhouya *et al.*, 2022). Despite these developments, there are still a number of important gaps such as differences in cultural factors, a paucity of longitudinal data, and a dearth of practical treatments to encourage pregnant women to engage in exercise (Okafor & Goon, 2022).

The literature review outlines the theoretical review and empirical review of the study which includes a thorough analysis of the benefits, drawbacks, and current knowledge and attitudes towards exercise during pregnancy as well as the gaps in the literature.

2.1 Theoretical Review

Theoretical frameworks for the study will be drawn from fields including public health, psychology, and sociology, and provide insightful analysis of the intricacies of exercise behavior during pregnancy to achieve the study's objectives. One framework that helps explain how pregnant women's attitude to engage in physical activity is the Health Belief Model (HBM) (Thompson *et al.,* 2017).

Also, the Social Cognitive Theory (SCT) highlights the interaction of environmental influences, behavioral factors, and personal factors. It proposes that access to resources, social support, and environmental factors like self-efficacy and outcome expectations influence pregnant women's exercise behaviors (Scarpa *et al.,* 2022).

Building on these ideas, the Theory of Planned Behaviour (TPB) emphasises the significance of intention as the primary driver of behaviour. Pregnant women's intentions to exercise are influenced by their attitudes towards exercise, their perceptions of social norms surrounding exercise behaviour, and their sense of control over their abilities to exercise (Lee *et al.*, 2016).

Furthermore, the Transtheoretical Model (TTM) suggests that behaviour change happens in stages, starting with contemplation and ending with maintenance. Pregnant women may move through these stages at varying speeds (Prochaska & Prochaska, 2019).

2.2 Empirical Review

2.2.1 Knowledge and Attitudes Towards Exercise During Pregnancy

To encourage pregnant women to engage in physical activities, it is essential to comprehend their attitudes and understanding regarding exercise (Okafor & Goon, 2021). According to (Asante et al., 2022; Evenson & Bradley, 2010), while some pregnant women understand the advantages of exercise, many have false beliefs about its safety, which causes them to engage in less activity.

(Janakiraman *et al.*, 2021) reveals a notable deficiency in pregnant women's knowledge of recommended exercise regimens. Less than half of the participants in the survey could name the particular health benefits of exercise during pregnancy, such as a lower risk of gestational diabetes and an easier time giving birth, although the majority of participants were aware of these benefits in general.

Additionally, a study (Barakat et al., 2023) looked at pregnant women's psychological obstacles to exercise. It was discovered that among the widespread myths are the ideas that working out could damage the foetus or cause miscarriage. Even though there are a ton of studies and medical guidelines that support the advantages and safety of moderate exercise during pregnancy, these anxieties persist.

An important factor is also played by attitude barriers. According to (Rovcanin *et al.*, 2022), many pregnant women feel that exercise is not as beneficial to the health of the foetus as rest does, and they view themselves as "fragile." Evidence suggests that sedentary behavior may raise the risk of issues including hypertension and excessive weight gain, which stands in stark contrast to this view (Park *et al.*, 2020).

2.2.2 Exploring the Benefits of Exercise During Pregnancy

Exercise during pregnancy has multiple benefits in the physiological, psychological, and obstetric domains that affect the mother and the foetus which are beginning to be recognised and validated (Bauer *et al.*, 2020; Hinman *et al.*, 2015).

Moderate exercise during pregnancy is essential for improving cardiovascular health, which satisfies the body's requirement for more blood volume and cardiac output. Studies have indicated that physical activity plays a major role in preserving insulin sensitivity and glucose metabolism, hence lowering the risk of gestational diabetes. Regular exercise can also lessen the

chance of preeclampsia by preventing hypertension from developing during pregnancy (Laredo-Aguilera *et al.*, 2020; Witvrouwen *et al.*, 2020).

Also, exercise helps to preserve muscle flexibility and balance, which is important because pregnancy causes the body to go through a lot of changes. This is especially helpful for treating common ailments like lower back discomfort (Fiat *et al.*, 2022). According to (Diez-Buil *et al.*, 2024) pregnant women's back and pelvic discomfort can be reduced with specialised exercise regimens that incorporate strength training and stretching.

Additionally, exercise's positive effects on mood and energy levels are particularly beneficial for mental health during pregnancy when emotional sensitivity is at its peak. Exercise causes endorphins to be released, which naturally elevates mood and helps fight anxiety and depression in pregnant women (Kołomańska *et al.*, 2019; Liu *et al.*, 2023). According to (Kołomańska *et al.*, 2019), pregnant women who regularly exercised showed a significant decrease in melancholy symptoms.

Furthermore, exercise has also been connected to more effective labour and delivery. According to (Barakat et al., 2018) women who continued an exercise programme during pregnancy were likely to have shorter labours and require fewer interventions, such as caesarean sections. This implies that physical fitness can improve one's readiness for childbirth.

Moreover, the benefits of maternal exercise for the foetus include enhanced heart rate variability and possible improvements in neurodevelopment. Active moms' Foetuses respond better to labour demands (Guinhouya *et al.*, 2022).

2.2.3 Identifying Barriers to Exercise During Pregnancy

According to (Okafor & Goon, 2022), physical complaints like weariness, nausea, and musculoskeletal discomfort are frequently used as barriers. This study demonstrates how these

discomforts, which are frequently made worse during pregnancy, can seriously lower a woman's desire and capacity for physical exercise.

Also, (Turon *et al.*, 2023) reveal that, psychological elements also play a crucial impact. Pregnant women's anxieties over exercise are due to worry about endangering their unborn child or inducing early labour. These anxieties are frequently the result of unclear information or incorrect guidance regarding the appropriate levels of physical exercise during pregnancy.

Additionally, (McKeon *et al.*, 2022) indicated that time constraints and restricted access to suitable and safe exercise facilities are major obstacles. The study also shows that a pregnant woman's decision to exercise can be significantly influenced by her family's and her healthcare professionals' encouragement. Women could struggle to prioritise physical activity if their partners and medical experts do not support them or offer helpful advice.

Furthermore, (Ansong *et al.*, 2022) indicate that attitudes regarding fitness can also be influenced by cultural factors. certain cultures are more accepting of active lives during pregnancy than others. According to the study cultural views of pregnancy affect physical activity levels and are less inclined countries where pregnancy is seen as a state requiring rest. . The physical demands of pregnancy, coupled with the exhaustion from disrupted sleep and other pregnancy-related issues, further hinder the capacity to exercise. The antenatal period is marked by significant physiological changes that can create substantial impediments to physical activity (Chan et al., 2019).

Additionally, (Ferrari & Joisten, 2021) indicated that pregnant women often experience anxiety regarding their body image and fitness levels. Concerns about the safety of exercise during pregnancy and fears of harming the baby can deter women from engaging in physical activity. This anxiety is compounded by the pressures of adapting to impending motherhood and the

emotional fluctuations that often accompany this period. Psychological barriers can significantly influence a woman's motivation and confidence to pursue an exercise regimen (Kim, 2021).

Furthermore, time constraints and the lack of childcare support for other children are significant barriers to antenatal exercise. Many women find it challenging to allocate time for physical activity while managing the demands of pregnancy, household responsibilities, and sometimes work commitments (Okafor & Goon, 2022).

Moreover, Limited access to suitable exercise facilities and safe environments further restricts opportunities for antenatal exercise. Social support and the availability of resources play crucial roles in enabling pregnant women to engage in regular physical activity, and their absence can be a major deterrent (Jahan & Anaiba, 2023).

2.2.6 Existing gaps in literature

Even though the corpus of data on exercise during pregnancy is growing, there are still a number of important gaps in the literature, which calls for more research to fill them up and promote physical activity among pregnant moms. First off, longitudinal studies that follow pregnant women over time are severely lacking in their ability to assess the long-term impacts of prenatal exercise on outcomes for both mothers and newborns. Such information would be extremely helpful in understanding the long-term effects of continuing an active lifestyle while pregnant (Okafor & Goon, 2022).

Also, most of the research that has been done so far has been on populations in the West, leaving a knowledge gap about how cultural variations may affect pregnant women in non-Western nations' beliefs and behaviours related to exercise. Research covering a range of cultural backgrounds is necessary to create workout guidelines that are appropriate for all countries (Abebe *et al*., 2021).

Furthermore, although there is no shortage of quantitative data regarding the advantages of exercise during pregnancy, there is a dearth of qualitative research examining the individual experiences and obstacles faced by expectant mothers. The understanding of the contextual and individual factors influencing exercise behaviour during pregnancy should be further enhanced by additional qualitative research (Okafor & Goon, 2021).

2.2.4 Exercise During the Antenatal Period

While considerable attention has been given to the benefits of exercise during the postnatal period, the antenatal period, also known as the prenatal period, is equally critical for both the mother and the unborn child. Engaging in physical activity during pregnancy can facilitate a healthier pregnancy, improve mental health, and promote long-term health benefits (Ribeiro *et al.*, 2022).

According to (Laredo-Aguilera *et al.*, 2020), antenatal exercise aids in maintaining muscle strength, improving cardiovascular fitness, and managing weight gain during pregnancy. Exercise can also help prevent and manage gestational diabetes, reduce back pain, and prepare the body for labor and delivery.

The antenatal period can also be a challenging time for mental health, with many women experiencing anxiety and depression related to pregnancy (Biaggi et al., 2016). Regular physical activity has been shown to alleviate symptoms of anxiety and depression by boosting endorphin levels and providing a sense of normalcy and control. Exercise groups also offer social support, which can be beneficial for mental well-being (Kugbey et al., 2021)

Moreover, engaging in physical activity during the antenatal period can help establish long-term healthy habits. Women who exercise regularly during pregnancy are more likely to continue these habits postpartum, which sets a positive example and promotes a healthy lifestyle for the entire family (Gascoigne et al., 2023).

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The chapter outlines the strategies and methods used for the study which includes the study design, study site, study population, sampling technique and sample size, inclusion and exclusion criteria, data collection instrument, data collection procedures, validity and reliability assessment, data analysis, data management and confidentiality, risks and benefits, ethical considerations, and budgetary allocation for the study.

3.1 Study Design

The study employed a cross-sectional study design to allow for the collection of data.

3.2 Study Site

Holy Family Hospital, Berekum, a renowned medical centre situated in the Berekum municipality, served as the study's site. Offering a comprehensive spectrum of medical services to the surrounding neighbourhood and beyond, Holy Family Hospital functions as a crucial hub for healthcare. The hospital represents a dedication to offering compassionate and all-encompassing healthcare in line with Christian values as a Christian Health Association of Ghana (CHAG) facility functioning under the National Catholic Health Service, specifically under the management of the Catholic Diocese of Sunyani (Joana, 2022).

Holy Family Hospital is easily accessible to residents of Berekum and neighboring towns. It is located approximately 36.8 kilometers from Sunyani, the regional capital, makes it a preferred healthcare destination for individuals seeking quality medical care. It is also approximately 200 metres to East to the Berekum Central Market. Holy Family Hospital boasts a bed capacity of

around 200, accommodating inpatient and outpatient services across various medical specialties, including maternity and physiotherapy.

3.3 Study Population

The study population consisted of pregnant women attending antenatal clinics at Holy Family Hospital, Berekum. Participants were selected based on their willingness to participate and their ability to provide informed consent.

3.4 Sample Technique and Sample Size

A convenient sampling technique will be employed in the study due to practical considerations and accessibility to the target population. Given the constraints of time, resources, and logistics inherent in conducting the study.

Using Slovin's sample size formula;

$$n = \frac{N}{1 + Ne^2}$$

Where;

N is the population size

n is the sample size

e is the margin of error

By determining the desired margin of error (e) = 5% which is equivalent to 0.05,

the confidence level = 95%, and the estimated proportion (N) is 60 according to the Antenatal records of pregnant women attendee at the Berekum Holy Family Hospital per month

Putting in the values into the formula;

$$\mathrm{n} = \frac{60}{1 + 600(0.05)^2}$$

$$\mathrm{n} = \frac{60}{1 + 60(0.0025)}$$

$$n = \frac{60}{1 + 0.15}$$

$$n = \frac{60}{1.15}$$

$$n = 52.174$$

$$n = 52$$

Therefore, the sample size for this study was 52 respondents but 50 respondents were considered due time constraints.

3.5 Inclusion and Exclusion Criteria

3.5.1 Inclusion Criteria

Pregnant women attendees at the Berekum Holy Family Hospital receiving antenatal services who consent to the study.

3.5.2 Exclusion Criteria

Pregnant women attendees at the Berekum Holy Family Hospital receiving antenatal services who do not consent to the study.

3.6 Data Collection Tool

3.6.1 Instrument

The study used a well-structured questionnaire consisting of both closed and open-ended questions to collect data from study participants.

3.6.2 Data Collection Procedure

Before data collection, detailed information about the study aims, procedures, risks, and benefits were provided to potential participants, and written informed consent was obtained from those willing to participate. The questionnaire was self-administered to participants for their responses.

Participants who cannot read or write were assisted by translating questions into their local dialect.

3.6.3 Validity and Reliability

To ensure the validity of the questionnaire, a pretesting was done among 10 respondents from the Berekum Holy Family Hospital. Feedback from the pilot was used to refine the instruments, addressing any ambiguity in questions and improving the clarity of the language used. The reliability of the instruments was assessed using Cronbach's alpha, with a threshold of $\alpha > 0.7$ considered acceptable for the internal consistency of the scales.

3.7 Data Analysis

Data collected was entered into Microsoft Spreadsheet version 2016. Data was then cleaned, coded, and transferred into the Statistical Package of Social Science version 26.0 (SPSS, 26.0). Descriptive statistics was employed to summarize the demographic characteristics of the study respondents using frequencies and percentages. Graphical visualization was used to summarize the knowledge level, and attitude level of respondents using frequencies and percentages. Additionally, percentage distribution barriers that prevent respondents from engaging in exercise during their pregnancy were represented on a histogram.

3.8 Data Management and Confidentiality

Confidentiality, privacy, and ethical standards were strictly adhered to during the data collection procedure to guarantee that participants' rights and welfare were upheld. The gathered data was handled safely, thoroughly examined, and interpreted to yield insightful information.

3.9 Risk and Benefit

The study carries no risk to the respondent as it involved completing a questionnaire on their knowledge and attitudes towards exercise during pregnancy. Respondents may not benefit

directly from the study but will help policymakers in the health sector to adopt a policy to ensure good exercise during pregnancy for pregnant women.

3.10 Ethical Consideration

Permission from the Management of the Berekum Holy Family Hospital was soughted through an introductory letter. Consent from study respondents was also soughted after explaining the purpose, risk and benefit, and the procedures involved in partaking in the study.

3.11 Budget

The study was self-funded.

Table. Budget for the study

Item	**Cost (GHC)**
Photo Copying and Printing	100
Data bundle	50
Stationary	50
Total	**200**

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.0 Data presentation and analysis

This chapter presents the findings from the study. The chapter focus on the demographical characteristics of the study, the knowledge level of respondents on exercise during pregnancy, the perception of respondent on exercising during pregnancy and the barriers that prevent respondents on exercising during. The results are presented in tables using frequencies and percentage and Bar Chart, Pie chart.

4.1 Demographical Characteristics of Study Respondents

The demographic variables of the respondents were as follows; in trying to find out the age distribution among the respondents, 30% (15) of the respondents were between the ages group 21-25 years, 26% (13) of the respondents were between the 26-30, 24% (12) of the respondents were above 30 years and 20% (16) of the respondents were between the age group 13-20 years. In assessing the respondent's academic level, 36% (18) had secondary education,34% (17) had a diploma education,22% (11) had a primary education while 4% (2) each had either bachelor's degree or no formal education.

In terms of the marital status of respondents, half 50% (25) were married, 48% (24) were single whiles 2% (1) was divorced. In assessing the respondent's occupational background, students and self-employed representing 32% (16) each,30% (15) were government workers while 6% (3) were unemployed. Regarding religious affiliation, the majority 94% (47), were Christians with minority 6% (3) identifying as Muslims.

For respondents 'ethnicity, the majority 88% (44) were Akan's, 10% (5) were Northerners while m 2% (1) were Voltarian. As indicated in the table 1 below

Table 1. Demographical characteristics of Respondents

Variables	Categories	Frequency	Percentage (%)
Age Group	13-20	10	20.00
	21-25	15	30.00
	26-30	13	26.00
	Above 30	12	24.00
Educational Level	Primary	11	22.00
	Secondary	18	36.00
	Diploma	17	34.00
	Bachelor's Degree	2	4.00
	No formal Education	2	4.00
Marital Status	Single	24	48.00
	Married	25	50.00
	Divorced	1	2.00
Occupation	Student	16	32.00
	Government Worker	15	30.00
	Self-employed	16	32.00
	Unemployed	3	6.00
Religion	Christian	47	94.00
	Muslim	3	6.00
Ethnicity	Akan	44	88.00
	Northerner	5	10.00

	Voltarian	1	2.00

4.2 The Knowledge level of Study Respondent on Exercise during pregnancy

In answering a major research question on knowledge of exercise during pregnancy, the following were the outcome, respondents understanding on exercise during pregnancy was asked, 52% (26) understood that exercise helps to keep fit, 16% (8) said it helps strengthen muscle, 10% (5) each said it helps with physical activities and its good to exercise during pregnancy whiles 6% (3) each indicated it enhance easy labour and helps with stress relief. As indicated in table 2.

Table 1. Responses on the understanding on exercise during pregnancy

Response	**Frequencies**	**Percentage (%)**
Keep Fit	26	52.00
Physical Activity	5	10.00
Strengthen Muscle	8	16.00
Good	5	10.00
Stress Relief	3	6.00
Easy Labour	3	6.00

Respondent were asked to indicate good exercise for women during pregnant, majority 58% indicated walking, 22% indicated washing and 20% indicated sweeping.

As indicated in figure 1.

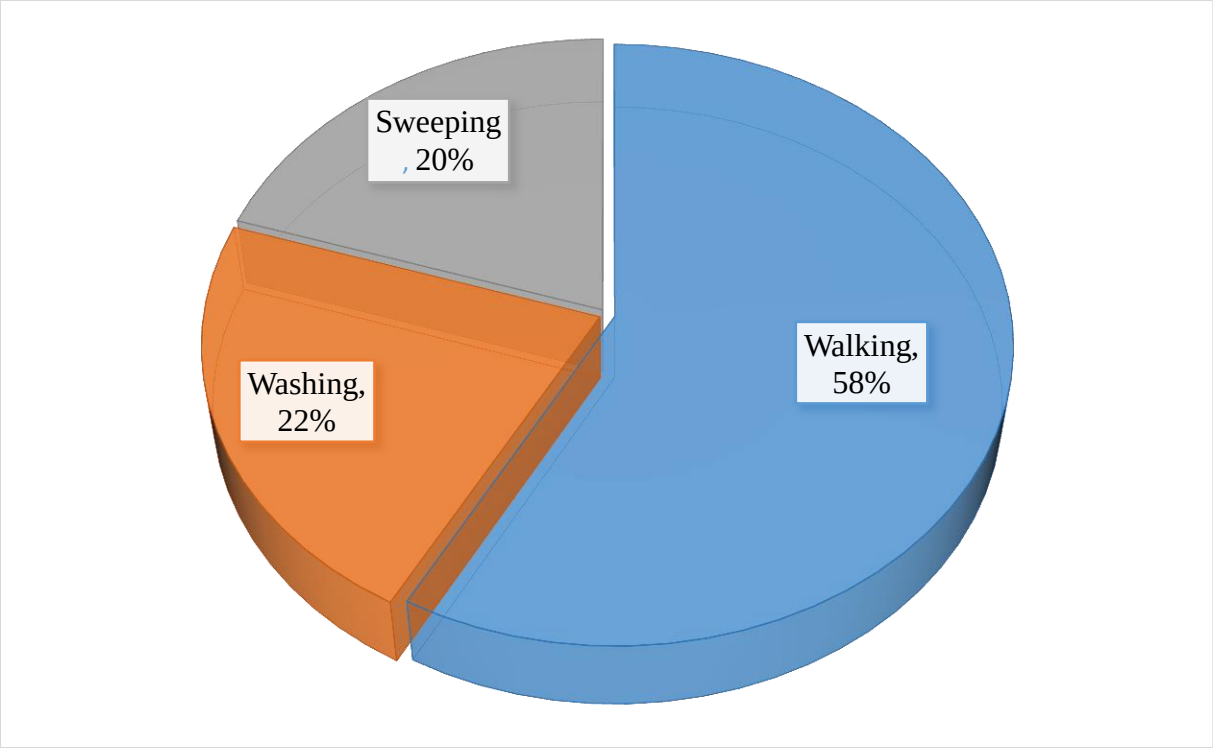

Figure 1. Responses on the example of a good exercise

In assessing benefits on exercise during pregnancy, 62% (31) indicated it enhances muscle strength, 18% (9) said it gives better mood and mental well-being whilst 10% each indicated it reduces back pain and improves cardiovascular health as indicated in table3.

Table 3. Responses on the benefits on exercise during pregnancy

Response	**Frequencies**	**Percentage (%)**
Improved Cardiovascular Health	5	10.00
Enhanced Muscle Strength	31	62.00
Reduced Back Pain	5	10.00
Better Mood and Mental Well-being	9	18.00

Regarding regular exercise during pregnancy,50% (25) indicated it prevents excessive weight gain, 20%(10) each indicated it prevents gestational diabetes and hypertension (high blood pressure while 10% (5) said it prevents constipation.

As indicated in table 4.

Table 4. Responses on the importance of regular exercise during pregnancy

Responses	**Frequencies**	**Percentage (%)**
Gestational Diabetes	10	20.00
Excessive Weight Gain	25	50.00
Hypertension (High Blood Pressure)	10	20.00
Constipation	5	10.00

Respondents were asked to indicate better ways of exercising during pregnancy 54% (27) said it is generally safe and beneficial for most pregnant women, 18% (9) said exercise should be avoided in the first trimester only, (12%) 6 said only walking is safe during pregnancy, (10%) 5 pregnant women should only exercise under medical supervision while 6% (3) indicated pregnant women should avoid all types of exercise.

As indicated in table 5.

Table 5. Responses on better ways of Exercise During Pregnancy

Response	**Frequencies**	**Percentage (%)**
Pregnancy women should avoid all types of exercise	3	6.00%
Pregnancy women should only exercise under medical supervision	5	10.00%
Exercise is generally safe and beneficial for most pregnant women	27	54.00%
Exercise should be avoided in the first trimester only	9	18.00%
Only walking is safe during pregnancy	6	12.00%

4.3 Perception towards exercise during pregnancy among respondents

In answering a major research question on perceptions towards exercise during pregnancy, the following were the outcome,

Regarding response on cultural believes on exercise during pregnancy, (68%)34 indicated it strengthen pelvic muscles, 12% indicated pregnancy goes through a lot of changes, (10%) 5 each said it preserves muscle flexibility and treats common ailments like lower back discomfort, as seen in figure 1.

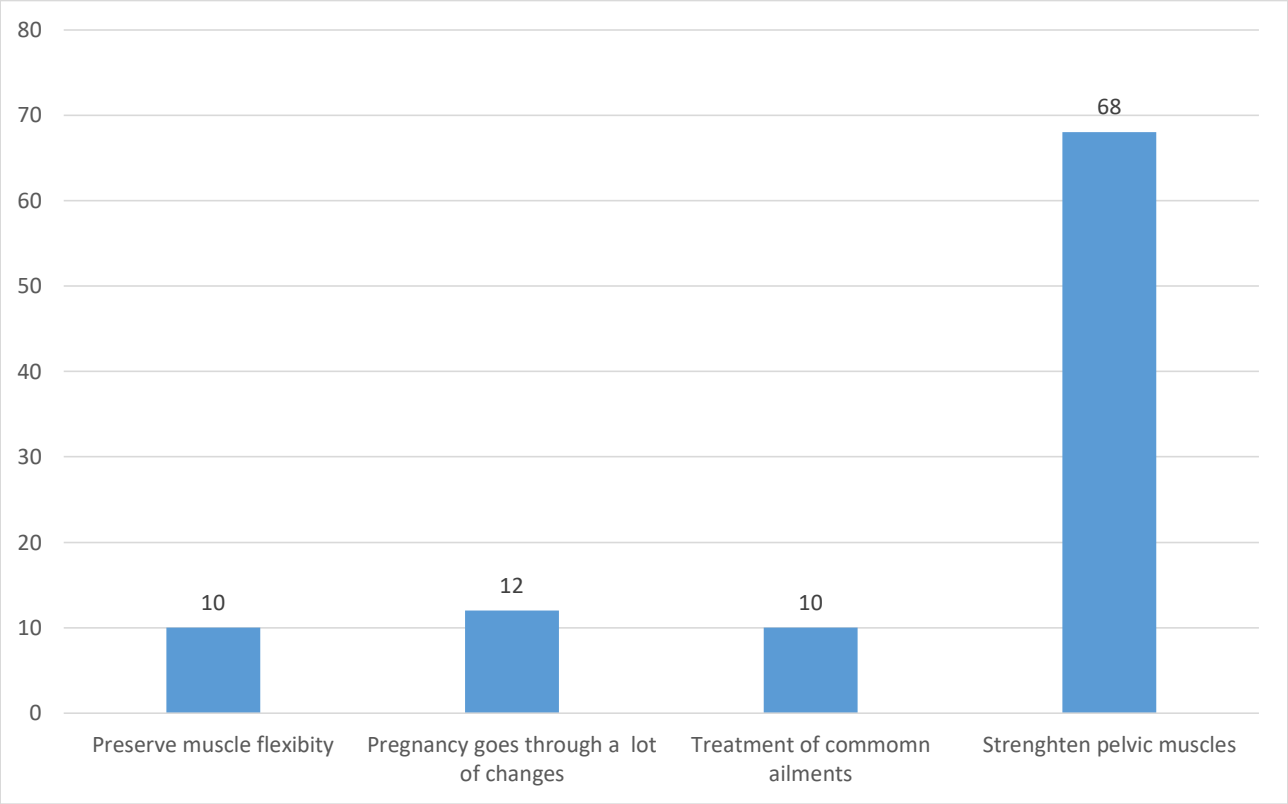

Figure 2. Response on cultural believes on exercise during pregnancy

Regarding responses on the relation of exercise during pregnancy and its outcome where multiple selection is allowed,100% said it enhances effective labour and delivery, 78% said it enhances heart rate variability,70% indicated it enhances short labour, , 60% indicated it promotes fewer intervention(example CS), 50% each responded, it improves one's readiness for birth and balance health of mother and fetus,46% responded it promotes physical fitness while 40% indicated fetus response better to labour demand as illustrated in figure 2.

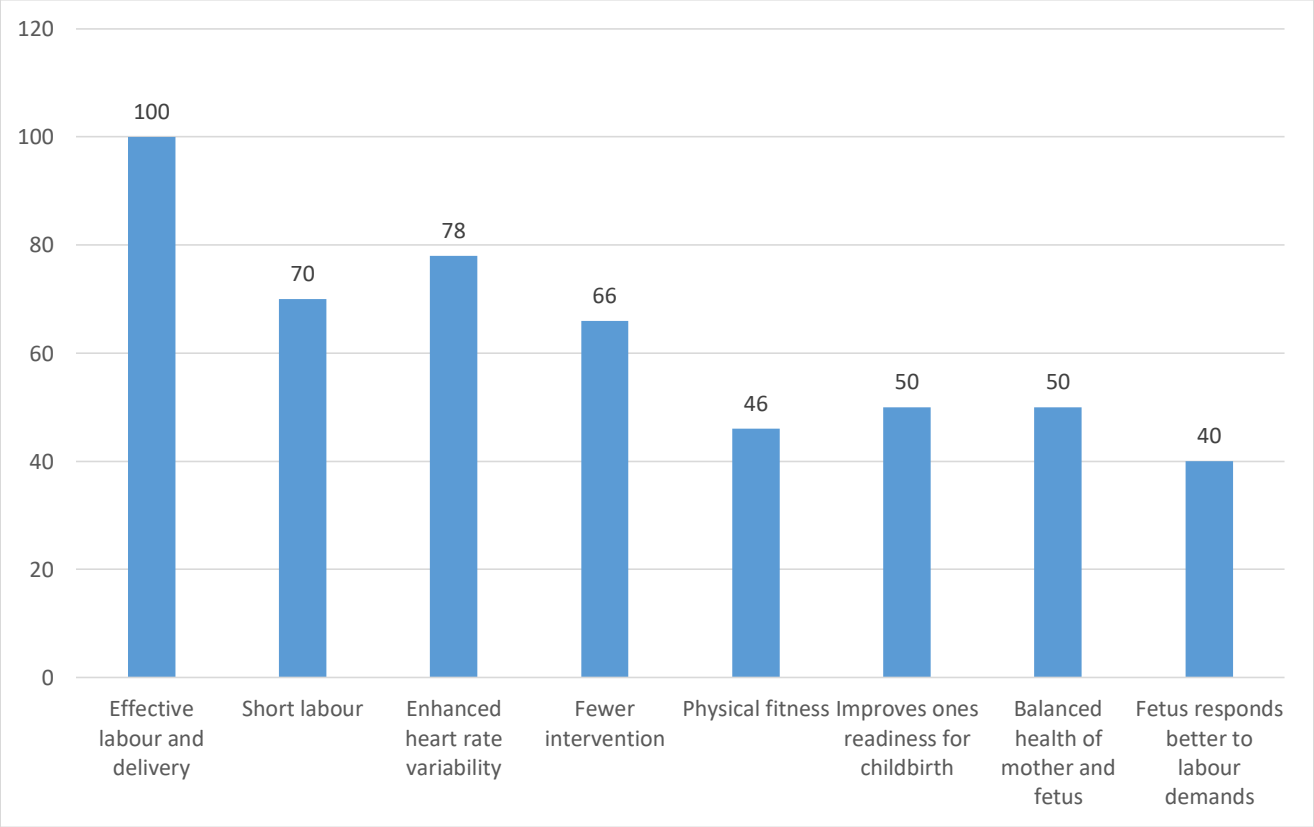

Figure 3. Responses on the relation of exercise during pregnancy and its outcome

As observe in figure 3, Regarding the response on cultural or traditional ways respondents perceive exercise and pregnancy with its outcome, majority 60% of the respondents indicated, exercise is thought to make labour easier while 40 % indicated, exercise is thought to harm fetus.

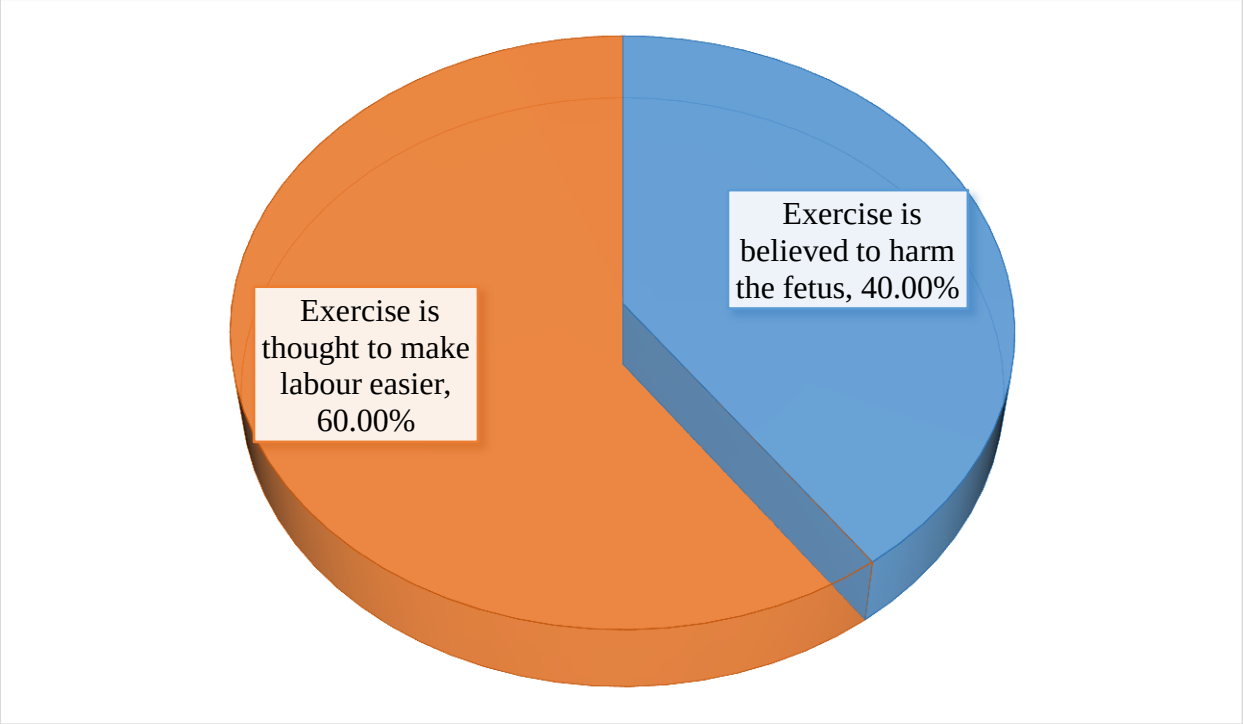

Figure 4. Response on cultural or traditional ways respondents perceive exercise and pregnancy with its outcome.

4.4 The barriers that prevent respondents from exercising during pregnancy

This study assessed barriers that prevent pregnant women from exercising during pregnancy. Respondent were asked to indicate the main barriers that prevent them from exercising during pregnancy where multiple selections were allowed, 100% indicated fatigue or tiredness, 96% indicated physical discomfort, 52% each indicated lack of time and insufficient knowledge about safe exercise and, 44% indicated concerns about safety and while 40% indicated lack of access to exercise facilities.

As seen it figure 4.

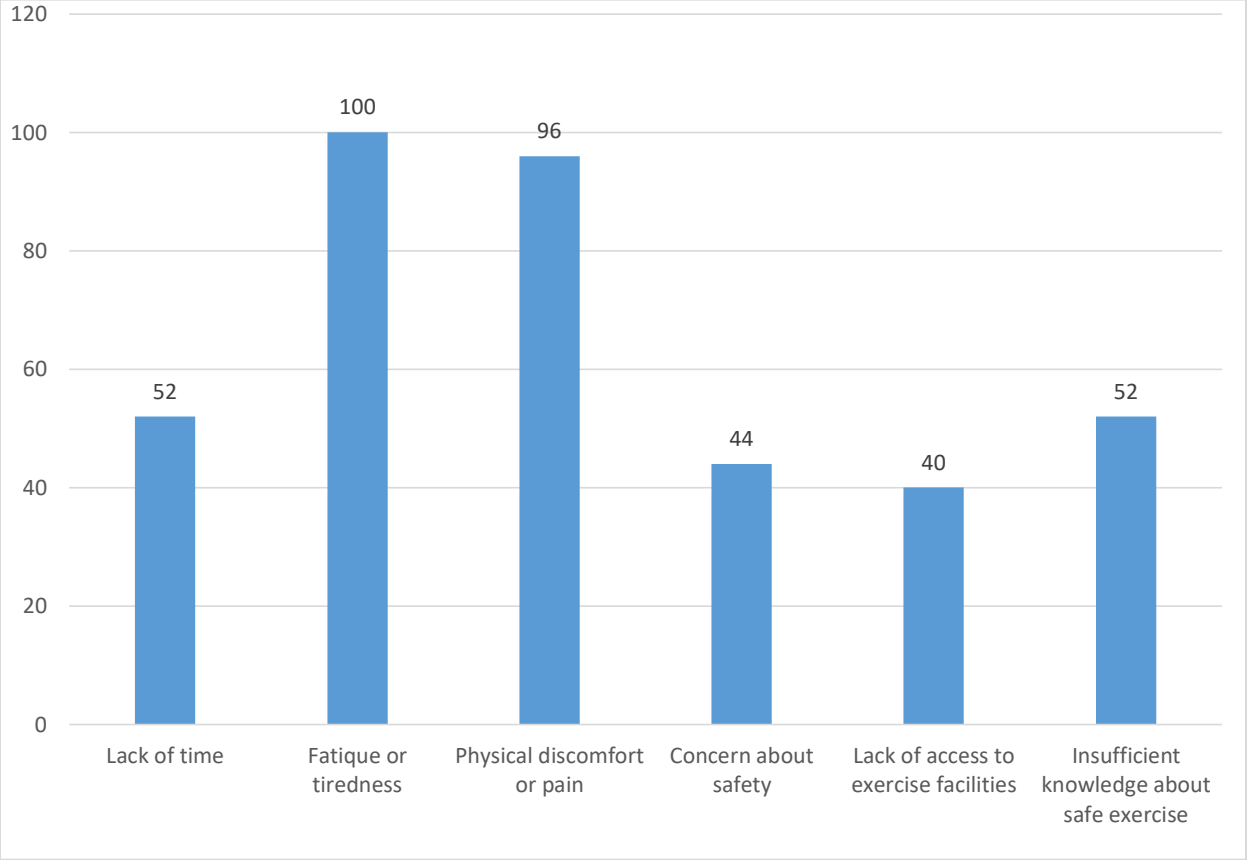

Figure 5. Responses on the main barriers preventing exercise during pregnancy among respondents

Regarding responses on the environmental factors influencing respondents' exercise during pregnancy were multiple selection were allowed, 94% indicated self-efficacy throughout ANC, 90% indicated social support from neighbors, 56% indicated access to resources in the community, 50% indicated flexible exercise schedules while , 42% indicated widespread myth whiles 30% indicated online resources and virtual classes.

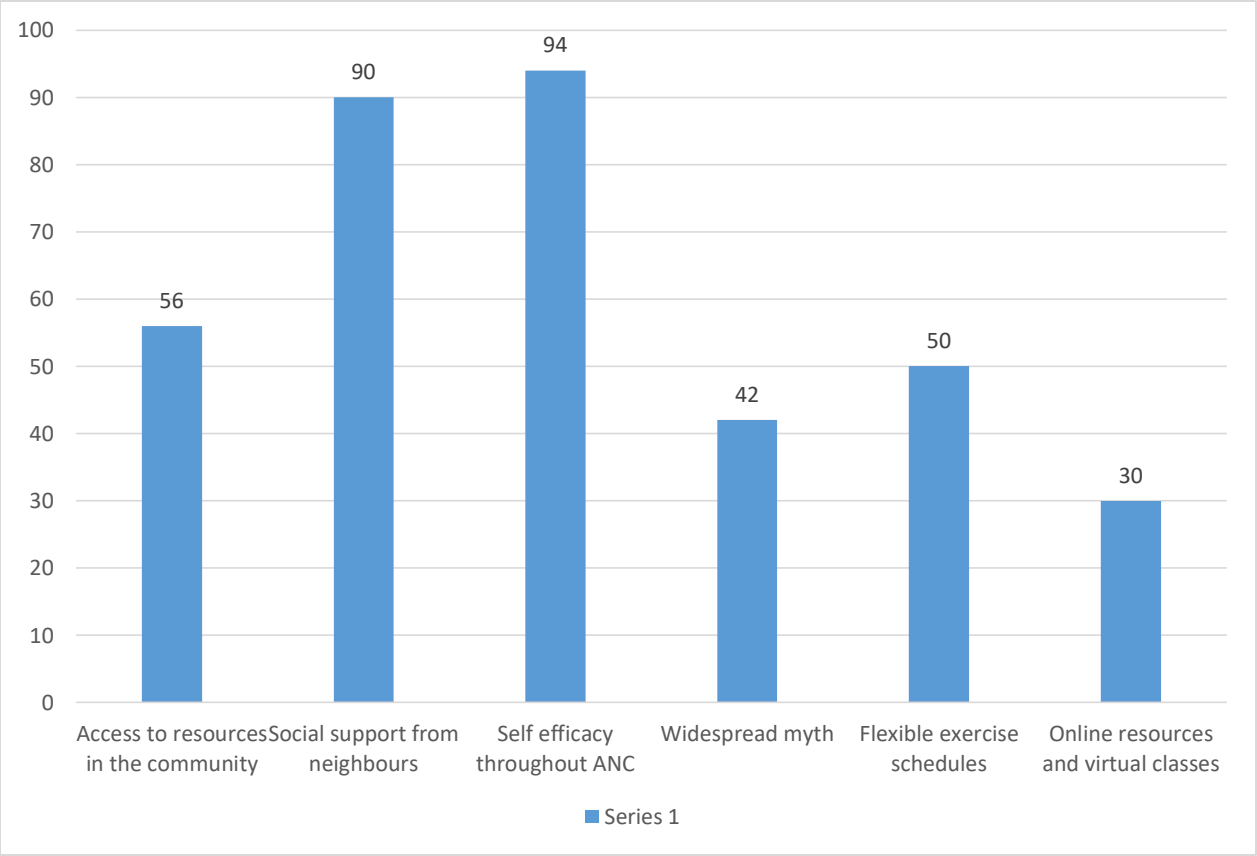

Figure 6. Responses on the environmental factors influencing respondents' exercise during pregnancy

As seen in figure 6, in assessing responses on the considered hindrance to exercise, 58% said miscarriage, 16% each indicated pregnant women are fragile and persistent anxiety while 10% indicated damage to the fetus.

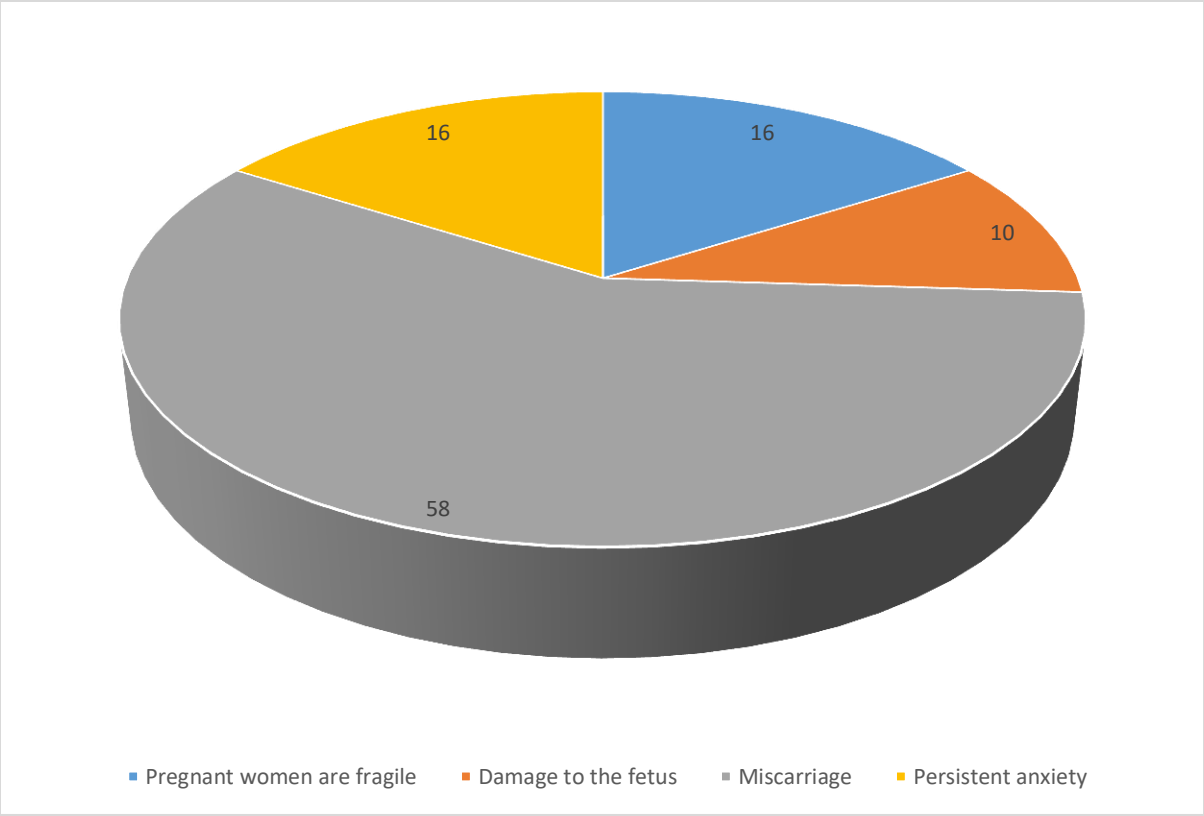

Figure 7. Respondents' responses on the considered hindrance to exercise

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.0 Introduction

The chapter focuses on the discussion of the study where findings of the study is discussed in detail and align with previous studies. It also focuses on the conclusion and the recommendation of the study.

5.1 Discussion

5.1.2 The knowledge level of respondents on exercise during pregnancy

From the study, respondents' knowledge on exercise during pregnancy highlights several key insights. One of the most significant findings is that walking emerged as the clear favourite, with recognised the role of exercise in helping to keep fit during pregnancy, benefits of exercise during pregnancy enhanced muscle strength as the primary advantage and evaluating the importance of exercise that it prevents excessive weight gain ……believed that exercise is generally safe and beneficial for most pregnant women. This might be as a result of good educational background 84% of respondent were secondary school and above.

This finding is similar to a study conducted by (Okafor & Goon, 2021) which emphasises fitness as a primary motivator for pregnant women to engage in physical activity.

5.1.3 Perception towards exercise during pregnancy among respondents

The study revealed significant insights into respondents' perception towards exercise during pregnancy, concerning cultural beliefs and perceived outcomes. One of the most significant findings is that exercise during pregnancy strengthens pelvic muscles, also in relation to its outcome, majority said it enhances effective labour, promotes short labour or make labour easier and enhance heart rate variability.

This perception aligns with established medical advice that emphasises the importance of pelvic muscle strength for labour and delivery (Okafor & Goon, 2021).

5.1.4 The barriers that prevent respondents from exercising during pregnancy

The study explored the barriers that prevent pregnant women from exercising during pregnancy, revealing several key factors.

Fatigue and tiredness together with physical discomfort or pain associated with late pregnancy were suggested by majority as barriers, social support from neighbors and self-efficacy throughout ANC were supporting environmental means, the fear of miscarriage was paramount concern by majority of the respondents as a hindrance.

This finding reflects the deep-rooted anxiety that many pregnant women have about the risks associated with physical activity which is similar cited by respondent in a study by (Barakat et al., 2023).

5.2 Conclusion

Based on the analysis of data obtained from the field, the following conclusions were drawn from the study:

1. Fatigue or tiredness and pain associated with late pregnancy was identified as the primary barrier preventing pregnant women from exercising, reflecting the physical demands of pregnancy that often lead to exhaustion.
2. It featured out clearly respondents concerns about the safety of exercising during pregnancy, indicating a need for better education on safe exercise practices.
3. Social support was key environmental factor that encouraged exercise during pregnancy, emphasizing the importance of confidence and community support.
4. The fear of miscarriage was a major hindrance to exercise in early pregnancy, suggesting that misconceptions and anxieties continue to impact exercise behaviours during pregnancy.

5.3 Recommendation

Based on the findings from the study, the following recommendations are made:

1. Midwives at ANC should implement educational campaigns to teach pregnant women about the safety and benefits of exercise during pregnancy. These teachings should address common concerns such as the fear of miscarriage, providing clear guidance on appropriate exercises.
2. NGOs or social support groups that offer social support to pregnant women should create an environment encouraging participation in group activities which can help increase

motivation, reduce feelings of isolation, and promote a healthy exercise routine during pregnancy.

3. Further research can be done on a larger scale for generalization.

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APPENDIX

RESEARCH QUESTIONNAIRE

Title: Assessing Pregnant Women's Knowledge and Attitudes Towards Exercise during Pregnancy at Holy Family Hospital-Berekum.

Introduction

Thank you for participating in this study. The purpose of this study is to assess your knowledge, attitudes, and barriers towards exercise during pregnancy. Your responses will help us understand the factors influencing pregnant women's engagement in exercise and inform interventions to promote maternal health. Your participation is voluntary, and all responses will be kept confidential. Please answer each question to the best of your ability.

Section I: Demographic Information

1. What is your age? _____ years
2. What is your educational level?

    ☐ Primary

    ☐ Secondary

    ☐ Diploma

    ☐ Bachelor's degree

    ☐ Master's degree

    Others (Please specify) _____

3. What is your marital status?

    ☐ Single

    ☐ Married

☐ Divorced

☐ Separated

☐ Widowed

4. What is your Occupational Status? …….

5. What is your religion?

☐ Christian

☐ Muslim

☐ Tradition

☐ Other (please specify): _____

6. What is your ethnicity? _____

Section II: Knowledge of Exercise During Pregnancy

Instruction: For this section, Tick all that apply

7. How do you understand exercise during pregnancy?.....

8. Which of the following is a good exercise for pregnant woman?

☐ Walking

☐ Washing

☐ Sweeping

9. What are benefits of exercising during pregnancy?

☐ Improved cardiovascular health

☐ Enhanced muscle strength

☐ Reduced back pain

☐ Better mood and mental well-being

10. Regular exercise during pregnancy can help prevent which of the following conditions?

- ☐ Gestational diabetes
- ☐ Excessive weight gain
- ☐ Hypertension (high blood pressure)
- ☐ Constipation

11. Which of the following statements is true regarding exercise during pregnancy?

- ☐ Pregnant women should avoid all types of exercise.
- ☐ Pregnant women should only exercise under medical supervision.
- ☐ Exercise is generally safe and beneficial for most pregnant women.
- ☐ Exercise should be avoided in the first trimester only.
- ☐ Only walking is safe during pregnancy.

Section III: Perception Towards Exercise During Pregnancy

Instruction: From this section, choose one appropriate answer

12. Culturally it is believed that exercise help in the following ways?

- ☐ Preserve muscle flexibility
- ☐ Pregnancy go through a lot of changes
- ☐ Treatment of common ailment example. Lower back discomfort
- ☐ Strengthen pelvic muscles

13. How do you relate excise during pregnancy to the outcome of pregnancy?

- ☐ Effective labour and delivery
- ☐ Short labour

☐ Fewer intervention example (C/S)

☐ Enhance heart rate variability

☐ Physical fitness

☐ Improve one readiness for child birth

☐ Balance health of mother and the fetus

☐ Fetus respond better to labour demand

14. Share with us two cultural or traditional way(s) people perceive exercise and pregnancy with its outcome?

i……

ii……

Section IV: Barriers to Exercise During Pregnancy

15. What are the main barriers that prevent you from exercising during pregnancy?

☐ Lack of time

☐ Fatigue or tiredness

☐ Physical discomfort or pain

☐ Concerns about safety

☐ Lack of access to exercise facilities

☐ Insufficient knowledge about safe exercises

16. Which of the following environmental factor influence exercise during pregnancy?

☐ Access to resources in the community

☐ Social support from neighbors

☐ Self-efficacy throughout ANC

☐ Widespread myth

☐ Flexible exercise schedules

☐ Online resources and virtual classes

☐ Personalized exercise plans from fitness professionals

17. Which of the following will you consider as the most hindrance to exercise?

☐ damage to the fetus

☐ miscarriage

☐ Persistent anxiety

☐ Pregnant women are fragile

NATIONAL CATHOLIC HEALTH SERVICE (DIOCESE OF SUNYANI)
HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE
BEREKUM

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Our Ref. .....

Your Ref. .....

Date .....

August 14, 2024

The Nursing Administrator

Holy Family Hospital

Berekum

Dear Nursing Administrator

PERMISSION TO CONDUCT RESEARCH

I wish to introduce to you the under listed names of final year students of the College

1. Serwaa Felicia
2. Agyapomaa Obedia
3. Acheampoma Abigail

As part of the pre-requisite for the award of Diploma in Midwifery, they are to conduct a research study, on the topic "**Assessing Pregnant Women's knowledge and attitude towards exercise during pregnancy at the Holy Family Hospital, Berekum".**

I would be grateful if you could assist them with any material or help they may need to accomplish this task.

Thank You.

Yours sincerely

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Ms. Martha Kyeremaa
Supervisor
For: Principal