Intimate Partner Violence and Depression Among Pregnant Women in Orolu Local Government, Ifon, Osun State

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Certification

This is to certify that Agboola Islamiyat A. with Matriculation number LCU/PG/001955 carried out this research work titled 'Intimate partner violence and Depression among pregnant women in Orolu Local Government (Osun state)' in the Department of Public Health, Faculty of Life sciences, Lead City University, Ibadan, Oyo State, for the award of Master Degree in Public Health and this has not been previously submitted.

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Dedication

This project is dedicated to God Almighty, the most beneficent and the most merciful.

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With a heart of gratitude, I wish to express my appreciation to the ever faithful God for his tender mercies and unfailing grace to complete this work.

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"Even though, the above institutions and persons have assisted in the process of this research work, I alone stand responsible for the errors, if any, found in the work."

Abstract

More than one in three women worldwide report being physically or sexually abused by intimate partners. Even though the most frequent mental illness during pregnancy is depression, majority of research on maternal depression has concentrated on postpartum depression. Hence, the purpose of this study is to determine the prevalence of AD among pregnant women who visit specific PHCs in the Orolu Local Government, as well as to evaluate the relationship between IPV and depression, the risk factors for AD, and the experience of violence (Osun state). This study employed a cross-sectional design using a three stage sampling, simple random sampling was used to pick one PHC each from the ten stratified wards and proportionate random sampling was used to pick respondents from each of the health facility. All pregnant women who were present for antenatal care sessions as at the time the study was carried out were recruited. An interviewer administered questionnaire was used to obtain data from the respondents. Data obtained were analyzed using descriptive statistics and Chi-square test at p=0.05. AD affected 56.0% of the population. 26 (8.0%) of the responders reported high levels of GBV exposure while pregnant. While parity and violent experiences were linked to depression, the sociodemographic features of the respondents were not linked to depression during pregnancy. There is a need to encourage investments in effective prevention, diagnosis, and treatment initiatives that are crucial for identifying pregnant women in need of intervention in order to safeguard the wellbeing of mother and baby. AD is frequently ignored and under-diagnosed, so prenatal care should not only focus on physical health but also on emotional health. It is advised to screen for depression and IPV during prenatal visits with referral to relevant care and service.

Keywords; antenatal depression, pregnant women, risk factors, violence
Word Count 288

Table of Contents

Chapter Four : Results and Discussion of Findings

Chapter Five: Conclusion

LIST OF TABLES

List of Figures

List of Acronyms

Abbreviation	Meaning
WHO	World Health Organisation
GBV.	Gender Based Violence
AD.	Antenatal Depression
PPD	Postpartum Depression
EPDS	Edinburgh Postpartum Depression Scale
MDG	Millennium Development Goals
GHQ	General Health Questionnaire
MDD	Major Depressive Disorder
APA	American Psychiatric Association
FMOH	Federal Ministry of Health
PHC	Primary Health Care
NPHCDA	National Primary Health Care Development Agency
PMHC	Primary Mental Health Care
UOR	Unadjusted Odd Ratio

Chapter One

Introduction

1.1 Background to the study

Depression is a prevalent mental illness. According to estimates, the condition affects 5% of adults worldwide. Consistent sorrow and a lack of interest in formerly fulfilling or joyful activities are its defining traits. Additionally, it may impair appetite and sleep. Concentration problems and fatigue are frequent. The largest cause of disability in the world today is depression, which also significantly increases the burden of sickness on the planet.[1]

It is now known that there are numerous complicated elements, such as environmental, social, biological, and psychological risk, that interact to cause depression. The most common psychiatric condition during pregnancy, depression is correlated with clinical and psychosocial obstetric variables.[2]

Prenatal or perinatal depression, often referred to as antenatal depression, is a type of clinical depression that can impact a woman while she is pregnant and, if left untreated, can be a precursor to postpartum depression. According to estimates, this illness affects between 7% and 20% of expectant mothers.[3] Pregnancy-related stress and anxiety can contribute to antenatal depression, though to a greater extent. Unplanned pregnancies, trouble getting pregnant, a history of abuse, and financial or family circumstances are some other triggers [3].

Traditional antenatal care prioritizes physical health over emotional wellbeing.

As a result, prenatal depression is frequently underdiagnosed both locally and globally. In contrast, postpartum depression has received a lot of attention and has generated a lot of

literature. Studies of prenatal psychiatric illness have just become more widespread in the last ten years. Because of the hormonal changes that occur during pregnancy, particularly in the first trimester, a woman's psychology is more likely to be volatile, emotional, and melancholy. Clinical mania, sadness, or even hallucinations could manifest.[4]

The increased frequency of depression during pregnancy is caused by a variety of factors. Pregnancy is often welcomed by women, but it is also a significant physiological and psychological event.

Pregnancy-related stress may be too much for women who are already managing other more persistent life pressures. Additionally, pregnancy entails particular requirements that different women may find challenging. For example, if a woman has experienced poor parenting herself or was sexually abused as a child, or if she is soon to become a mother.[5]

The physiologic changes that occur during pregnancy also directly affect mood state; for example, during gestation, concentrations of female-specific sex steroids increase and alter areas of the brain that control mood.5 The hypothalamic-pituitary-adrenal (HPA) axis 4, which has been reported to be overactive in depressed individuals, is part of the hypothalamic-pituitary-adrenal (cortisol) stress system and gradually elevates hormone concentrations.

An estimated one in five women worldwide experience antenatal depression, which is more common in low- and middle-income nations than in high-income ones. WHO estimates that the prevalence of APD varies from 12 to 42% in LMICs, from 26.3% overall in Sub-Saharan Africa to 8.3 to 26.6% in Nigeria.[2]

Depending on where in the world you are, antenatal depression is more or less common. Antenatal depression affects as many as 16% of pregnant women in the US, whereas it affects as many as 24% of pregnant women in South Asia.[6]

Because of the disease's severity, recurrence, and chronic nature as well as its detrimental impact on women's general health and children's development, it is now thought to be a global public health issue [7]. The prevalence is rising as more medical research is being done. Before, antenatal depression was dismissed as being the natural stress of any pregnancy and was seen as a rather common condition [8]. It can be brought on by a variety of things, most of which are related to the mother's personal life, including her family, financial situation, romantic relationships, etc. Additionally, it may be brought on by the physiological and hormonal changes related to pregnancy. Lack of social support, an unhappy marriage, hostile work situations, a history of domestic abuse, and unintended or unwanted pregnancies are additional risk factors.[3]

A significant public health and human rights issue is IPV against women. Although violence can take many different forms and occur in a variety of places, such as the workplace, school, and community, violence at home by intimate partner violence is thought to be the most common type. Violence by an intimate partner can take the form of physical, sexual, or emotional abuse acts as well as controlling behaviors.[9]

Slapping, kicking, pushing, and beating are all considered kinds of physical violence, as are forced sexual contact and other types of sexual coercion. Insults, demeaning, persistent humiliation, threats of violence, or controlling behaviors, such as cutting off a person from friends and family, watching their every move, and denying them access to money, jobs, education, or medical treatment, are all examples of psychological abuse.[10]

Due to its prevalence, detrimental health effects, and potential for intervention, attention has recently been drawn to intimate partner violence during pregnancy because this occurs almost everywhere in the world, including Europe, Asia, Australia, America, and Africa, especially here in Nigeria, it warrants serious and critical consideration.[10]

According to the World Health Organization (WHO), IPV refers to "any behavior inside an intimate relationship that causes physical, sexual, or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse, and uncontrollable behaviors." The frequency of IPV against women may be as high as 61% in sub-Saharan African countries, where it is the most prevalent type of violence against women and has become a major public health concern.[10]

Approximately 38.7% of women reported experiencing physical violence, 30.7% emotional violence, and 14.8% sexual violence from intimate partners in their lifetimes, according to statistics from the W.H.O. 2018 Demographic Health Survey (DHS). Negative outcomes are usually linked to IPV. Physical harm such as bruising, abrasions, lacerations, broken bones or teeth, and attempted strangling may be among them.

In addition, these women are more prone to experience mental health issues including anxiety and phobias, which can result in a variety of behavioral changes like smoking, excessive alcohol and recreational drug use, low self-esteem, post-traumatic stress disorder (PTSD), and risky sexual behavior. Depression, the biggest cause of disability worldwide, and IPV are frequently linked.[10]

According to a systematic assessment of data, mostly from Africa, the prevalence of IPV among pregnant women ranged from 2% to 57%. Pun and colleagues found a 20% IPV

during pregnancy in their large prospective cohort study, which included 2,004 pregnant women seeking antenatal care.[5]

Previous studies have demonstrated that exposure to IPV during pregnancy is linked to both fatal and non-fatal illnesses for both the mother and the unborn child.

The most frequent form of violence against women is IPV, which does not respect cultural, socioeconomic, or religious boundaries and affects all ethnic groups.

In sub-Saharan Africa, 13–49% of women reported experiencing physical violence from an intimate relationship at some point in their lives, with 5-29% of those women reporting actual assault.[12]

The range of IPV prevalence in Nigeria is between 11 to 79%. This wide variation is thought to be the result of methodological variations in IPV estimation. 68.1% of married women reported verbal abuse, while 31.4% reported both verbal and physical abuse. Physical abuse was experienced by 7.3% of women, sexual abuse by 19.9%, and psychological abuse by 61.1% of women.[13]

IPV rates varied from 28% in Madagascar, 57% in India, 74% in Ethiopia, and 87% in Jordan, according to studies done in sub-Saharan African and Asian countries. Domestic violence by an intimate partner alone had a rate of 15.5 to 70.9% in a multi-country study done in 10 different nations, while violence by non-partners ranged between 5.1 and 64.6%.[14]

A study on the prevalence and risk factors for intimate partner violence exposure in Lagos, Southwest Nigeria, found that it occurs 29% of the time, with large percentages of victims reporting sexual (8%), physical (9%) and psychological (23%) abuse. A research in Oyo found that among women of reproductive age, wife beating was prevalent (31.1%). Studies

among expectant women in Zaria and Jos, Northern Nigeria, revealed that 28% and 63.2% of respondents, respectively, had suffered some kind of maltreatment

One of the top causes of maternal mortality in certain industrialized nations, including the United States and the United Kingdom, is intimate partner violence during pregnancy.

According to reports, pregnant women who have been exposed to pregnancy-related IPV have a higher risk of perinatal and neonatal mortality than pregnant women who have not been exposed.[13]

While maternal effects of IPV during pregnancy may include abortions, miscarriages, and gestational diabetes, neonatal issues caused by IPV include intrauterine growth retardation, preterm delivery, low birth weight with extended intensive care and death.

Although there are a lot less cases documented, IPV is extremely common among pregnant women in Nigeria. Given that most instances of violence against an intimate partner are not viewed as wrong, this is probably due to the influence of religion and culture, particularly in many African countries. In these regions, culture may permit couples to solve their problems through the use of violence. In Nigeria, which is largely patriarchal in nature, men are still seen as the "gods" of the home and are in charge of all affairs, including women's right to procreation [9]. Therefore, incidents go unreported because doing so is seen as demeaning to the husband and disrespectful of family members and elders who play a role in mediating such disputes. Because of this, the real scope of the issue is mostly unrecognized and unexplored.[9]

There are still many knowledge gaps, particularly in low- and middle-income countries like Nigeria, despite the fact that there is an increase in research on the prevalence and health impacts of IPV during pregnancy from many different nations throughout the world.

Studies on domestic violence from all around the world were included in systematic reviews; however, the review did not include studies involving pregnant women. The data revealed that in comparison to North America and Europe, very few studies and publications came from Africa. Additionally, there are variations in the cultural and religious practices observed in the various regions of the nation; even in the northern region, there are variations in how IPV is perceived. (NDHS 2018).

According to a study done in Southwest Nigeria, the most common forms of physical abuse suffered by pregnant women were being hit (13.4%), kicked (14.4%), and slapped (27.2%). Due to their fear of getting a divorce or ending their marriage, the majority of pregnant women in Africa who are subject to violent relationships prefer to suffer in quiet[10]. A little over half (54%) of respondents in a different study on the disclosure of IPV among pregnant women performed in Lagos concurred that they would not discuss their violent experiences with anyone[7]. Due to the strong cultural belief that a woman's place is with her husband and because divorced and separated women are not held in high social esteem compared to women who remain in marriage, traditionally, women, especially in rural areas, are frequently encouraged to stay in abusive relationships without disclosing their experiences to anyone. Most people may have believed that reporting was unnecessary and that couples should handle their problems on their own for this reason, as culture and religion encourage women to develop endurance and patience under any conditions [14]. Examples from the real world In most areas of Nigeria, mothers of IPV victims would request that their daughters stay in the homes of their husbands by stating that "after all, we the moms went through the same traumas in the hands of your fathers."

This is not surprising given that the NDHS 2018 data found that the rate of IPV in pregnancy is higher in southwest Nigeria, where the Yoruba tribe is the most numerous, than in northwest Nigeria, where the Hausa tribe is the most numerous.

Globally, intimate partner violence (IPV) against women is quite common and has a negative impact on health, including depression. Although the impact of IPV on women in low- and middle-income countries (LMICs) is greater, it is unclear whether IPV raises the risk of depression in pregnant women and in settings where the disease is prevalent.

Contrary to popular opinion, domestic violence has ramifications that go beyond harm to one's physical health. Victims frequently have serious behavioral and psychological problems. In actuality, there is a strong correlation between domestic violence and depression. Abuse is a very traumatic experience that can leave its victims with psychological as well as physical scars.[10]

Studies show that persons who have gone through traumatic experiences like abuse and mistreatment are more likely to acquire depression. Abuse in an intimate relationship can cause severe mental, emotional, and spiritual pain. One's confidence can be damaged by repeated abuse and insults, which can lead to an endless cycle of guilt and humiliation and a sense that they are never good enough for anything. The victim's regular life may also be impacted by this trauma. It can cause significant changes in a person's outlook, such as lack of desire, absences from or subpar performance at work or school, excessive fear and anxiety in situations that would not ordinarily be distressing, and in extreme circumstances, it may even result in mortality. According to research, victims of depression frequently engage in substance misuse and drug addiction as a coping mechanism. An estimated 35-70% of female victims of domestic violence have a depressive diagnosis.[15]

More than one in three women worldwide report experiencing physical or sexual abuse at the hands of a romantic partner. Serious mental health consequences like depression and depressed symptoms are linked to living with IPV. Despite the fact that there is a connection between IPV and depression, very few studies in Africa have looked at how different types of IPV affect women's depressive symptoms. These studies used established methods to evaluate both IPV and depression in pregnant women.

According to a study on IPV and depression in Ile-Ife, Nigeria, respondents who had experienced violence were twice as likely (33.6%) to report having depression as the general population (15.5%), indicating that IPV is a significant risk factor for depression[7].

This supported research from other situations showing that partners can abuse women in the present or in the past.

Additionally, a cross-sectional survey carried out in China during the COVID 19 pandemic revealed that depression and IPV prevalence among pregnant women were 2.2% and 6.9%, respectively, and came to the conclusion that IPV increased the risk of prenatal depression in pregnant women[16].

1.2 Statement of the Problem

Intimate partner violence and sexual violence are two of the most widespread types of violence against women, and they are a major public health and human rights concern. Although women can be violent in relationships with men, male intimate partners or ex-partners are the more frequent offenders of violence against women (WHO 2012). Most governments formerly regarded violence against women—especially "domestic" abuse committed by a husband or other close partner—as a relatively unimportant social issue [9].

Depression from IPV ultimately develops, necessitating careful attention in order to completely control it. Although IPV is extremely common in Nigeria, there are much less incidents that are recorded [9]. Over one in three women worldwide report experiencing physical or sexual abuse at the hands of their intimate partners, which is considered an important public health and human rights issue. Intimate partner violence (IPV) is characterized by physical, sexual, or emotional abuse[12]. Although there is a recognized link between IPV and depression, very few studies have looked at depression as a risk factor for IPV; hence, this needs to be taken seriously in order to stop or lessen additional future harm or occurrence.

Additionally, post-natal depression has been the subject of the majority of studies on maternal depression; as a result, this is a significant research deficit.

1.3 Aim and Objectives of the Study

The aim of this study was to assess the prevalence and correlates of both IPV and depression among pregnant women attending antenatal care sessions in Orolu Local Government

The Objectives are to:

i) determine the prevalence of IPV among pregnant women in Orolu Local Government

ii) examine the prevalence of depression among pregnant women attending antenatal care session in selected primary health care centers in Orolu Local Government

iii) investigate the relationship between IPV and depression.

1.4 Justification of the Study

Domestic violence affects one in five pregnant women, according to the WHO, which prove that pregnancy does not shield women from IPV and that it is also strongly linked to depression. In order to help survivors of IPV understand that their experience is not

"normal," but rather wrong and illegal, there needs to be a change in the way society views IPV, particularly for those who live in rural places where it is difficult to access information about this important problem.

It can be made more open by routinely screening for IPV during antenatal care, but this must be done in tandem with an action plan that includes access to pertinent agencies. The public has to be made more aware of the risks linked with depression and the detrimental consequences of IPV on pregnant women.

Investigating intimate partner violence and depression among pregnant women is an important area of research because it will provide empirical evidence of baseline data and provide the basis for the formulation of preventive strategies. Without objective information derived from empirical analysis of intimate partner violence among women, it will be challenging to plan meaningful screening to form assessment and control of this abuse on pregnant women.

1.5 Research Questions

i) What are the risk factors associated with depressed pregnant women

ii) Do pregnant women attending PHCs in Orolu Local Government have experience of IPV

iii) What stressful life events predisposed pregnant women attending primary health care centers in Orolu Local Government experience from IPV during pregnancy

1.6 Hypotheses

i) There is no significant association between the demographic characteristics of respondents and depression in pregnancy.

ii) There is no significant association between experience of violence and depression in pregnancy

iii) There is no significant association between parity and depression in pregnancy

1.7 Significance of the Study

The findings of this study shall be of great importance to academics, individuals and general public as it will provide insight on the prevalence of IPV and risk factors associated with antenatal depression among pregnant women attending antenatal care sessions at selected primary health centers in Orolu Local Government (Ifon-Osun-state).

This information shall be beneficial to the Ministry of Health and Non-governmental organizations interested in health issues of women of reproductive age and the entire population of women, in coming up with intervention measures to curb the problems that arise due to prevalence of antenatal depression.

The information generated from the study shall also help policy makers, planners and implementers of programmes to be able to approach the fight against morbidity and mortality as a result of antenatal depression in a more holistic way. Lastly the study will contribute to the field of knowledge in antenatal depression among pregnant women and act as a basis for future research in this area.

1.8 Scope of the Study

The study shall focus on the experience of IPV and Depression among pregnant women in Orolu local government Ifon Osun- state Nigeria. The study shall be carried out among pregnant women that attends primary healthcare centers within the research location.

1.9 Limitations of the study

The researcher discovered that majority of the pregnant women were reluctant in telling their actual age and thereby had to probe further before they could tell their real ages. Another limitation encountered in the study was that most of the women found it difficult to answering questions related to violence by their partners, an extra mile had to be undergone before they could answer the question.

1.10 Operational Definition of Terms

Depression: a mood disorder marked especially by sadness, inactivity, difficulty with thinking and concentration, a significance increase or decrease in appetite and time spent sleeping, feelings of depression and hopelessness, and sometimes suicidal thoughts or an attempt to commit suicide.

Antenatal Depression (AND): is depression that occur during pregnancy. It can strike at anytime during pregnancy but seems to become more pronounce in the third trimester.

Intimate Partner Violence (IPV) against women is a global public health and human rights concern. It refers to "any behavior inside an intimate relationship that causes physical, sexual, or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse, and uncontrollable behaviors."

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Chapter Two

Literature Review

2.1. Conceptual Review

2.1.1. Nature of Depression

Depression probably existed before written history. It has undoubtedly been acknowledged for thousands of years. The first clinical account of depression is given to Aretaeus of Cappadocia (c. 81–138 A.D.). The ancient Greek physician Hippocrates was well aware of depression; he referred to it as "melancholia."

Depression is regarded as a mood disorder even if it exhibits a wide range of physical symptoms. It is also referred to as an "affective disorder" to denote the fact that one of its main characteristics is an emotional or psychological disturbance. In their lives, about 20% of individuals will experience a mood disorder that requires treatment, and only 8% of persons will experience major depressive disorder. For those between the ages of 18 and 30, depression is the biggest cause of disability and early mortality [1].

An estimated 3.8% of the world's population suffers from depression, including 5.0% of those over the age of 60. Around 280 million people worldwide suffer from depression [2].

Depression is distinct from common mood swings and fleeting emotional reactions to problems in daily life. Depression may develop into a significant medical illness, particularly if it lasts for a long time and is moderate to severe in intensity. The affected person may experience severe suffering and perform poorly at job, in school, and in the family. Suicide can result from depression at its worst. Every year, suicide is thought to be the cause of 1 million deaths. More than 75% of people in low- and middle-income nations do not obtain treatment for mental problems despite the fact that there are known effective methods [3]

In both high- and low-income countries as well as middle- and low-income ones, depression is the most common disease burden for women. By the year 2030, it is anticipated that this widespread, pervasive, and crippling public health issue would be to blame for the largest global burden of diseases[3]. Worldwide, the burden of depression and other mental health issues is increasing. According to World Health Organization, complex interplay of social, psychological, and biological variables causes depression. It could exacerbate the affected person's current predicament by causing further stress and dysfunction. There are connections between physical health and depression. For instance, depression can result from cardiovascular disease, and vice versa.

2.1.2 Types of Depression

A depressive episode can be classified as mild, moderate, or severe depending on the quantity and intensity of symptoms. Another important distinction is recognized between depression in individuals with or without a history of manic episodes. Both types of depression have the potential to be chronic (i.e. lasting a long time) with relapses, particularly if they are left untreated. When a person has a unipolar depressive episode, they typically experience a low mood, a lack of interest and enjoyment, and a decrease in energy

that causes them to be less active for at least two weeks. Many persons who have depression also experience anxiety symptoms, irregular eating and sleeping patterns, guilt or low self-worth sentiments, impaired attention, and even symptoms that are medically unexplained.

A depressive episode can be classified as mild, moderate, or severe based on the volume and intensity of symptoms. A person experiencing a moderate depressive episode may find it challenging to carry on with daily tasks and social interactions, but they are likely to remain functional. It is extremely improbable that someone experiencing a major depressive episode will be able to carry on with social, professional, or household activities, except very minimally.

Manic and depressed episodes, which are frequently separated by intervals of stable mood, make up bipolar mood disorder. An heightened or irritated mood, excessive activity, pressure in speech, inflated self-esteem, and a reduced need for sleep are all characteristics of manic episodes.

2.1.3 Causes of Depression

The illness of depression is intricate. Although there are many potential causes, no one is certain of their actual cause. During a severe medical condition, some people experience depression. Others may experience depression when their lives change, such as when they move or lose a loved one. Still others have a history of depression in their families. Those who do may suffer from depression and experience overwhelming melancholy and loneliness for no apparent reason [4].

There are two basic ways to look at depression: biologically and from an environmental and personal perspective.

From a biological standpoint, this encompasses the genetic, neurological, and hormonal mechanisms that contribute to the emergence of major depression, many of which revolve around responses to stresses and the processing of emotional data. Human and environmental standpoint; contains Active life events, ongoing stress, and early adversity exposure.

Life experiences that are stressful; there is evidence that many major depressive episodes are brought on by these events, and there is some support for a general linear relationship between the intensity and quantity of negative events and the likelihood that depression will start.

Long-term stressful situations are another cause of depression, as does chronic stress. Depression can be brought on by the pressures of poverty, unemployment, or displacement, but depression weakens the person's capacity to deal with or alter their circumstances.

Early adversity is a risk factor for depression in adults, especially in women. There is strong evidence linking childhood sexual, emotional, or physical abuse with depression in adults. Mothers who have experienced trauma or abuse have a much higher risk of developing postpartum depression [5].

Personal factors also include interpersonal vulnerability (marital conflict, intimate partner violence, low social support), cognitive (excessively pessimistic and self-critical, perception of selflessness or hopelessness about changing their situations), and cognitive (overly optimistic and self-critical)[4]

There are numerous elements that can raise the risk of depression, including the following:

Abuse: being subjected to the physical, sexual, or emotional levels can raise your risk of depression in later life.

Age: Depression is more prevalent in older persons. Other elements like living alone and having little social support can make things worse.

Certain medicines: Some medications, including the acne medication isotretinoin, the antiviral medication interferon-alpha, and corticosteroids, can raise your chance of developing depression.

Conflict: People who are biologically predisposed to depression may experience depression as a result of interpersonal problems or disagreements with friends or relatives.

Loss or death: Although it is common to feel depressed or in mourning after losing a loved one, the risk of depression can increase.

Gender: Women are typically twice as likely as men to suffer from depression. Nobody is aware of the cause. Different hormonal changes that women experience over the course of their lives may play a role.

Depression in the family may increase the risk due to genes. Given that depression is seen as a complex feature, multiple small-effect genes are more likely to be involved in the development of the disorder than a single gene. In comparison to diseases that are exclusively hereditary, such as Huntington's chorea or cystic fibrosis, the genetics of depression is less obvious or straightforward.

Major occasions: Happy life events like starting a new job, graduating, or getting married can lead to depression. This can also happen as a result of relocation, job loss, divorce, or retirement. However, the clinical depressed condition is never a "normal" response to demanding living circumstances. Added personal matters Clinical depression may result from problems like rejection from family or friends or social isolation brought on by other

mental illnesses. severe illnesses Depression can sometimes co-exist with major illnesses, while other conditions can occasionally induce depression.

Misusing drugs: Nearly 30% of individuals who struggle with substance abuse also experience significant or clinical depression. Even though alcohol or narcotics momentarily improve your mood, they ultimately aggravate depression [6].

2.1.4 Global Regional and National Burden of Depression

According to the World Health Organization, depressive disorders will be the second biggest cause of disease burden globally by 2020, while unipolar depression will be the main cause of disease burden in middle- and high-income nations, ranking third globally and eighth in low-income countries. In low- and middle-income nations, they account for three of the top ten causes of disease burden, and for four of the top ten in high-income countries. In both high- and low-income countries as well as middle- and low-income ones, depression is the most common disease burden for women. According to projections, unipolar depressive disorders, ischemic heart disease, and traffic accidents would be the three main causes of diseases worldwide by 2030.

Researchers have discovered variations in the brains of those with clinical depression as compared to those without it. For instance, the hippocampus, a tiny area of the brain crucial for memory storage, tends to be smaller in certain persons with a history of depression compared to others who have never experienced sadness. The hippocampus is smaller, and there are fewer serotonin receptors there. Serotonin is one of the several neurotransmitters, which are substances in the brain that allow circuits connecting areas of the brain involved in

processing emotions to communicate with one another. For unexplained causes, the hippocampus may be smaller in some sad people.

Researchers have also discovered that depressed people produce an excessive amount of the stress hormone cortisol. According to these researchers, cortisol has a harmful or "shrinking" effect on the hippocampus' development. According to some scientists, sad people may just have a smaller hippocampus at birth and are hence predisposed to depression. There are other other brain areas and connections between them that are known to be involved in depression, thus it's likely that no one brain area or connection can entirely explain clinical depression.

There is little doubt that depression is a complex condition with numerous underlying causes. Antidepressants may have "neurotrophic effects," which refer to their ability to sustain nerve cells, stop them from dying, and enable them to form stronger connections that can withstand biological stresses. This ability to do so is suggested by the most recent scans and studies of brain structure and function. Health care providers will be able to provide patients with more "tailored" diagnoses and more efficient treatment regimens as scientists learn more about the causes of sadness [7].

2.1.5 Depression in Pregnancy

Pregnancy has always been a happy and fulfilling time for women. Evidence, however, suggests that during this time there is an increase in psychiatric morbidity, particularly despair and anxiety [7]. Your body experiences many changes throughout pregnancy. Depression during pregnancy may be brought on by the strains of these changes. Your feelings about yourself and the world around you may alter as a result of this emotional transformation. Friends, family, and even caregivers sometimes dismiss a pregnant woman's depressive symptoms as "normal" during pregnancy. Because of how drastically different her

current state is from her pre-pregnancy state, it can also be challenging for the woman to recognize depression. She frequently states that she is “simply weary” or that she is not enjoying the pregnancy.

Antenatal depression affects women differently, and not all women will suffer the same symptoms. Pregnancy depression is typically diagnosed when symptoms are severe or persist for two weeks or longer. For the majority of women, the severity of their symptoms will generally remain fairly stable. Contrary to popular assumption, pregnancy is not always marked by accomplishments and joy. These times in the life of many women are times of melancholy or concern. The physical, hormonal, psychological, and social changes that occur during pregnancy and the postpartum period (puerperium) in women might directly affect her mental health [8].

Although the notion that a pregnant woman's emotions can affect the health of the unborn child is an old one, it has only recently piqued scientific curiosity [9]. The mother's dietary, hormonal, metabolic, psychological, and social environments during pregnancy are known to have an impact on the baby's health. A woman experiencing gestational depression might not be as concerned about her overall health. This could cause her to neglect prenatal care, abuse alcohol, tobacco, and other drugs, experience insomnia, and lose her appetite, which would reduce the amount and quality of nourishment she receives [8].

Depression symptoms may be exacerbated by pregnancy hormones. All pregnant women experience the ups and downs of their hormones, but some experience them more severely. The onset of depression during pregnancy can, however, be influenced by a wide range of additional circumstances. A pregnant woman could feel hesitant about the pregnancy, thinking that the timing is off, that long-term aspirations might need to be put on hold, or that

there might be money issues. Additionally, she can be unsure of how she will handle labor and delivery as well as her new duty as a mother and worry about carrying the pregnancy. Because everyone anticipates her to be happy and blossoming, she could also feel guilty for being miserable. Additionally, prenatal depression has been largely ignored. In fact, it was believed that pregnancy shielded women against depression[9]. Antenatal psychopathology studies have mostly examined antenatal mood as a potential predictor of postnatal depression. Depression during pregnancy can have disastrous effects on the mother, the unborn child, and the entire family[8]. In addition to having an adverse effect on a child's development, antepartum depressive and anxiety symptoms (ADS and AAS, respectively) can cause postpartum depression, reduced birth weight, and early delivery [10].

Due to three main factors, depression during pregnancy is an issue of public health importance: First off, antenatal period has a significant rate of depression throughout pregnancy [11]. Second, it is the main contributor to post-natal depression risk. Thirdly, it results in poor outcomes for both the mother and the fetus. Depression during pregnancy is therefore very important. Antenatal depression, postnatal depression, or both are all forms of childbearing-related depression that can develop [12].

Estimates of the prevalence of antenatal and postnatal depression range from 12–20%, with a commonly cited estimate of 13%[12]. These estimates are comparable to those for depression in the general population. Perinatal depression has serious immediate and long-term effects on both the mother and her unborn child as well as their relationships.

Depression during pregnancy may impair one's ability to care for oneself, which may lead to poor nutrition, drug or alcohol use, and a lack of attendance at prenatal appointments. All of

these factors may compromise a woman's physical and mental health, reduce the effectiveness of fetal monitoring, or limit the growth and development of the fetus.

A number of research have focused on the effects of postnatal depression on a child's cognitive, emotional, and social development in early infancy, later infancy, and early childhood. When postnatal depression is chronic and severe, the effect on child development is larger but still fairly low in high socioeconomic populations. When postnatal depression is present, the mother-child interaction may be harmed, and its consequences may have a greater impact than simply exposing the baby to maternal depressive symptomatology.

For academics, doctors, and policymakers, prenatal depression detection and treatment are crucial public health issues. Depression that goes undiagnosed and untreated can have negative repercussions on the mother and child. Due in part to a lack of appetite, pregnant women who are depressed are more likely to engage in unhealthy behaviors and consume poor nutrition. This can result in inadequate weight gain and increase the risk of intrauterine growth. Women who are depressed are less concerned with and feel less invested in the care given to their pregnancies. Additionally, pregnant depressed women experience more pain and discomfort, including worsened nausea, stomach pain, shortness of breath, gastrointestinal problems, pounding heart, and dizziness[5]

Untreated prenatal depression has been linked to adverse pregnancy and birth outcomes, including maternal preeclampsia, low birth weight, smaller head circumference, higher risk of preterm delivery, more surgical delivery interventions, lower APGAR scores, and is thought to be the strongest risk factor for postpartum depression[5]. Many different factors can add to the risk of developing depression during pregnancy. These risks can include:

Having a history of depression or premenstrual dysphoric disorder (PMDD).

Your age at time of your pregnancy — the younger you are, the higher the risk.

Living alone.

Having limited social support.

Experiencing marital conflict.

Feeling ambivalent about your pregnancy.

2.1.6. Symptoms of Antenatal Depression

Fatigue, substantial changes in eating and sleep patterns, a lack of desire in sex, no enjoyment or interest in routine activities, impatience, and difficulty concentrating or focusing are some of the physical symptoms of prenatal depression. Lack of motivation, obsessive behaviors like cleaning, pacing, or pacing all the time, substance abuse, difficulty coping with daily tasks, lack of interest in appearance or taking care of oneself, cutting off from others, uncontrollable crying, not wanting to get pregnant, irrational thoughts, fear of being rejected by partner, self-blame for problems in life, and desire to run away, fear of harm coming to your partner or your baby, fear of being alone, or going out , negative, obsessive or morbid thoughts and thoughts of suicide. Other notable characteristics include guilt, shame, or worthlessness, prolonged sadness, pessimism and gloomy outlooks, high levels of anxiety or panic, mood swings, feeling “low” or “flat,” feeling pressured by others to experience the so-called joys of pregnancy, helpless, hopeless, or out of control, feelings of anger and resentment toward yourself and/or your baby that won’t go away, feeling inadequate, and so on. Before diagnosing depression, it is important to take into account

several symptoms that could be brought on by conditions including anemia, lack of sleep, thyroid malfunction, or bereavement.

Screening

Early prenatal and postpartum depression detection and diagnosis are made possible through perinatal mental health screenings. One of the numerous maternal health groups that strongly encourages universal screening for depression in pregnant and postpartum women as part of standard obstetric care is the American College of Obstetricians and Gynecologists.32 Since early screenings can speed up the process of receiving successful treatment, many jurisdictions, including California, have passed legislation requiring clinicians to screen patients while they are in the office. A screening test frequently used to identify depression is the Patient Health Questionnaire 9 (PHQ-9).33 The Edinburgh Postnatal Depression Scale is a different instrument that was created for use in the postpartum period but has also been approved for use during pregnancy [13].

The DSM-IV criteria for depression were used to create the PHQ-9, a valid scale of depression severity that has 9 items that correspond to the 9 criteria specified in DSM-IV20. Since it is a condensed version of the PHQ, its sensitivity and specificity have also been evaluated. Patients self-administer the screening test, which is often conducted at the primary care office.

Giving at-risk individuals only mental health screenings, however, is insufficient. In order to guarantee that these women receive constant assistance throughout their recovery journeys, health care systems should include interventions including treatment referrals and mental health monitoring [14].

Obese women are more likely to experience mental health problems, according to studies, and should disclose any symptoms with their doctor at the first prenatal appointment [15].

Treatment

Due to the fact that any treatment given to the mother also affects the baby, treating prenatal depression presents several difficulties. Women experiencing prenatal depression can consider both non-pharmacological and pharmaceutical treatment options.

Non-Medical Treatment

Psychotherapy

Any woman experiencing prenatal depression is advised to seek psychotherapy since it allows the mother to effectively articulate her thoughts in her own words [16]. Particularly, Cognitive Behavioral Therapy efficiently reduces prenatal depression symptoms [17]. A psychiatrist should also be consulted in addition to psychotherapy since they can determine whether medications will be helpful and, if necessary, recommend specific prescriptions. The emotional components of prenatal depression may benefit from familial support, according to one study [18].

Ineffective services for treating depression and anxiety are typically filled by nonspecialist providers, such as lay counselors, nurses, midwives, and instructors who lack professional training in counseling methods, according to a recent systematic review and meta-analysis of the literature. Even though they are educated to offer therapeutic techniques, mental health practitioners nonetheless do this.

Fitness Therapy

Exercise, however, may lessen depressed symptoms both before and after giving birth, according to some studies [7]. Exercises that have been shown to help in symptom reduction include:

Yoga [19]

Stretching

Walking

Aerobic activity [20]

Medications

Ask the prescribing healthcare professional to provide additional information about all the dangers and advantages of all the available medications when considering treatment choices for prenatal depression. Tricyclic antidepressants (TCAs) and selective serotonin reuptake inhibitors are the two types of antidepressants most commonly used during pregnancy (SSRIs). Antidepressants are extremely effective at treating prenatal depression once they have been given. In general, patients should anticipate feeling happier in two to three weeks and starting to experience a genuine connection to their newborn. Restored appetite, improved mood, more energy, and improved attention are among the medication's reportedly positive side effects. Side effects are rare, despite the fact that some people have experienced them. Antidepressant use during pregnancy hasn't been linked to any infant defects as of yet [21].

It's possible that using an SSRI throughout pregnancy can make it harder for the baby to acclimate to life outside the womb right after birth. According to some studies, infants exposed to SSRIs during the second and third trimesters were more likely to require postpartum admission to intensive care for reasons related to their respiratory, cardiac, low

weight, and other systems, and they also displayed less motor control than infants not exposed to SSRIs. Lower Apgar scores 1 and 5 minutes after delivery were more likely in neonates exposed to SSRIs for five months or more before to birth, indicating they were in worse health than newborns not exposed to SSRIs.

The long-term mental and physical health of the children was not shown to be significantly impacted by prenatal SSRI exposure, though. These findings are not associated to any infant consequences of prenatal depression [22].

Relationship between parenting stress and postpartum depression

Women who have postpartum depression also often experience prenatal depression, according to studies. In other words, postpartum depression is very likely to also affect women who have antenatal depression. The continuance of prenatal depression into postpartum is the root cause of this. Logistically, it makes plausible that pregnant women who experience depression will also experience depression after the delivery of their child [23]. Having said that, there are several variables that solely define the presence of postpartum depression and aren't always related to antenatal depression. These factors include socioeconomic status, whether or not a pregnancy was planned, and the relationship between the parents before the kid was conceived and delivered.

According to a recent study by Coburn et al., higher maternal depressive symptoms throughout the postpartum period (12 weeks) were linked to increased baby health risks in addition to prenatal impacts. This is in line with findings from studies of low-SES Mexican-American women and their children [24]. Postpartum depression, which can also negatively affect children by causing emotional and behavioral issues, attachment issues, cognitive deficiencies, physical growth and development, and eating habits and attitudes. It is also

more likely to occur in women who had prenatal depressive symptoms. Relatedly, mother depression has an impact on parenting practices, which may have an impact on child outcomes [25]. Women's mental health should therefore be prioritized throughout the perinatal period, not just to help women but also to encourage good functioning for their newborn.

Depression during pregnancy and infant health

There is a link between depression during pregnancy and a higher risk of a spontaneous abortion. Acute and chronic stress during pregnancy can reduce the normal immune activity necessary during pregnancy and may even cause spontaneous abortion, according to a review by Frazier et al.[26]. Whether the miscarriage resulted from the depressive illness state or the antidepressant drug is still up for discussion. A significant Danish study found that depressed women who were not exposed to SSRI had a greater rate of first-trimester miscarriage than nondepressed women who were, suggesting that the miscarriage may be related to the mother's psychological state rather than the antidepressant [27]. Poor newborn health outcomes are associated with pregnant women's depressive symptoms [28]. Infants born to pregnant women who had high levels of depression were found to have higher hospitalization rates. Some of the observed results of poor health among infants delivered to depressed pregnant mothers include reduced breastfeeding, poor physical growth, lower birth weight, early gestational age, and high rates of diarrheal infection [29]. Positive prenatal tests performed in the first or third trimester have actually been proven to have a high chance of leading to an early end to breastfeeding [30]. According to studies, the environmental effects of maternal sadness on the developing fetus are so profound that they can be felt by the offspring as adults. Women from low socio-economic background experience worse impacts.

An increase in the number of baby health issues at 12 weeks (3 months) of age was significantly predicted by maternal prenatal depressive symptoms in a recent study by Coburn et al. [31]

Rash, colic, cold, fever, cough, diarrhea, ear infections, and vomiting were among the health issues. Low birth rates and preterm births are additional issues that low-income mothers must deal with. [32]

To examine the impact of confounding factors in the association between maternal prenatal depression and baby health issues is an intriguing and instructive field of research. Some mediating or moderating factors that have been linked to infant health concerns include the mother's age, her romantic partner's age, her education, her household's income, her immigration status, the number of other children she has, her breastfeeding practices, her gestational age, and her baby's weight.

Research on postpartum depressive symptoms are generally more numerous than studies on prenatal depression, and these studies ought to consider the influence of many prenatal factors that might have an impact on the health of newborns, possibly even into adulthood.[33]

2.1.7 Antenatal Depression Prevalence Figures

Prevalence and Causes

Depending on where in the world you are, prenatal depression is more or less common. Antenatal depression can affect up to 16% of pregnant women in the US, whereas it can affect up to 24% of pregnant women in South Asia. [34]

As more medical investigations are conducted, it is spreading more widely. A common illness, antenatal depression was formerly dismissed as being little more than the natural stress of any pregnancy. It can be brought on by a variety of things, most of which are related to the mother's personal life, such as her family, finances, romantic relationships, etc. It can also be brought on by the physiological and hormonal changes related to pregnancy [35]. Lack of social support, unhappy marriages, hostile work settings, a history of domestic abuse, and unintended or undesired pregnancies are other risk factors. According to research, women with lower vitamin D levels may be more likely to experience prenatal and postpartum depression [36]. Women who live in low-income nations are more likely to experience prenatal depression because they have less access to high-quality healthcare, are struggling financially, and lack a strong support network [37]

2.2 Methodological Framework for Theoretical Model Development

ERDEG is a tool that medical professionals can use to screen for and assess the risk of depression in expectant mothers. In order to build it, the European Group of Children with Disabilities (DISABKIDS)® and Pasquali's methodological frameworks and the theoretical underpinnings of psychometry were followed.[38]

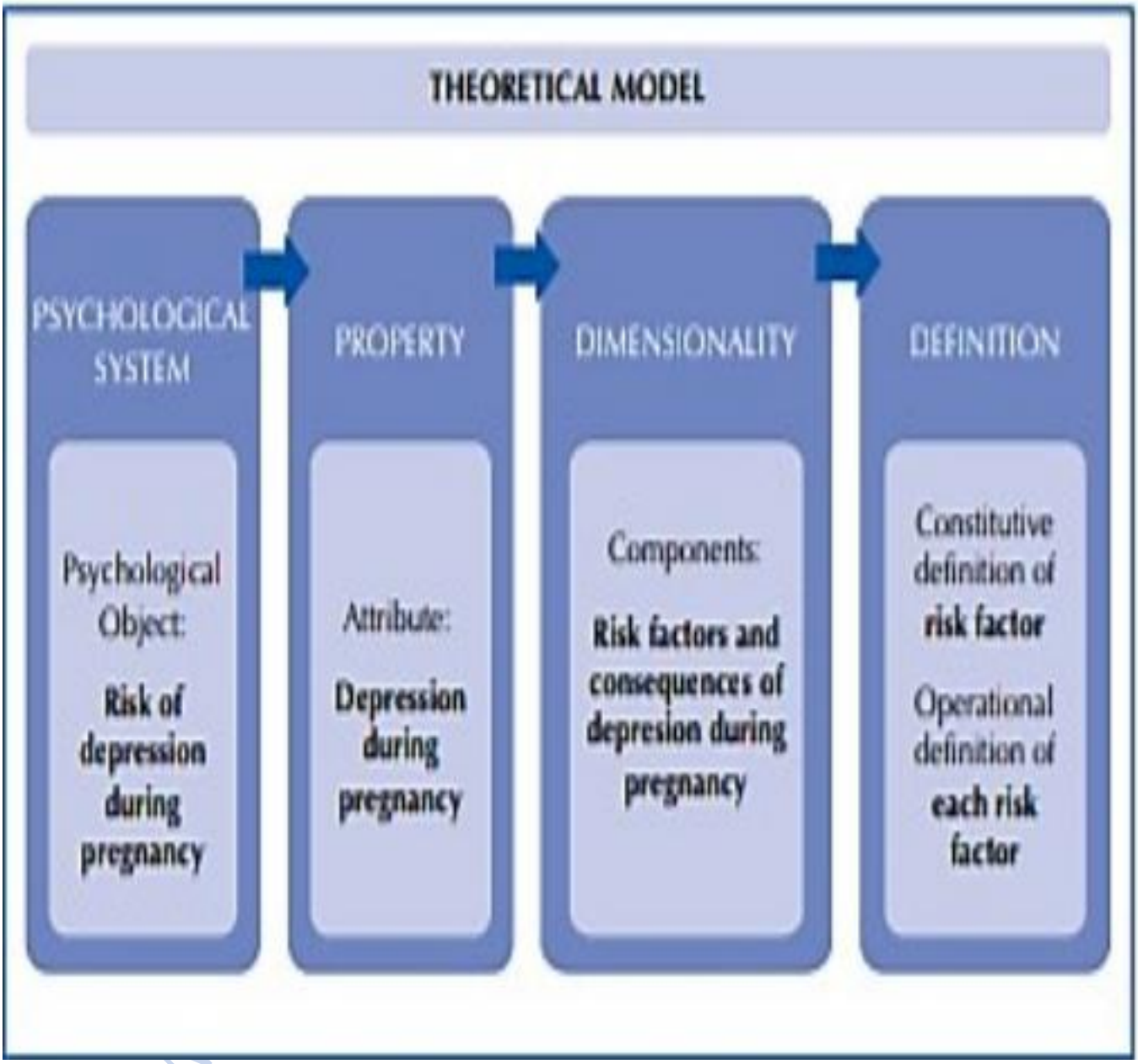
With these as references, it is then important to specify the construct for which the instrument will be developed, specifically its dimensionality, constitutive definition, and operational definition, before moving on to the development of a scale. These processes are a component of the first stage in the development of instruments, which are described as theoretical processes, together with the development of the items, also known as operationalization [39]. In this study, a theoretical model that considers the definition of the psychological system or construct, its determination of dimensionality, and its constitutive and operational definition

will be presented [40]. This theoretical model includes the development of a theory about the construct, its determination of dimensionality, and its constitutive and operational definition [41]

The elaboration of the theoretical model was carried out in four steps according to the methodology recommended by Pasquali.

Steps for preparing the theoretical model. Ribeirão Preto, SP, Brazil, 2019.

Fig 2.2



2.3 Review of Empirical Studies

2.3.1 Antepartum Depression

The most prevalent mental health condition in pregnancy is antepartum depression, which is also a risk factor for poor perinatal outcomes. Compared to high income nations, low and middle income countries, like Nigeria, have a higher prevalence of antepartum depression. In order to meet the Sustainable Development Goals, it is essential to give pregnant women's mental health issues top priority. With the primary goal of determining the associations between maternal obesity and lifestyle factors on pregnancy and postpartum outcomes among women and their offspring in Ibadan, a prospective cohort study was carried out among 1745 pregnant women enrolled early in pregnancy (20 weeks) at four comprehensive obstetric facilities within Ibadan metropolis. During the third trimester, depression was measured using the Edinburg Postpartum Depression Scale12.

Utilizing the Hurt, Insult, Treaten, and Scream (HITS) test for Intimate Partner Violence Screening created by Kevin et al. in 1998, intimate partner violence was evaluated. A score of more than 10 is considered to be a positive result for intimate partner violence. The total scoring range for this tool is 1 to 20. STATA version 13 was used to conduct the statistical analysis. The chi square test was used in bivariate analysis to describe variations in the proportion of women with or without antepartum depression based on sociodemographic, maternal, obstetric, lifestyle, and psychological factors, as well as newborn features.

According to the study's findings, the prevalence of APD was substantially greater among single women (21.7%), women without jobs (19.4%), people with lower incomes (17.0%), and poorer women (16.1%). Women who had had an induced abortion in the past (20.0%) or who now experience intimate partner violence (40.0%) also had a greater incidence of APD.

Low perceived stress (6.4%), moderate perceived stress (15.2%), and high perceived stress (28.7%) all demonstrated a dose-response association with APD. This study's prevalence of antepartum depression was 14.1%, and binge eating and antepartum depression were significantly correlated (p=0.001). [42]

2.3.2 Prevalence and Associated Factors of Antenatal Depression in Africa

Another study was carried out with the aim to investigate the prevalence and associated factors of antenatal depression in Africa (Epidemiology of antenatal depression in Africa: a systematic review and meta-analysis)

The authors looked for English-language observational studies carried out in Africa from 2007 to 2018 in the MEDLINE, PsycINFO, Psychiatry online, PubMed, SCOPES, and Emcare databases. The Newcastle Ottawa Scale (NOS) was used to evaluate study quality, and studies of high quality were included in the final evaluation. Higgins tests were used to evaluate the heterogeneity between trials. They used a funnel plot to assess for publication bias, and Duval and Tweedie's Trim and Fill analysis was used to adapt Egger's regression test results. The pooled estimates with 95% confidence interval were determined using a random effect meta-analysis (CI). Analysis51 was performed using Stata 14. [43]

The study's findings, which indicated that one in four pregnant women experienced depression, led to the conclusion that "antenatal depression is highly prevalent in Africa." Antenatal depression was more likely to occur in pregnant women who experienced financial hardship, poor obstetric history, inadequate family support, prior mental health issues, and unfavorable marital circumstances. [44]

2.3.3. Summary of studies conducted on antenatal depression in African countries (N = 64, 2007–2018)[45]

Author, P. year	Country	Study setting	Study design	Sample size	Time of screening	The tool used for screening depression	Prevalence
Adewuya, A. O. *et al*. 2007	Nigeria	HI	Crosssectional	180	Third trim	DSM-IV	8.30%
Esimai, O. *et al*., 2008	Nigeria	HI	Crosssectional	195	All trim	HADS(Not found)	10.80%
Kaaya SF *et al*. 2010	Tanzania	HI	Crosssectional	560	Second trim	HSC ≥ 1.06	39.50%
Hartley M *et al*., 2011	South Africa	Community	Crosssectional	1062	All trim	EPDS ≥14	39%
Rochat TG *et al*., 2011	South Africa	HI	Crosssectional	109	Second trim	DSM-IV	47%
Manikkam L *et al*., 2012	South Africa	HI	Crosssectional	387	Third trim	EPDS ≥13	38.50%

Stewart RS *et al*., 2014	Malawi	HI	Crosssectional	583	Second trim	SRQ ≥ 8	21.10%
Weobong B *et al*., 2014	Ghana	Community	Cohort	2086	First trim	PHQ ≥ 10	9.90%
Abdelhai R *et al*. 2015	Egypt	HI	Crosssectional	376	All trim	HADS> 10	10.40%
Bindt C *et al*. 2013	Ghana	HI	Cohort	719	Third trim	PHQ ≥ 10	28.90%
Mahenge B *et al*. 2015	Tanzania	HI	Crosssectional	1180	All trim	HSC ≥ 1.06	78.20%
Rwakarema M. et a; 2015	Tanzania	HI	Crosssectional	397	All trim	EPDS ≥13	33.80%
Heyningen T *et al*. 2015	South Africa	HI	Crosssectional	376	All trim	MINI	22%
Malqvist M *et al*. 2016	Swazilan d	Community	Crosssectional	1038	Third trim	EPDS ≥13	22.70%
Thompson O *et al*. 2016	Nigeria	HI	Crosssectional	314	All trim	EPDS> 11	24.50%

Dibaba Y *et al.* 2013	Ethiopia	Community	Crosssectional	627	Third trim	EPDS ≥13	19.90%
Gemta A *et al.* 2013	Ethiopia	HI	Crosssectional	660	All trim	EPDS (Not found)	25.60%
Biratu A *et al.* 2015	Ethiopia	HI	Crosssectional	393	All trim	EPDS ≥13	24.94%
Ayele TA *et al.* 2016	Ethiopia	HI	Crosssectional	388	All trim	BDI ≥ 16	23.00%
Bisetegn TA *et al.* 2016	Ethiopia	Community	Crosssectional	527	All trim	EPDS ≥12	11.80%
Bitew T *et al.* 2016	Ethiopia	Community	Crosssectional	1311	Second trim	PHQ ≥ 5	29.50%
Mossie Tb *et al.* 2017	Ethiopia	HI	Crosssectional	196	Second trim	PHQ ≥ 5	31.10%
Sahile MA *et al.* 2017	Ethiopia	HI	Crosssectional	231	8 All trim	BDI ≥ 14	31.20%

Guo N *et al.* 2013	Ghana	HI	Cohort	654	Third trim	BDI ≥ 21	26.30%
Guo N *et al.* 2013	Cote devour	HI	Cohort	654	Third trim	PHQ ≥ 10	28.30%
Bitew T *et al.* 2017	Ethiopia	Community	Cohort	1240	Second and third	PHQ ≥ 5	28.70%
Mochache K *et al.* 2018	Kenya	HI	Cohort	255		EPDS ≥10	38.40%
Thai A *et al.* 2016	South Africa	Community	Longitudinal	1238	All trim	EPDS> = 13	39.50%

CIS-R Clinical Interview Schedule–Revised, HSC Hopkins symptom checklist, EPDS Edinburgh Postnatal Depression scale

Author/year of publication	**Study population**	**Setting**	**Major findings**
Guo *et al*., 2019	Pregnant women	All pregnant women	Antenatal depression prevalence was slightly higher than that reported in high-income countries, such as Ireland, but significantly lower than that reported in low- and middle-income regions, such as Africa (26.3%).
Adewuya, Ola, Aloba, Dada, Fasoto, 2007	Pregnant women	Pregnant Nigerian women	Depression is common in late pregnancy among Nigerian women with a prevalence of 8.3%
O'Hara, 1986.	Pregnant women	All pregnant women	Antenatal depression affects approximately10% of women during pregnancy
Burke, Burke, Rae *et al*, 1991	Pregnant women	Women in their childbearing	Antenatal depression prevalence is highest among women between

		years	the ages of 25 and 44 years.
O'Keane, Marsh, 2007	Pregnant women	Developed countries	10-15% of women in developed countries are depressed in pregnancy. Estimates suggest 7% of women are depressed outside the perinatal period
O'Keane, Marsh, 2007		Economically poorer countries	19-25% of women are depressed. 10% of women are depressed postnatally
Rich-Edwards *et al*., 2006	All women		Depression affects 20% of women during their lifetime, with pregnancy being a period of high vulnerability
Hobfoll, Ritter, Lavin *et al*, 1995	Pregnant women	Low-income pregnant women	Depression in pregnancy may be as high as 27.6%

Hobfoll, Ritter, Lavin, Hulsizer, Cameron, 1995., Séguin, Potvin, St Denis, Loiselle, 1999	Pregnant women	Middle-class population	Antenatal depression prevalence ranges between 9% to 28%
Hobfoll, Ritter, Lavin, Hulsizer, Cameron, 1995., Séguin, Potvin, StDenis, Loiselle, 1999	Pregnant women	Low-income population	Prevalence rates range between 25% to 50% using variety of depression tools
(Teixeira *et al*., 2009., Pereira *et al*., 2009).(RichEdwards *et al*., 2006)	Pregnant women	All pregn ant women	Depression is also the most prevalent psychiatric disorder during pregnancy, and several studies have documented prevalence range from 4% to 25%. with point prevalence of 15.5% in

			early and Mid pregnancy, 11.1% in 3 rd trimester, and 8.7% in postpartum period

Dadi, A.F., Miller, E.R., Bisetegn, T.A. *et al*. Global burden of antenatal depression and its association with adverse birth outcomes: an umbrella review. BMC Public Health 20, 173 (2020).

2.3.3.1 A cross-sectional study was carried out in Chongqing, a significant city in Southwest China with over 31 million inhabitants, 13 million of whom were female and 32,000 of whom were pregnant. All women diagnosed with pregnancy by B-ultrasonography and registered to receive antenatal care at the Initially Affiliated Hospital of Chongqing Medical University were required to complete free online psychological tests when they first received antenatal treatment, however exceptions were made. There were some illiterate expectant mothers, and those who insisted on avoiding psychological testing were removed.

The results of this study revealed that the prevalence of prenatal depression was slightly greater than that reported in high-income nations like Ireland but much lower than that recorded in low- and middle-income regions like Africa (26.3%). This disparity in prevalence between nations may be brought about by variances in socioeconomic status, culture, study methodology, study population, and sociodemographic [46]. In other words, pregnancy-related depression has emerged as a public health issue, and preventative and treatment efforts should be prioritized. It was also discovered that anxiety level, somatic symptom level, rural residency, and early pregnancy were significant risk factors for depression in pregnant women.

Strong research has demonstrated the strong connection between depression, anxiety, and somatic complaints [47]. For instance, people who have anxiety disorders or somatic discomfort disorders are more likely to develop depression, and people who have depression typically experience anxiety and somatic symptoms [48]. According to research, Barthel et al. discovered that anxiety was a risk factor for perinatal depression, and Apter et al. discovered that when the total score for somatic complaints, as measured by a checklist of 18 somatic complaints, increased from 3 to 7, the risk of antenatal depression increased 1.91 times. [49]

According to research, roughly one in every six expectant women may have prenatal depression, making it crucial to improve screening and early management for depression during pregnancy. Online mental health assessments should be utilized often in obstetric clinics for pregnant women, especially for those with certain risk factors, as they may be a practical and time-saving approach of depression screening (anxiety symptoms, somatic symptoms, rural residence and early pregnancy) [50]

2.3.3.2 A cross-sectional study was also conducted in Rio de Janeiro, Brazil, involving 331 pregnant women who visited a public primary health facility over the course of a year.

The Composite International Development Interview was used to measure depression, and participants also provided information on their socio-demographic status, obstetric/medical issues, life events, and experiences with violence while pregnant.

Prevalence of depression during pregnancy was 14.2% (95% CI: 10.7-18.5) compared to a combined prevalence of postnatal depression of 10.5% (95% CI: 10.1-10.9) 2. The majority of studies (15/19) were conducted in high-income nations, with three, and the remaining four in low- and middle-income nations.

As was previously said, it was shown that depression is common during pregnancy and that low-income Brazilian women are more likely than other groups to face unexpected pregnancies, financial hardships, and uncertain employment. These risk variables are comparable to those that have been reported for other populations, such as non-pregnant women. Pregnancy, however, is a special biological and social event in a woman's life that may provide particular vulnerabilities. (Guo and colleagues 2021).

2.3.4. Factors That Influence Antenatal Depression

Antenatal depression typically results from a variety of causes. It is typically linked to the stress and anxiety of becoming pregnant. Life stress, a history of depression, a lack of social support, unwanted pregnancies, domestic violence, lower income, lesser education, smoking, single status, teenage pregnancy, and first pregnancies are some of the most significant risk factors, according to the literature [2]

Social support is typically understood to be any activity or interaction that benefits a person in some way. There is some evidence to support the idea that a number of factors affect the availability of social assistance, including the potential support provider's assessment of the need and their capacity to do so (Jung, 1998). However, one of the most crucial aspects of social support is how the recipient feels about it; in contrast, a lack of social support is linked to anxiety and sadness.

Prenatal depression has a number of known risk factors. Negative attitudes toward pregnancy, unexpected or first pregnancies, physical pain (such as sickness), and previous stillbirth are the ones that are most frequently noted. As a risk factors for depression during pregnancy, inadequate prenatal care, dysfunctional marriages, remarriage, and substance abuse/dependency have all been found.

Depression during pregnancy is predisposed by a number of risk factors. Poor prenatal care, poor nutrition, stressful life events like financial hardship, gender-based violence, and polygamy are a few of them. Others include a prior history of psychiatric disorders, prior puerperal complications, prior events during pregnancy like prior abortions, and prior instrumental or operative delivery methods. Age, marital status, gravidity, whether the pregnancy was intended or not, prior stillbirth history, prior lengthy labor history, and degree

of social support are other considerations. Therefore, assessing depression during pregnancy is crucial for identifying pregnant women who require treatment in order to protect the health of both mother and child.

Antenatal depression can affect everyone, but some women may be more prone to the blues than others due to specific events. There is undoubtedly no specific group of women who are exempt from its effects. Women are more likely to experience depression during pregnancy if they struggle to conceive, have an unwanted pregnancy, worry about how they will handle having a child, receive inadequate support from their partner, family, and/or friends, have a history of depression, have low self-esteem, have been abused, or have had previous miscarriages or stillbirths, which can cause anxiety and depression.

Young age, low income, lower educational attainment, a history of depression, a history of miscarriages and pregnancy terminations, a history of childhood sexual abuse, concurrently high levels of anxiety during pregnancy, low levels of self-esteem, and low levels of social support are all risk factors. There seems to be little study on the relationship between significant life experiences, a negative cognitive attributional style, and prenatal depression. (Marcus S. et al.,2013).

A previous traumatic labor or delivery, an unplanned pregnancy, problems during the pregnancy, such as hyperemesis (severe sickness), Symphysis Pubis Dysfunction (SPD), stressful major life events like a relationship breakup, job change or unemployment, moving houses, bereavement, a previous pregnancy loss, miscarriage, or stillbirth, are additional risk factors.

2.3.5 Consequences of Depression

Although less well researched than postpartum depression, depression during pregnancy is similarly linked to poor results for the unborn child. Women with antenatal depression are more likely to receive subpar prenatal care, use alcohol, and gain less weight throughout pregnancy, all of which have a negative effect on the unborn child. Pregnancy depression is linked to a higher frequency of newborn depression in adolescence, spontaneous preterm deliveries, slower foetal growth, and generally depressed infant behavior. Women who are depressed throughout pregnancy are more likely to experience depression after giving birth because antenatal depression is a powerful predictor of postnatal depression.

Because of a common notion that pregnancy somehow protects against mood disorders, depression in pregnant women is frequently disregarded. In actuality, about 25% of postpartum depression cases begin during pregnancy, and the condition may reach its height at that time[24] For both mother and fetus, it can be harmful to ignore depression throughout pregnancy.

Women who are depressed typically neglect their own needs. Some research indicates that depression in pregnant women may have an immediate impact on the fetus. These women may smoke, drink excessively, or neglect proper nutrition. Their off-kilter infants frequently exhibit irritability and lethargy. These neonates could develop into infants who are emotionally immature, underweight, slow learners, and have behavioral issues including aggressiveness.

Depression that is not recognized and treated can have negative impacts on both the mother and the child. Due in part to a lack of appetite, pregnant women who are depressed are more likely to engage in unhealthy behaviors and consume poor nutrition. This can result in

inadequate weight gain and increase the risk of intrauterine growth. Women who are depressed are less concerned with and feel less invested in the care given to their pregnancies. Additionally, pregnant depressed women experience more pain and discomfort, including worsened nausea, stomach pain, shortness of breath, gastrointestinal problems, pounding heart, and dizziness [24]

Untreated prenatal depression has also been linked to undesirable pregnancy and birth outcomes, including maternal pre-eclampsia is thought to be the main risk factor for postpartum depression, along with low birth weight, smaller head circumference, increased risk of premature delivery, more surgical delivery interventions, lower APGAR scores, and other factors [20].

Depression in mothers and their outcomes The prevalence of chronic and severe maternal depression can jeopardize the future prosperity and general well-being of society, as well as having potentially far-reaching negative impacts on families and children. Children who grow up in a mental illness-prone setting may experience substantial delays in brain development, which could have an impact on both their future learning capacity and physical and mental health. When there are no measures to guarantee mothers' welfare and children's healthy growth, there may be significant missed chances. Infants of postpartum depressed moms may have depressive-like behaviors, such as decreased interest expression, increased crying, and decreased excitability before meaningful mother-baby interactions [22]. On the Brazelton Scale, which evaluates neonatal behavior, they have reportedly performed less well on the orientation, reflex, excitability, and withdrawal clusters.

"The sadness of a mother herself may make some of her concerns for her child reasonable. Infants pick up on a mother's grief, quietness, and inattention very quickly. Three-month-old

infant mothers in one study were asked to act depressed for three minutes. They avoided making eye contact with the child, spoke monotonously, and showed no emotion. Infants could already respond at that age to brief shifts in their mothers' perceived mood. Even after the women started acting normally, they continued to display signals of anxiety and turn their heads away from their mothers for a while.

The long-term development of children may be impacted. Long-term adjustment can be difficult for children of mothers who have postpartum depression, and children of depressed parents in general are more prone to depression.

2.3.6 Gender based Violence- A Risk factor for Depression in Depression

At least one in three women have experienced gender-based abuse at some point in their lives globally. Due to their gender and social inequality, millions of girls and women experience violence and its effects. Women's rights are gravely violated by violence against them, sometimes known as gender-based violence. A variety of health issues affect women who have undergone physical, sexual, or psychological abuse, often in silence. Compared to non-abused women, they have worse physical and mental health, sustain more injuries, and require more medical resources. The most frequent types of abuse a woman experiences are from her spouse or another intimate partner include physical, sexual, and emotional assaults. According to surveys, 10 to 58 percent of women have ever been physically abused by an intimate partner. [18]. In some regions of the world, as many as 50 percent of women have experienced domestic violence, according to preliminary findings from a World Health Organization (WHO) Multi-Country Study on Women's Health and Domestic Violence, at some point in their lives, between 12 and 25 percent of women have been coerced into having sex by a romantic partner or ex-partner.

Every nation experiences violence against women from various social, cultural, economic, and religious backgrounds. While abuse occurs in all socioeconomic contexts, violence against women is most prevalent in societies where gender roles are rigidly established and upheld, where punishment of women and children is accepted, and where using violence to resolve conflicts is a common practice. While abuse occurs in all socioeconomic contexts, poverty and the stress it causes are factors in intimate partner violence. Women who have been abused frequently experience melancholy, anxiety, and even post-traumatic stress disorder[15]. Contrary to other illnesses for which pregnant women are frequently tested, like diabetes and hypertension, intimate partner violence during pregnancy may be a greater risk factor for pregnancy problems. Prenatal treatment delays, increased smoking, drug or alcohol use while pregnant, inadequate maternal weight growth, and depression have all been associated to abuse during pregnancy. Unsafe abortion, miscarriage, stillbirth, low birth weight, and neonatal death are all linked to the abuse of pregnant women.

Some instances of violence include beating, sexual exploitation, sexual abuse of houseguest children, dowry-related violence, marital rape, female genital mutilation, and other harmful traditional practices for women, as well as non-spousal violence and violence related to exploitation.

Confinement is the act of isolating someone from their friends or family, limiting their movements, denying them their freedom, or restricting their ability to move freely. GBV most frequently takes the form of domestic violence. It is frequently characterized by persistent behaviors of control and abuse. Although it can sometimes apply to violence committed by other family members, domestic violence often refers to violence committed by an intimate partner. Intimate partner violence and domestic violence are two terms that

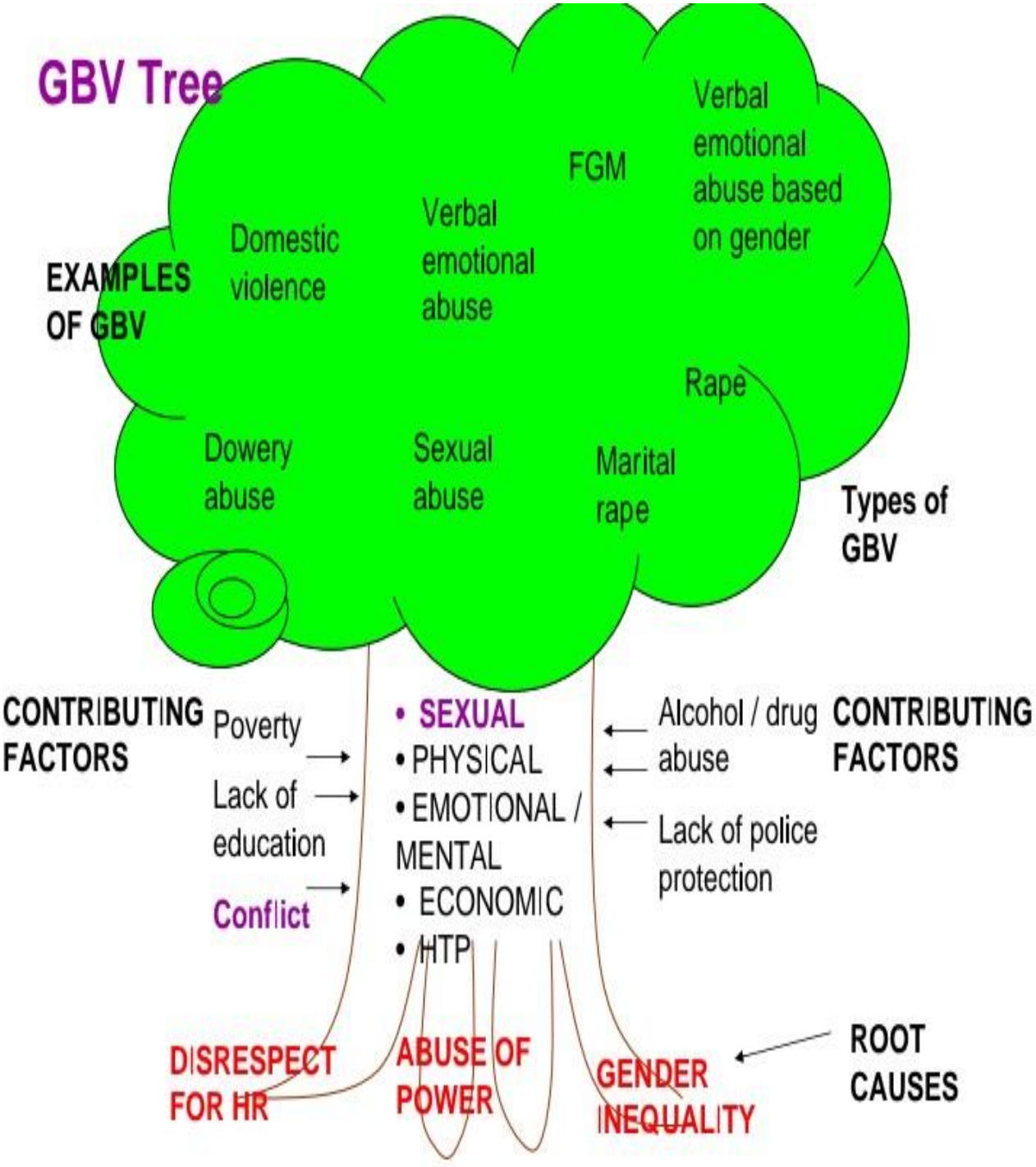
can be used interchangeably. Violence against women also happens during the reproductive cycle, and this includes rape, sexual assault, and physical, psychological, and sexual abuse by close male relatives and intimate partners involving property grabbing and sexual cleansing tactics against widows.

2.3.7 Gender-Based Violence's Types

The attitudes toward and practices of gender discrimination in a society that put women in an inferior position to men are the core causes of sexual and gender-based violence. Through acts of sexual and GBV, whether collective or individual, perpetrators seek to maintain privileges, power, and control over others. This is due to the lack of social and economic value placed on women and women's work, as well as to accepted gender. Through acts of sexual and gender-based violence, whether individual or collective, perpetrators aim to uphold privileges, power, and control over others. This helps to perpetuate and reinforce the idea that men control and have decision-making authority over women.

Sex, age, socioeconomic status, ethnicity, country, and religion all have a role in determining gender roles and identities. Relationships between men and women, women and men, and males and males are also characterized by varying degrees of authority and power that uphold privileges and subordination among the constituents of a society. Disregard for or ignorance of democratic principles, gender equality, human rights, and peaceful conflict resolution contributes to the persistence of these injustices.

ROOT CAUSES AND CONTRIBUTING FACTORS



2.3.8 Consequences of Sexual and Gender-Based Violence

Even in the absence of physical attack, victims and survivors of sexual and gender-based violence are at significant risk for serious health issues, mental issues, and even death. According to recent studies, gender-based violence which includes beatings during pregnancy, sexual abuse of girls, forced sterilization, marital rape, unsafe abortion procedures, malnutrition, limited access to health services, and other abuses is a significant factor in the death and illness of women.

It is important to never undervalue the possibility that physical and emotional trauma will have incapacitating long-term impacts. Actors will be more equipped to respond to these aftereffects and stop further suffering if they are aware of the potential consequences of sexual and gender-based violence. Gender-based violence has emotional and psychological repercussions such as post-traumatic stress disorder, despair, anxiety, fear, wrath, and insecurity. Self-hatred and self-blame

Gender-based violence's effects

FATAL RESULTS

Homicide

Suicide

Mothers dying at birth

Deaths due to AIDS

NON-FATAL RESULTS

Physical Damage

Ability Impairment

Permanent impairment

Subjectively poor health

CHRONIC

Persistent pain syndrome

Rheumatoid bowel syndrome

Digestive system issues

Fibromyalgia

Post-traumatic stress disorder (MENTAL)

Depression

Anxiety

Panic/phobia disorder

Parasuicide and self-harm

IMPAIRING HEALTH ACTIONS

Smoking

Drug and alcohol abuse

Taking sexual risks

Active inactivity

Disorders of eating

PERIODONTAL HEALTH

HIV and STIs during pregnancy Gynecological issues

Dangerous abortion

Obstetrical complications

Miscarriage

A little birth weight

Inflammation of the pelvis

2.3.9 Preventive, Early-detection, and Treatment of Depression in Pregnancy

When a woman is pregnant, depression may be diagnosed if emotional impairments in memory and attention, weight loss, loss of appetite, or early morning awakenings occur. If the woman experiences a general loss of interest and energy, pervasive remorse and hopelessness, and suicidal thoughts, depression is likely. Depression can be effectively treated. Primary care providers with the necessary training may consistently identify and treat depression. Depression that is not recognized and treated can have negative impacts on both the mother and her child. The most disastrous results of untreated depression include maternal infanticide and/or suicide.

Women who are depressed are less invested in antenatal care and less concerned about prenatal care. Women who are depressed may experience more pain and discomfort during their pregnancies, frequently complaining of a variety of somatic issues that may necessitate medical treatment. Poor obstetric, fetal, and neonatal outcomes have been linked to untreated maternal depression during pregnancy (Alder et al., 2017).

Although there are well-established, efficient therapies for depression, less than 50% of persons who suffer from the condition worldwide—and as few as 10% in some nations—actually receive them. Lack of funding, a shortage of qualified healthcare professionals, and the stigma associated with mental illness are all obstacles to providing effective care. Inaccurate assessment is another obstacle to providing appropriate care. Even in certain high-income nations, depression is not always properly diagnosed, and occasionally people who do not have the condition are misdiagnosed and given antidepressants.

The severity of the condition and its accompanying symptoms are typically factors in the choice of a therapy option for pregnant individuals with depression. Clinical treatment for depression during pregnancy should be individualized for each patient. The patient's ability to make an informed choice with the aid of her healthcare professional should be the main focus of the decision-making process [18]

Programs for prevention have been demonstrated to lessen depression. Effective community initiatives to prevent depression include school-based initiatives to stop child maltreatment or initiatives to improve young people's social, cognitive, and problem-solving abilities.

According to World Health Organization, Exercise programs for seniors are very useful at preventing depression. By releasing neurotransmitters and endorphins in the brain, exercise improves mood and helps with sadness. In addition to raising body temperature, which has a relaxing impact, it decreases immune system chemicals that might make depression worse. Recent studies have demonstrated that acupuncture helps reduce the symptoms of depression. A 2010 Stanford School of Medicine study found that pregnant women who were identified as being at risk of a major depressive illness experienced fewer depressed symptoms after receiving depression-specific acupuncture. This style of acupuncture concentrates on the acupuncture points that have been linked to the alleviation of depression. For assisting in easing mood symptoms, exercise and other healthy practices (excellent nutrition, sleep hygiene, limiting use of tobacco, alcohol, and other hazardous drugs) are advised. [15]

Patients who are at risk for recurrent depression are advised to take a maintenance medication. Patients with chronic illnesses or those who have experienced more than three previous depressive episodes, for instance, should be prescribed maintenance treatment.

Depression has long been treated with psychotherapy. This strategy might combine interpersonal therapy, which aims to ease relationship tension, and cognitive-behavioral therapy, which seeks to change negative ideas and beliefs by identifying them. Support groups have repeatedly shown to lessen symptoms and boost self-esteem in depressed individuals. Finding a depression support group that the patient feels comfortable joining is crucial; they are available everywhere, including online (American Psychiatric Association, 2010). These treatments, along with the help of family and friends, may be sufficient to help a pregnant woman manage her depression. For women who have been given a diagnosis of mild or moderate depression, they need to be the primary course of action.

Many medical specialists feel that antidepressant medications are the greatest option to safeguard the health of mothers and newborns in cases of severe depression or if other therapies are unable to relieve depression symptoms. Women who are expecting are understandably anxious about the long-term effects of taking medications. Retrospective investigations have revealed that several of the most popular antidepressants on the market have been taken by pregnant women with no known negative effects, despite the fact that all drugs pass the placenta. Pregnant women are frequently prescribed the selective serotonin reuptake inhibitor (SSRI) class of antidepressants by doctors.

According to data, pregnant women who used SSRIs experienced the same rate of birth abnormalities in their offspring as pregnant women who did not (American Psychiatric Association, 2010).

Identification and Therapy

There are several strategies for treating depression during pregnancy. Women with prenatal depression can benefit from interpersonal psychotherapy (IPT), which has been proven to be

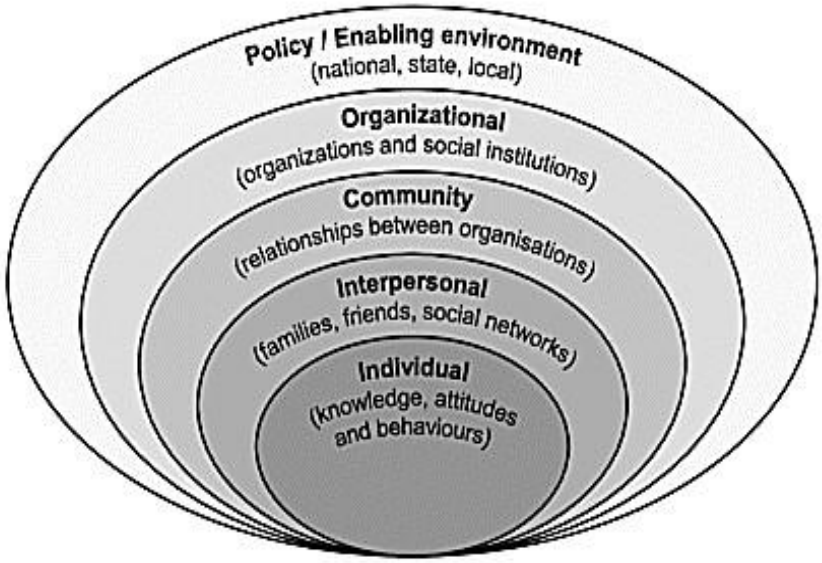
useful in treating this condition (Bennett, Einarson, Taddio et al., 2014). In cases of mild to severe depression, medications and psychological therapies are useful.

Additionally, therapy and counseling can be helpful because they make it possible to discuss problems and resolve any challenging emotional issues. The first trimester might be challenging because of unwelcome morning sickness and fatigue symptoms. Depression during this stage could also be influenced by the early hormonal changes. However, unless the mother's depression is severe, antidepressants should be avoided at this point because the baby's organs are still growing. During this time, getting help with domestic tasks or arranging for the family to help with the elder child's care will be beneficial. This will give the woman the much-needed rest she needs. Antidepressant use may be explored during the second trimester if the depression is at least moderate in nature and is not responding to non-pharmacological treatments. It is advised to gently go off antidepressants in the final few weeks of pregnancy. This is because a newborn may have withdrawal symptoms from various drugs. Additionally, studies have shown that electroconvulsive therapy (ECT) is effective in treating pregnant patients who are very depressed and at risk of suicide. Most significantly, multiple studies have found a rise in the use of medication to treat depression during pregnancy.

2.4 CONCEPTUAL FRAMEWORK

The Ecological model

Conceptual frame-work



www.balancedweightmanagement.com/Socio-Ecological%20Model.jpg

Return to Ecosystem Management; Socio-Ecological Model- Looking Beyond the Individual Jane Moore PhD., DHS-HS Office of Health Promotion& Chronic Disease prevention, Department of Human Services- Health Services. Article written by Bob Wilson BS,DTR

The Ecological model

The ecological model will be utilized in this study to explain human behaviors as they relate to antenatal depression morbidity among pregnant women attending antenatal sessions in particular primary health care facilities in Orolu local government, Osun state, because it permits the inclusion of risk and protective factors from multiple domains of influence.

Individual/intrapersonal: comprises biological and historical aspects that could influence whether a person experiences depression or not. This could involve a history of sexual abuse or despair.

Relationships with peers, close partners, and family members are among the interpersonal and relationship-related elements that raise the risk of depression during pregnancy. These people make up a person's closest social group and can influence their choices in events and conduct. Taking the absence of assistance from spouses and other family members as an example.

Community: refers to the social contexts, such as schools, workplaces, and neighborhoods, in which social ties are embedded, and it aims to pinpoint the features of these environments that are connected to prenatal depression cases. The society assumes that being pregnant is always marked by accomplishments and joy, while ignoring the truth that many women go through difficult times during these times.

The bigger, macro-level elements that contribute to intimate partner violence, such as gender disparity, religious or cultural belief systems, societal norms, and economic or social policies

that foster or maintain gaps and tensions, are referred to as society/organization and policy. Pregnant women who are depressed can be helped in a healthy way by a good counseling center with the proper policies and standards.

By creating such a model, one can have a framework for comprehending the intricate interplay of all the elements that affect depression in pregnancy, which can then offer useful tips for prevention and intervention (Dahlberg & Krug, 2002). A strategy that has various primary care practices that have been proven to be efficient forms of care for depression should also be looked into in Nigeria.

The ecological model also offers a complete public health strategy that targets not only a person's risk of developing prenatal depression but also the social and economic structures, norms, and attitudes that foster its occurrence. The approach's main focus is on the numerous and dynamic interactions between risk variables at each level and within them. Risk factors for prenatal depression include, for instance, structural disparities between men and women, family history, environmental factors, and poverty. However, it is evident that they also show themselves on other levels, such as in communities and relationships.

By highlighting the connections and interactions between various levels and components, using the ecological model also aids in the promotion of the establishment of cross-sectoral preventative policies and programs. Therefore, while developing comprehensive measures to control prenatal depression, mainstream programs that treat these concerns should use effective tactics to boost their relevance and durability. By emphasizing the relationships between the model's many levels and how they relate to prenatal depression, the ecological model can therefore be used to this study. These aspects of the intrapersonal level are helpful

in determining what shapes people's ideas, cultures, conventions, and understanding regarding depression. Questions 12, 13, 14, 15, 16, 17, 18, 19, 20, and 21 looked at a few of the things that made pregnant women more likely to experience sadness during their pregnancies.

For instance, in question 12, it was questioned if the expectant mothers had ever been able to laugh and find the humor in things.

The interpersonal level is a part of cognition that takes into account variables affecting respondents' relationships with important others and how those relationships affect whether or not a pregnant woman suffers depression. This includes the influence of major individuals including spouses, in-laws, parents, relatives, friends, the local community, and religious or traditional authorities. Exists a notion of male engagement, for instance, that the spouse assists the pregnant lady with household tasks, encourages the pregnant woman to seek professional aid when necessary, comprehends her mood swings, and recognizes a need for suitable intervention? The respondents' relationships with their significant others were assessed in questions 22, 23, 24, 27, 28, 47, and 48 to determine whether they would be risk factors for depression during pregnancy.

The level of the community; this model gave details about the efforts taken by the community to address issues associated to depression, such as if there are emotional education programs for depressed women as a form of intervention. Questions 54 and 57 focused on the community's provisions.

By learning about the government's policies on depression, the types of interventions implemented for depression during pregnancy, and the existence of government hospitals

where depression may be diagnosed and treated, the organization/policy and ecological model strive to address this. In Nigeria, there were no discovered written regulations regarding prenatal depression.

2.5 Summary of Literature Reviewed

Post-natal depression has been the main subject of most studies on maternal depression. Although it is important for public health, depression is the most common psychiatric disease during pregnancy.

The reasons behind "pregnancy anxiety's" potent impacts on mothers and their unborn children are unclear; in fact, the nature of this idea hasn't gotten enough study to be properly explained. Pregnancy-related vulnerabilities may interact with other familial, social, cultural, societal, and environmental factors to raise pregnancy anxiety levels and have an impact on the maternal-fetal-placental systems, particularly during vulnerable times like the early stages of pregnancy.

This study's findings will shed light on the incidence of prenatal depression and its risk variables among pregnant women visiting antenatal care appointments at selected PHCs in Orolu local government, Ifon (Osun-State). The Ministry of Health, Non-Governmental Organizations, and other groups concerned with the health of women and girls in general will also find this information useful in developing intervention strategies to address concerns brought on by the incidence of prenatal depression.

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Chapter Three

Methodology

3.0 Description of Study Area

Orolu local government area is found in Osun state, South-west geopolitical zone of Nigeria. The current estimated population of Orolu LGA is 109,741 inhabitants with the area primarily populated by members of the Yoruba ethnic affiliation. The Yoruba language is commonly spoken in Orolu LGA while the religions of Christianity and Islam are extensively practiced in the area.

Geography of Orolu

Orolu LGA occupies a total area of 80 square kilometres and has an average temperature of 28 degrees centigrade. The LGA experiences two distinct seasons which are the dry and the rainy seasons with the average humidity level in the area put at 53 percent.[1]

Orolu is a Local Government Area in Osun State, Nigeria. Its headquarters are in the town of Ifon (or Ifon Osun) at7°52′00″N 4°29′00″E. It has an area of 80 km2. The postal code of the area is 230. Orolu Local Government Area has its administrative seat located in Ifon & consists of other towns & villages like Aro Elemo, Asalu, Awokunle, Awoniyi, Awoyale, Bara, Barohun, Egan Aje, Elemo, Esa, Folarin, Idi Ape, Idi Iroko, Ikimo, Jagun, Laarope & more.[1] Orolu Local Government Area comprises 10 wards and 17 primary health centers.

This study was carried out in Orolu Local Government Council Area, which is made up of ten wards. Each of these wards is made up of communities and areas.

The list of the wards and communities are as follows:

Ward 1 Olufon.

Ward 2 Owoka.

Ward 3 Araromi.

Ward 4 Bolorunduro

Ward 5 Ooye

Ward 6 Jaleyemi

Ward 7 Eleesi.

Ward 8. Egan aaje.

Ward 9. Osun eesa

Ward 10 Okiti molufo.

These 10 wards are made up of 17 primary health centers namely:

1. Olufon health center
2. Owoka PHC
3. Araromi PHC

4. Bolorunduro PHC
5. Ooye PHC
6. Jaleyemi PHC
7. Eleesi PHC
8. Odo-oje PHC
9. Egan-aaje PHC
10. Osun eesa PHC
11. Owode PHC
12. Okiti PHC
13. Molufon PHC
14. Idi-iroko health center
15. Bolorunduro village health center
16. Ologele health center
17. Ikimon health center

This local government consists of multi-ethnic nationalities predominantly dominantly by the Yoruba, Hausas, Fulani, Igbo. The inhabitants are mostly traders, farmers, civil servants, students etc.

3.1 Research Design

The study made use of facility based cross sectional survey design.

3.2 Population of the Study

Cross-sectional study design was used for this study, the target population consisted of pregnant women within the age-group 15 and 49 years as categorized by the National health demographic survey (NDHS, 2018) as the age fertility range.

Inclusion Criteria

The study involved pregnant women that attended antenatal care sessions in the selected primary health centers in Orolu Local Government.

Exclusion Criteria

The study excluded:

1. Pregnant women with previous mental illness
2. Ill pregnant women
3. Women in labor or in their post-natal period.

3.3 Sample and Sampling Techniques

A three staged sampling procedure was used in this study which was made up of three different Stages.

- Stage 1: The 10 wards in Orolu local government were stratified into 3 based on the Level of development (Transitory, peripheral and inner core).

- Stage 2: Simple random sampling was used to select one primary health center each from the 3 previously stratified wards.
- Stage 3: Proportionate sampling was then used to determine the total number of respondents to select in each of the health facility.

All pregnant women in each of the primary health centers who came for antenatal care sessions during the period of 2nd and 20th September 2022 were recruited into the study until allocated number of respondents were reached.

Records of estimated total numbers of patients who attend antenatal care sessions in each of the health facility were obtained before hand in each of the health facility.

Table 3.3.1

Records of patients that attended antenatal care sessions in each of the heath facility

	Eleesi Primary Health Centre	Araromi Primary Health Centre	Ooye Primary Health Centre	Total
Estimated total of antenatal patients seen in a week	100	30	50	180

Table 3.3.2

Selection of total number of respondents from each of the health facility using proportionate Random sampling

	Eleesi Primary	Araromi Primary	Ooye Primary	Total

	Health Centre	Health Centre	Health Centre	
Total number of respondents selected from each Health Facility	(100×330)÷180 =183	(30×330)÷180 =55	(50×330)÷180 =92	330

All the antenatal care patients who came for antenatal care sessions between 2nd and 20th September 2022 were selected for participation in this study after getting informed consent from them. Collection of data was done for 3 consecutive weeks in each of the selected health facility in order to meet up with the sample size.

The three primary health centers of interest were;

I. Eleesi health center,

II. Araromi health center and

III. Ooye health center.

Eligibility criteria

All pregnant women that attended primary health centers within Orolu local government within the period of 2nd and 20th September 2022.

Sample Size Determination

The sample size (n) was determined by using Lwanga and Lemeshow sample size formula: [2]

$$n = \frac{Z^2 p (1 - p)}{d^2}$$

Where n = minimum sample size required

Z = confidence limit of survey at 95% (1.96)

P = Prevalence of antenatal depression in Nigeria is 26.6% (Dadi et al.,2020)

d = absolute deviation from true value (degree of accuracy) = 5% n =

1.962x0.226x0.734÷(0.05×0.05) = 300.01

Approximately 300

A non response rate of 10% was added

10% of 330 = 30

30 non-response rate was then added to the calculated minimum sample in order to address any possible case of incomplete response. (30+ 300) = 330. Therefore, the Sample size is 330.

3.4 Description of Research Instruments

A 10-item questionnaire called the Edinburgh Postnatal Depression Scale (EPDS) was created to help determine whether a woman had postpartum depression[3]. The scale's items are related to a variety of clinical depression symptoms, including suicidal thoughts and behavior, fatigue, and feelings of guilt. The EPDS may be used up to eight weeks after delivery and may also be used to evaluate pregnant women for depression.

The Edinburgh Postnatal Depression Scale is a commonly used depression screening instrument that has been translated and validated in a variety of languages, including English, Spanish, Arabic, Hindi, Turkish, Swedish, German, French, and Dutch[4]. Scottish health facilities in Edinburgh and Livingston created the Edinburgh Postnatal Depression Scale initially

IPV during pregnancy was evaluated using the Abuse Assessment Screen (AAS) questionnaire.

This scale is frequently used and has good validity and reliability to test for IPV in pregnant women. The mental, physical, and sexual components of domestic violence are all evaluated on the scale. Five separate components made up the questionnaires.

Socio-demographic traits: these factors included age, sex, educational attainment, marital status, occupation, ethnicity, religion, monthly income, and type of marriage. They also included variables like a person's age and sex.

Assessment of antenatal depression prevalence among expectant women in Orolu Local Government; this section used The Edinburgh Postnatal Depression Scale (EPDS), a 10-item questionnaire designed to identify women who have postpartum depression. The scale's items

are related to a variety of clinical depression symptoms, including suicidal thoughts and behavior, fatigue, and feelings of guilt.

Evaluation of risk factors for depression in this section, which also covered relationships with partners and family members, plans to become pregnant, support from partners for seeking professional assistance, a history of miscarriages, stillbirths, and protracted labor, among other things, included information on risk factors.

The assessment of gender-based violence during pregnancy as a risk factor for prenatal depression includes descriptions of various forms of violence, including physical and domestic abuse or emotional abuse. The participants were questioned on a variety of topics, including if they were permitted to contribute to the relationship and whether they had ever been struck or slapped by their partners while expecting.

Evaluation of stressful life events that may increase the risk of depression during pregnancy; this section examined the impact of experiencing problems with money, housing, losing a job, losing a close relative, and other issues. Administered questionnaires were used to get responses. Interviewers delivered the surveys because the majority of respondents were unable to complete them on their own.

3.5 Validity of Research Instruments

The questionnaire was pre-tested among 31 pregnant women, regardless of their trimester in pregnancy, to ensure validity (measuring what it aims to measure) and reliability (consistency of measurements). These women were recruited from the antenatal clinic similar to the selected primary health centers in Orolu local government area as regards population, characteristic, and socio-demography. Women who were not pregnant as well as

those in labor or the postpartum period who were not a part of the main study were not allowed to take the pretest. They were questioned on the clarity of each question, whether they understood it or not, and whether they thought any questions should be removed.

A pro forma questionnaire about demographic information, such as age, marital status, education level, and so forth, was given to the pregnant women. Thirty-one pregnant women of any trimester were recruited from the antenatal clinic of Owode Primary Health Center in Okiti Local Government, which is comparable to the chosen primary health centers in Orolu Local Government Area in terms of population, characteristic, and socio-demography. The study was conducted for 7 days after review and approval by the project supervisor. Women who were not pregnant as well as those in labor or the postpartum period who were not a part of the main study were not allowed to take the pretest. They were questioned on the clarity of each question, whether they understood it or not, and whether they thought any questions should be removed.

Before completing the translated Yoruba version of the Edinburgh Postnatal Depression Scale, which consists of a 10-item self-report questionnaire asking women to rate how they felt in the previous seven days and assessing risk factors for antenatal depression, the pregnant women were first given a pro forma questionnaire about demographic information, such as age, marital status, level of education, and so forth.[5]

After the pretest, the questionnaire was changed, with some items being deleted and others being added. The phrase "Have you ever encountered or are you currently experiencing any form of violence" was eliminated. There were more inclusive and objective questions about violence, with a list of different forms of violence and yes/no response options. The initial question, "Have you experienced some form of difficult life events like loss of a close

relative or friend, housing issues?" was reframed and thus replaced in the questionnaire, placing more emphasis on stressful life events through the use of numerous examples.

Since most respondents couldn't even measure or identify depression, the section on pregnant women's knowledge of depression and the questions about respondents' help-seeking behavior were also eliminated. Instead, risk factors for depression and experiences of violence during pregnancy were substituted.

Prevalence was 58% based on the pretest findings, which showed that 18 out of 31 (58%) of the pregnant women had scores above 10. Age, marital status, income level, and partner support were additional risk factors for depression. Antenatal depression may result from a lack of a caring companion. Furthermore, pregnant women between the ages of 18 and 25 (most of whom were single) scored highly on the EPDH scale. This is because, in traditional African society, any woman who becomes pregnant at a young age while unmarried is considered promiscuous, and single parenting is not considered socially acceptable. Additionally, pregnant women from polygamous households also scored highly, which may be related to a lack of support from their partners. The majority of pregnant women also reported financial difficulties, which is another important risk factor for antenatal depression. In conclusion, the pretest had demonstrated that the target respondent, who may be viewed as representatives of pregnant women in the community, suffers from depression rather frequently. Age, marital status, income level, and partner support were all contributing factors.

The field helpers were closely supervised in order to attain reliability. Analysis of the data from the pre-testing exercise with a reliability coefficient of 0.72 was used to determine the dependability of the research tools.

3.6 Study Variables

Intimate partner violence and depression during the current pregnancy were the key outcome variables. Questions from the WHO multi-country study on women's health and domestic violence against women questionnaire were used to assess IPV.

Additionally employed as a covariate for the outcome of IPV was maternal depression. Age (years), own and partner's education, occupation, residence, income, parity (number of alive children), desired pregnancy (desired, not desired, don't know), history of parental violence, use of alcohol, khat, and cigarettes in the previous 30 days (yes, no), and social support were all covariates included in the analysis. Social support was measured by six items of the Maternity Social Support Scale.

The Edinburgh Postnatal Depression Scale's ten questions were used to assess maternal depression (EPDS 30)

3.7 Data Collection

A structured questionnaire was utilized as a data collecting tool to gather socioeconomic and demographic data as well as to analyze the risk factors for prenatal depression.

Data Collection Procedures

After the pretesting of the study tools, data was gathered using questionnaires. A revised version of the pre-tested and structured questionnaire was used to interview the respondents.

3.8 Data Analysis

The administered copies of the questionnaire were given serial numbers for quick identification, accurate data input, analysis, and recall of any instruments with one or more issues. The questionnaire's completed cycles were manually sorted out, cleaned, and coded; a

coding guide will be created to be used to code each question prior to data submission. Statistical software SPSS version 20.0 was used for data entry and management. In order to summarize the dependent and independent variables, descriptive statistics including percentage, mean, frequencies, and standard deviation were utilized. Chi-square test was used for cross-tabulations between the dependent and independent variables, such as age and the type of depression, in univariate/bivariate analysis. 0.05 (95%) was chosen as the confidence level, which is the standard for most descriptive studies (Field, 2005). Tables and charts were utilized to illustrate the findings while descriptive statistics, such as percentages and frequencies, were employed to characterize the data.

3.9 Ethical Approval

After outlining the study's goals to each participant, their informed consent was obtained. The stakeholders in the hospitals as well as the University authority gave their consent for the study to be conducted. By informing the participants that the forms did not contain any means of identification, their trust was earned. With each respondent, ethical concerns such as confidentiality, the ability to decline an interview at any time, and avoidance of hazards were also covered. Only respondents who could provide informed consent—i.e., those who could show that they understood the study's goals and implications for them—were chosen to participate in the study. Any Participant who wished to withdraw at any moment was free to do so. The confidentiality of any information was guaranteed, and participation was completely voluntary and without any kind of coercion. The respondents' anonymity and

privacy were respected. All information provided by the participants is kept private, stored in a secure location, and will only be used for research.

Beneficial effects for participants: Despite the absence of immediate and direct advantages for participants, the data from this study can be used to help implement counseling and treatment facilities for pregnant women who are diagnosed with depression, enhancing their quality of life.

Non-malificience to participants

The research did not require collection of invasive materials. Therefore, safety of the participants was guaranteed

Endnotes

1 *Post offices with the map of LGA.* NIPOST. Archived from the original, 2009.

2 S. Lwanga & S. Lemeshow Sample size determination in health studies, 1991

3 J.L.Cox, J.M.Holden, R.Sagovsky., Detection of postnatal depression. Development of the 10-item Endiburgh postnatal depression scale. **Br J Psychiatry** 1987;150:782-6

4 Jairaj, Fitzsimons, McAuliffe, O'Leary , Joyce, A population survey of prevalence rates of antenatal depression in the Irish obstetric services using the Edinburgh postnatal depression scale (EPDS). **Arch Women Ment Health**. 2019;22(3):349–55.

5 Bergant, Nguyen, Heim, Ulmer, Dapunt (1998), German Language version and validation of Endiburgh postnatal depression scale. **Dtsh Med wochenster**. Jan 16;123(3), 1998, 35-40. PMID 9472218

6 Garcia-Esteve, Ascaso, Ojuel, Navarro, Vivilaki., Description of Edinburgh Postnatal Depression Scale 2009

Chapter Four

Results and Discussion of Findings

4.1 Demographic Data

A total of 330 respondents took part in the study (Table 4.1). All of the respondents who were contacted were expecting mothers. The respondents' ages ranged from 17 to 44 years old, with a mean age of 28.23±5.86. The majority of respondents—182 (55.1%)—were between the ages of 25 and 34; just 89 (26.9%) were between the ages of 15 and 24; and the remaining respondents were 35 years old.

Among the respondents, 265 (80.2%) were of the Yoruba ethnic group, followed by 38 (11.5%) of the Hausa ethnic group, 22 (6.8%) of the Igbo ethnic group, and 1 (0.3%) each of the Efik, Edo, Fulani, 2 (0.6%), and Delta ethnic groups.

Muslims made up the majority of responders (167; 50.5%), followed by Christians (162; 49.2%), and African traditionalists (1; 0.3%). Fewer respondents, 77(23.2%), had primary education as their highest level of education, followed by 73(22.3%) respondents with tertiary level education, and the fewest respondents, 8(2.5%), had no formal education. The majority of respondents, 172(52.0%), had secondary education as their highest level of education.

Some of the respondents—154 (46.7%) were traders, 70 (21.1%) were artisans, 33 (9.9%) were housewives, 21 (6.5%) were either students or unemployed, and 16 (5.0%) were self-employed.

The majority of the respondents, 255 (77.3%), were married; 71 (21.4%) were single; 2 (0.6%) were either separated from their spouses or divorced; and 2 (0.6%) were widowed. Table 4.1 displays the outcome.

Table 4.1.0 Relationship between the number of study respondents and the Socio-demographic characteristics

N=330

Socio-demographic characteristics

Variables.	Frequency	%
Age(years).		
15-24.	89	26.9
25-34	182	55.1
35+	59	18.0

Ethnic group		
Yoruba	265	80.2
Hausa	38	11.5
Igbo	22	6.8
Others.	5	1.5
Religion		
Christianity	162	49.2
Islam	167	50.5
African tradition.	1	0.3
Highest level of education		
No formal education	8	2.5
Primary education	77	23.2
Secondary education	172	52.0
Tertiary education.	73	22.3
Occupation		
Trading	154	46.7
Artisan	70	21.1
Housewife	33	9.9
Government/Private worker	36	10.8
Self-Employed	16	5.0
Student/Unemployed.	21	6.5
Marital status		
Married.	255	77.4
Widowed	2	0.6

Separated/divorced	2	0.6
Single	71	21.7

Out of the three hundred and thirty (330) respondents, the majority, 324 (98.1%), do not smoke, while only six (1.9%) do. Eleven (3.4%) of the respondents also consume alcohol, whereas the majority of pregnant women, 319 (96.6%), do not.

The majority of the pregnant women, 219 (66.3%), were in their third trimester, followed by 101 (30.7%) and 10 (3.0%) who were in their second trimester. The outcome is displayed in table 4.1.1.

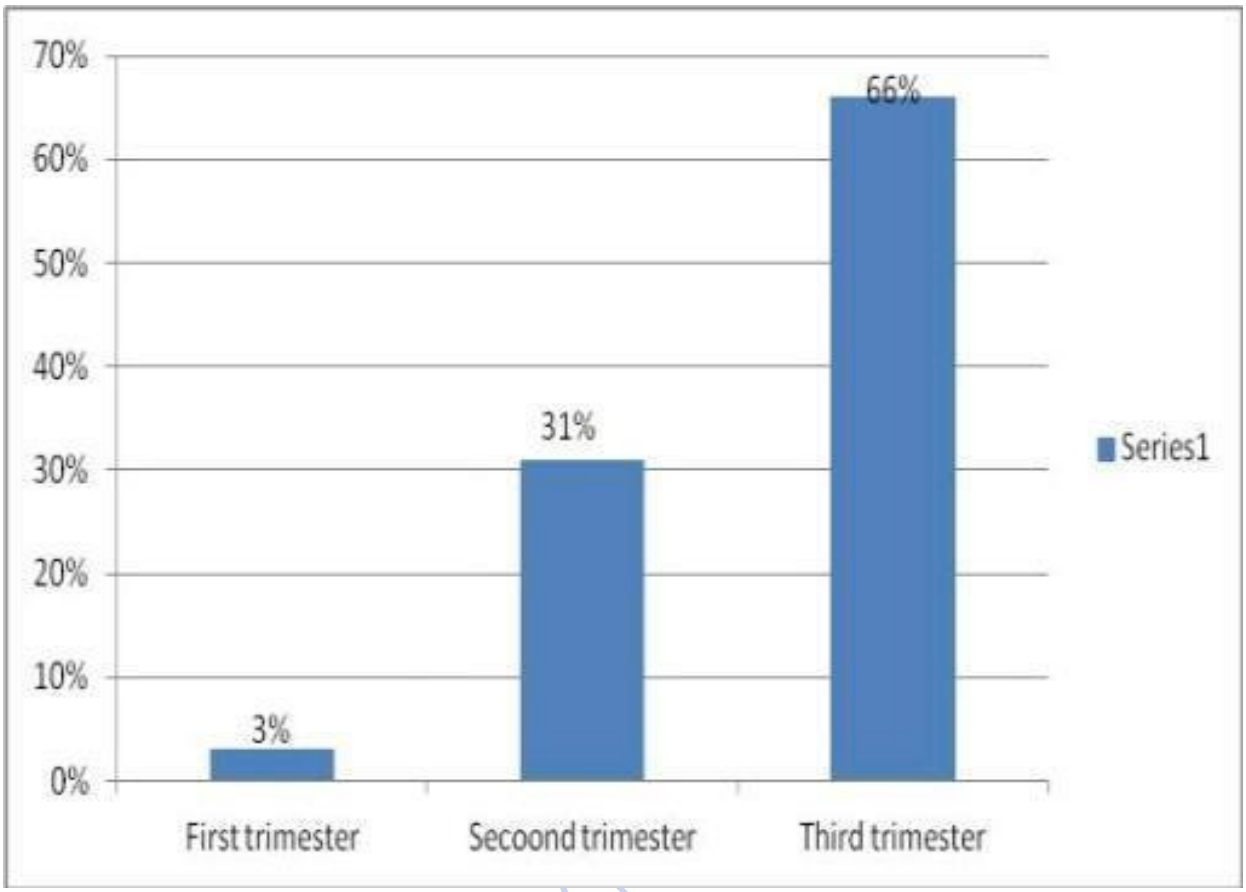
Table 4.1.1 Relationship between the number of respondents and their social habits.

Smoking and use of alcohol

Smoking and consumption of alcohol.	**Frequency**	**%**
Smoking		
Yes	6	1.9
No	324	98.1
Total	**330**	**100.0**
Consumption of Alcohol		
Yes	11	3.4

No.	319	96.6
Total	**330**	**100.0**

Figure 4.1 **Trimester in pregnancy**



Timing of Pregnancy

4.2 Presentation of Data

Prevalence of Antenatal Depression

Responses of the pregnant women to the statement, "I have been able to laugh and see the funny sides of things," revealed that the majority, 184 (55.7%) of the respondents, had been able to do so "As much as they always could," while only 71 (21.4%) of the respondents said, "Not quite so much now," 41 (12.4%) answered, "Definitely not so much now," and 34 (10.5%) said, "not at all."

The respondents' answers to the statement "I have unduly placed the blame when things went wrong" were as follows: 135 (40.9%) responded "Yes, sometimes," 86 (26.0%) stated "Yes, most of the time," 68 (20.7%) answered "No, never," and 41 (12.4%) checked the box "Not very frequently."

The following are the respondents' answers to the question, "I have been concerned or worried for no good reason." 102 respondents (31.0%) and 114 (34.4%) said "No, not at all." 54 (16.4%) of the pregnant women chose "Hardly Ever," while 60 (18.3%) chose "Yes, very often."

Pregnant women's responses to the statement "I have been terrified or panicky for no really good reason" were as follows: Few 114 (34.4%) said "No, not at all," while 98 (29.7%) chose "Yes, occasionally," 60 (18.3%) replied "Yes, quite a lot," and 58 (17.6%) responded "No, not much."

When pregnant women were asked to respond to the statement "Things have been getting on top of me," the responses were as follows: 121 (36.5%) said "No, I have been coping as well as ever," 81 (24.5%) chose "No, most of the time I have coped quite well," 68 (20.7%) said

"Yes, sometimes I haven't been coping as well," and the remaining respondents (68%) chose "No, I have been coping as well as ever

Yes, most of the time I haven't been able to cope at all, said 60 respondents (18.3%).

These are the respondents' responses to the claim that "I have been so miserable that I have Difficulty sleeping"; A significant portion of respondents—120 (36.5%)—answered "No, not at all," followed by 73 (22.3%), "Yes, occasionally," 69 (21%) and "Yes, most of the time," and 68 (20.7%) of pregnant women.

When asked to react to the statement, "I have felt sad or unpleasant," the majority of respondents, 126 (38.4%), said, "Not very frequently," whereas 80 (24.2%) of the respondents who were pregnant said, "Not very often."

"No, not at all," "Yes, quite often," and "Yes, most of the time," respectively. The least number of respondents, 45 (13.6%), chose "No, not at all."

Most of the respondents stated "Yes, most of the time" in response to the statement "I have been so upset that I have been crying." However, some respondents said "No, never," "Only occasionally," and "Yes, most of the time."

Yes, rather frequently was answered by 59 respondents (18.0%).

When asked if the notion of killing oneself had ever crossed their minds, the majority of respondents—292 or 88.5%—said "never." Eleven respondents—or 3.4% of the total sample—said it had done so occasionally or scarcely ever, while 15 respondents—or 4.6%—said it had done so rather frequently. It was also noted that 38 out of 330 respondents (11.4%) reported having considered killing themselves in the previous week. Table 4.2.0 presents the findings.

Table 4.2.0 Responses of the pregnant women to depression statements

I have been able to laugh and see the funny sides Of things	Frequency	Percent
As much as I always could	184	55.7
Not quite so much now	71	21.4
Definitely not so much now	41	12.4
Not at al	l34	10.5

I have looked forward to enjoyment with things Variables	Frequency	Percent
As much as I ever did	158	48.0
Rather less than I used to do	51	15.5
Definitely less than I used to do	75	22.6
Hardly at all	46	13.9

I have blamed myself unnecessarily when things went wrong	Frequency	Percent
Yes most of the time	86	26.0
Yes, some of the time	135	40.9
Not very often	41	12.4
No, never	68	20.7

I have been anxious or worried for no good reason	Frequency	Percent
No, not at all	114	34.4
Hardly ever	54	16.4
Yes, sometimes	102	31.0

Yes, very often	60	18.3

I have felt scared or panicky for no very good reason

	Frequency	Percent
Yes, quite a lot	60	18.3
Yes, sometimes	98	29.7
No, not much	58	17.6
No, not at all	114	34.4

Things have been getting on top of me

	Frequency	Percent
Yes, most of the time I haven't been able to cope at all	60	18.3
Yes, sometimes I haven't been coping as well	68	20.7
No, most of the time I have coped quite well	81	24.5
No, I have been coping as well as ever	121	36.5

I have been so unhappy that I have difficulty sleeping

	Frequency	Percent
Yes, most of the time	69	21.1
Yes, sometimes	73	22.3
Not very often	68	20.7
No, not at all	120	36.5

I have felt sad or miserable	**Frequency**	**Percent**
Yes, most of the time	45	13.6
Yes, quite often	79	23.8
Not very often	126	38.4
No, not at all	80	24.2

I have been so unhappy that I have been crying

	Frequency	Percent

Yes, most of the time	67	20.4
Yes, quite often	59	18.0
Only occasionally	73	22.0
No, never	131	39.6

The thought of harming myself has occurred to me

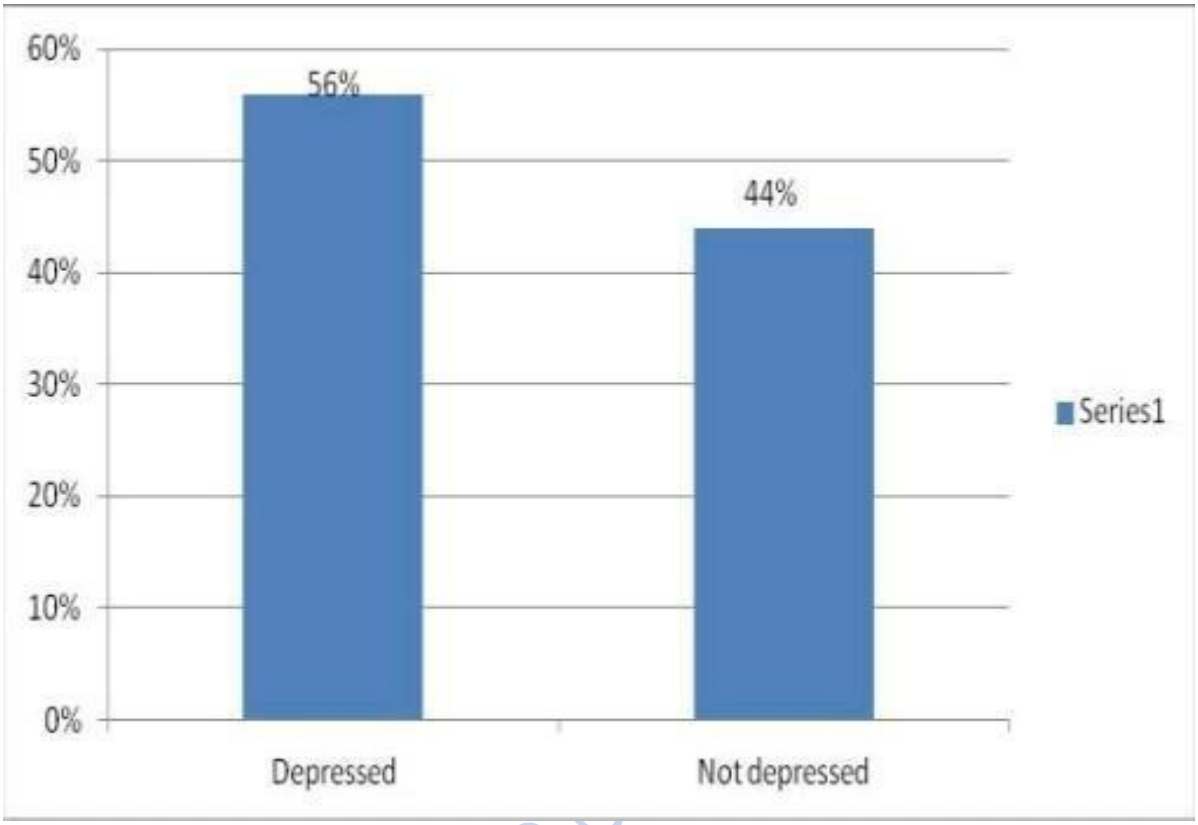
	Frequency	Percent
Yes, quite often	15	4.6
Sometimes	11	3.4
Hardly ever	11	3.4
Never	292	88.5

4.2.1 Categorization of Depression among Pregnant Women

The Edinburgh Postnatal Depression Scale was used to categorize 330 respondents as depressed or not depressed. Pregnant women with scores above 10 out of a possible 30 were considered depressed, while people with scores below 10 (0–10) were considered not depressed.

It was clearly stated on the scale that any respondents who scored above 10 should be classified as depressed and below 10 should be classified as not depressed. However, a clinical test should be repeated to determine the severity of depression in those whose scores are above 10, as each question on the scale attracts a score of three, making a total score of 30. The outcome is displayed in figure 4.2.1;

Figure 4.2.1 Categorization of depression among pregnant women



4.2.2 Responses of the Pregnant women to the assessment of risk factors associated with Depression in pregnancy

The majority of respondents, 302 (91.6%), report having positive relationships with their parents and other family members, while only 28 (8.4%) report having negative relationships with these people. The majority of respondents (294, or 89.2%) say they and their wives enjoy a good connection, however 36 respondents, or 10.8%, said they don't get along well with their spouses. When it comes to housework and child care, 180 of the respondents (54.5%) do not receive assistance from their partners, whereas 150 respondents (45.5%) did.

204 respondents, or 61.9%, indicated their pregnancy was planned. Only 108 (32.8%) of the expectant women reported having trouble getting pregnant. When asked if they make concrete decisions together with their partners about delivery, the majority of respondents—213 (64.4%)—said yes, while fewer than half of the pregnant women—117 (35.6%)—said they do not. The majority of respondents—214 (64.7%)—also said they receive encouragement to seek professional help when necessary, while the remaining 116 (35.3%)—did not receive this encouragement.

Fewer than 61 respondents (18.6%) reported having had miscarriages or stillbirths. The majority of pregnant women (276, or 83.6%) reported never having had a prolonged labor in the past, but only 54 respondents (16.4%) reported having done so.

The majority of responders, 206 (62.5%), expressed worry about their ability to handle the expected baby. Few respondents (66, or 20.1%) reported having pregnancy-related health issues. Fewer pregnant women (14, or 4.3%), meanwhile, depend on drugs, alcohol, or other

substances to get by. The majority of respondents (316, or 95.7%), however, do not use these substances in their daily lives. Table 4.2.2 presents the outcome;

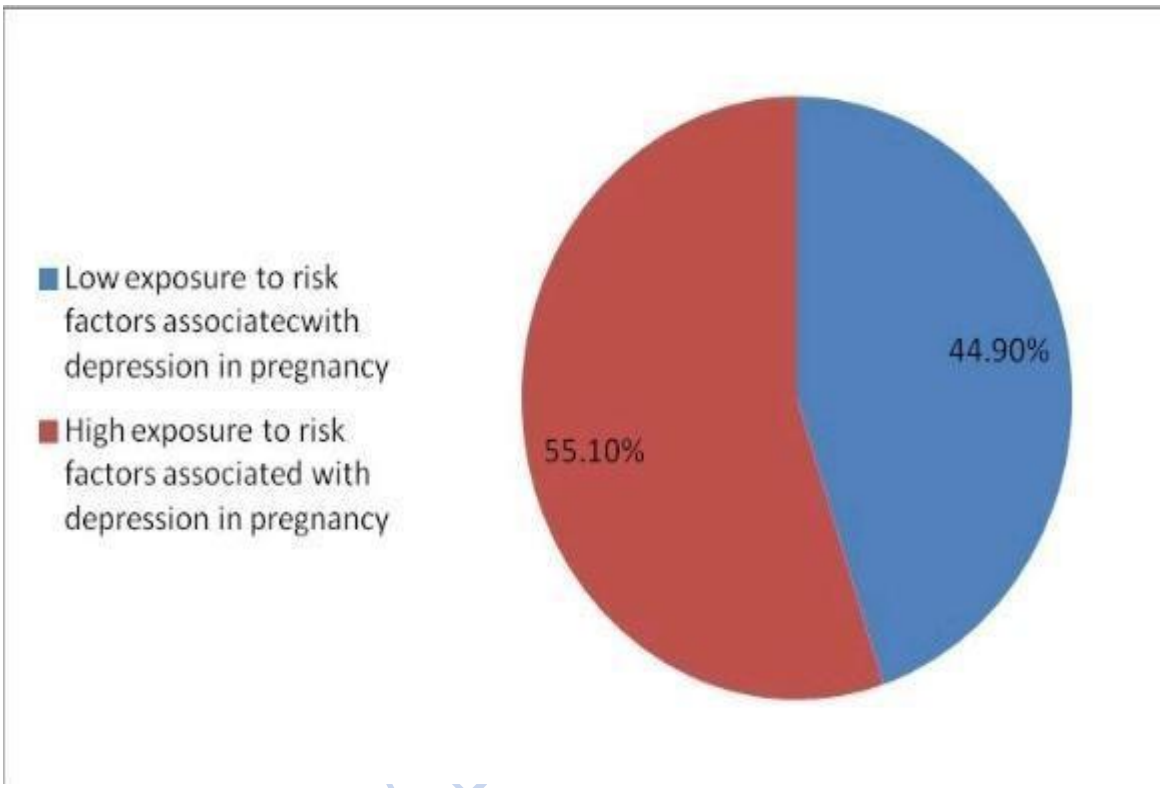
Table 4.2.2 Responses of the pregnant women to the assessment of risk factors associated with depression in pregnancy

Statement.	Response	
	Yes. Frequency(%)	No Frequency(%)
Good relationship with parents and other family members	302(91.6)	28(8.4)
Good relationship with spouse	294(89.2)	36(10.8)
Getting help from husband with house chores and in taking care of the children	150(45.5)	180(54.5)
Intention to get pregnant	204(61.9)	126(38.1)
Difficulty becoming pregnant	108(32.8)	222(67.2)
Joint and concrete arrangements with partner towards delivery?	213(64.4)	117(35.6)
Encouragement to seek professional help when needed	214(64.7)	116(35.3)
Previous episodes of miscarriage or still birth	61(18.6)	269(81.4)
Experienced prolonged labor in the past	54(16.4)	276(83.6)
Anxious about being able to cope with the expected baby	206(62.5)	124(37.5)
Health problems in pregnancy	66(20.1)	264(79.9)
Rely on drugs, alcohol or other substances to help with daily activities	14(4.3)	316(95.7)

Categorization of the risk factors for antenatal depression

A 12-point scale was used to classify the risk factors for prenatal depression. Most respondents—148, or 44.9%—had minimal exposure to risk factors for prenatal depression, while many respondents—182, or 55.1%—had significant exposure to these risk factors.

Figure 4.2.2 Categorization of the risk factors for antenatal depression



Categorization of respondents' level of exposure to risk factors associated with antenatal depression and experience of depression

A total of 147 respondents were identified as having low exposure to the risk factors for prenatal depression, of whom 95 (51.9%) and 95 (34.9%) were determined to be depressed, respectively. Additionally, 183 pregnant women were identified as having a high exposure to the risk factors for prenatal depression, of whom 89 (48.1%) had depression and 94 (64.1%), respectively.

A statistically significant link exists between the category of risk factors for depression and depressive experience (X2=8.253, df=1, Pvalue=0.004).

Categorization of respondents' level of exposure to risk factors associated with Antenatal depression and experience of depression

	Experience of Depression					
Level of exposure to risk Df Factors	**Depressed (%)**	**Not depressed(%)**	**Total**	**$X^{2.}$**	**P-val.**	
Low exposure	52 (35.9)	95(51.9)	147	8.253	0.004	1
High exposure	94(64.1)	89(48.1)	183			
Total	**146**	**181**	**330**			

4.3 Prevalence of Intimate Partner Violence

4.3.1 Physical violence

Only 26 (8.0%) of the respondents reported that their partners had punched them with their fists while they were expecting, and only 9 (2.8%) reported that their partners had hit them with something sharp or painful. Meanwhile, 8 (2.5%) of the respondents reported that their partners had kicked them while they were expecting. Only 20 women (6.2%) reported being punched while pregnant by their spouses. In contrast, the majority of respondents, 317 (96.0%), said their partners had never physically abused them while they were pregnant. Of the 330 respondents, 13 (4.0%) had experienced partner beatings during pregnancy.

Of the 78 pregnant women, 23.5% (23/4) had been dragged by their partners at some point. Only 15 (4.6%) of the respondents said their spouses had ever thrown anything at them in a rage, while 315 (95.4%) of the respondents said their partners had never done so when they were pregnant. Only 4 (1.2%) of the respondents admitted to being struck while pregnant by a partner's relative.

4.3.1 Experience of physical violence

Statement Responses	**(Yes)**
Physical violence Frequency(%)	
Ever been hit by partner with his fists while pregnant	26(8.0)
Ever been hit by partner with a sharp object or anything that could hurt while pregnant	9(2.8)
Ever kicked by partner while pregnant.	8(2.5)
Ever punched by partner while pregnant.	20(6.2)
Ever slapped by partner while pregnant.	25(7.7)
Ever been beaten by partner while pregnant.	13(4.0)
Ever been dragged by partner while pregnant.	78(23.5)
Ever threatened by partner with a knife	15(4.6)
Partner ever throw things at you when angry while pregnant.	15(4.6)
Partners relative ever hit you while pregnant.	4(1.2)

4.3.2 Experience of Psychological Violence

About half of the pregnant women 163 admitted that their partners had called them derogatory names while they were expecting, and more than half 182 felt interrupted by their partners. Of the respondents, 214 (65.0%) reported that their husbands had yelled at them while they were expecting. Few 113 respondents (34.1%) responded positively when asked if they feel their partners criticize them. A small percentage of respondents, 34 (10.2%), claimed that their partners prevent them from seeing their relatives and friends, although the majority of pregnant women, 296 (89.8%), claimed that their partners do not do this. Only 124 (37.5) of the respondents had experienced prenatal insecurity. Of the respondents, 186 (56.3%) said that their husband downplayed their contributions to the marriage.

4.3.2 Experience of Psychological Violence

Experience of psychological violence.	Yes Number (%)
Ever been yelled at by partner while pregnant	214(65.0)
Ever been called names or worthless by partner while pregnant	163(49.5)
Ever been interrupted by partner while pregnant	182(55.1)
Ever been criticized by partner while pregnant	113 (34.1)
Partner ever minimized contribution to relationship while pregnant.	186(56.3)
Ever been kept away by partner from family or friends while pregnant	34(10.2)
Have you ever felt unsecure in this pregnancy.	124(37.5)

4.3.3 Experience of Sexual Violence

Only 86 (26.0%) of the respondents reported having been coerced into having sex, whereas 244 (74.0%) of the pregnant women said their boyfriends had never coerced them into having sex while they were expecting.

4.3.3 Experience of Sexual Violence

	Yes Number (%)
Ever been coerced by partner to have sex with them	8(26.0)

4.3.4 Prevalence of Physical, Psychological and Sexual Violence

Majority 218(66%) of the respondents had experienced psychological violence one way or the other, Few 26(8%) of the respondents had experienced all forms of physical violence while about 86(26%) of the respondents had experienced sexual Violence.

A total of 110 respondents had experienced all the three forms of Violence

4.3.5 Assessment of Stressful Life Events that could lead to Depression in Pregnancy

Among the respondents, only 78 (23.6%) said they had recently experienced the death of a close friend or relative. 186 respondents (56.3%) reported having financial difficulties, compared to just 41 (12.4%) who had housing challenges, 35 (10.5%) who had recently lost their jobs, and 17 (5.0%) who had experienced a natural disaster such a flood or fire. Table 4.3.5 displays the results;

Table 4.3.5 Experience of Stressful Life Events

Statement	Response (Yes) Number (%)
Experienced death of a close relative or friend recently?	78(23.6)
Experienced housing problems?	41(12.4)
Experienced financial difficulties?	186(56.3)
Recently loss of job?	35(10.5)
Experienced any form of natural disaster recently like flood, fire outbreak?	17(5.0)

4.3.6 Categorization of Exposure to Stressful Life Events

On a 10-point scale, the respondents' exposure to stressful life situations was rated. The majority of respondents—302 (91.6%)—had minimal exposure to stressful life events, whereas only 28 (8.4%) of them had significant exposure.

4.3.6 Categorization of respondents' level of exposure to stressful life events and experience of depression

A total of 296 respondents were identified as having low exposure to stressful life events, of whom 142 (97.2%) were not depressed and 161 (87.3%) were; in contrast, 27 respondents were identified as having high exposure to stressful life events, of whom 4 (2.8%) were not depressed and 23 (12.7%) were.

According to statistics (X2=10.161, df=1, Pvalue=0.01), there is a link between being exposed to stressful life events linked to depression and experiencing depression.

Table 4.3.6 Categorization of respondents' level of exposure to stressful life events and experience of depression

Experience of Depression

Exposure to stressful life events	**Not depressed (%)**	**Depressed (%)**	**Total.**	**X^2**	**P-val.**	**Df**
Low exposure	142(97.2)	161(87.3)	303	10.161	0.01	1
High exposure	4(2.8)	23(12.7)	27			
Total	**146**	**184**	**330**			

4.4 Test of Hypothesis

1. There is no significant association between the demographic characteristics of respondents and depression in pregnancy.

2. There is no significant association between experience of violence and depression in pregnancy

3. There is no significant association between parity and depression in pregnancy

4.5 Discussion of Findings

4.5.1 Relationship between demographic characteristics (age, level of education) of respondents and experience of depression in pregnancy

According to the first hypothesis, there would be no connection between respondents' age, education level, religion, and ethnicity and their experience with depression during pregnancy.

The largest rate of depression was reported by respondents in the age range of 24-35 years (97; 53.4%), followed by pregnant respondents in the age range of 15-24 years (55; 62.1%), and respondents 35 and older (33; 55.2%).

(X2=1.816, df=2, p value=0.40) The age of respondents had no statistically significant relationship to depression during pregnancy.

The highest frequency and percentage of respondents who reported having experienced depression were those with secondary education. 89 (51.9%) of the 172 respondents with secondary education as their highest level of education were depressed. Additionally, out of 77 respondents with primary education as their highest level of education, 19 (24.9%) were

depressed; out of 73 respondents with tertiary education as their highest level of education, 17 (23.2%) were not depressed and 56 (76.1) were; the population of respondents in this category with the lowest frequency is the category with no formal education; of these 8 respondents, 4 (2.8%) were not depressed and 4 (2.2) were found to be depressed. As a result, there was no statistically significant correlation between education level and depression experience. (X2 = 0.90, df = 3, p = 0.82)

A total of 167 respondents identified as Muslims, of whom more than half, 85 (50.3%), were depressed. Of the 162 Christians who responded, only a small number (49.3%) were not depressed and 82 (49.2%) were. According to statistics (X2=7.008, df=3, pvalue= 0.07), there was no statistically significant correlation between religion and depressive experience.

Yorubas made up the majority of respondents; 220 of them (83.1%) reported feeling fine. There were 38 Hausa responders in all, and 19.7% of them were depressed. Ibo respondents made up 16 (8.8%) of the sample. There was no statistically significant correlation between respondents' ethnicity and their experience of violence. (X2=7.008; df; 2; p=0.65)

Table 4.5.1 Relationship between Demographic Characteristics (age, level of education) of Respondents and Experience of Depression in Pregnancy

N=330

	Not depressed (%)	Depressed (%)	X 2	P-val.	Df
Age-group					
15-24 years	34(37.9)	55(62.1)			
24-35 years	85(46.6).	97(53.4).	1.816	0.40.	2
35+years.	26(44.8).	33(52.2)			
Level of education					
No formal education	4(2.8)	4(2.2)	0.907	0.82	3
Primary education.	58(21.1)	19(24.9)			
Secondary education	83(52.1)	89(51.9)			
Tertiary education.	17(23.0).	56(77.0)			
Ethnic group					
Yoruba	220(83.1)	45(77.9)	7.008	0.07	3
Hausa.	19(12.7)	19(10.5)			
Ibo.	6(4.2)	16(8.8)			
Others	0(0.0) .	5(1.5)			
Religion					
Christianity.	80(49.3).	82(49.2)	0.788	0.65.	2
Islam	82(5.7)	85(50.3)			
African tradition.	0(0.0).	1 (0.6)			

4.5.2 Intimate Partner Violence As a Risk Factor for Depression

Relationship between the Experience of Violence and Depression in Pregnancy

According to the second theory, there would be no conclusive link between experiencing violence and depression during pregnancy.

304 respondents said they had never been hit by their partners while pregnant, and 137 (96.5%) of them were found not to be depressed while 167 (88.4%) were. Of the 26 respondents who had been hit while pregnant, 5 (3.5%) were categorized as not depressed and 21 (11.6%) as depressed. As a result, it was determined that there was a statistically significant link between the prevalence of violence among the respondents and the occurrence of depression during pregnancy. ($X2 = 7.021$, $df = 1$, $p=0.01$)

Twenty-five (25) respondents reported that they had been slapped by their partners while expecting a child. Six (4.2%), while not depressed, were among this group, while 19 (10.5%) were. 305 respondents stated that their partners had never struck them while they were pregnant, and 136 (95.6%) of this group did not experience depression, while 169 (89.5%) did. Violence experience and depression during pregnancy are significantly correlated among responders in this target demographic. ($X2 = 4.38$, $df = 1$, $p = 0.04$)

13 individuals in all had experienced prenatal abuse, with 2 (1.4%) not experiencing depression and 11 (6.1%) experiencing depression. Of the 317 respondents, 140 (98.6%) had never experienced partner abuse during pregnancy, while 177 (93.9%) had. Violence

experience and prenatal depression are significantly correlated among respondents in this group. (X2 = 4.49, df = 1, p = 0.03)

Table 4.5.2 Relationship Between Physical Violence and Experience of Depression in Pregnancy

N=330

Experience of Depression		Not depressed (%)	Depressed (%)	X^2	P-val.	Df
Ever been hit by	Yes.	5(3.5)	21(11.6)	7.021.	0.01.	1
partner with fist.	No.	137(96.5)	167(88.4)			
Total		**142.**	**188**			
Ever been slapped	Yes.	6(4.2)	19(10.5).	4.383	0.04.	1
partner while preg.	No	136(95.8)	169(89.5)			
Total.		**142.**	**188**			
Ever been beaten by	Yes.	2(1.4)	11(6.1)	4.49	0.03	1
Partner while preg.	No	140(98.6)	177(93.9)			

Total.	**142.**	**188**

4.5.3 Categorization of respondents' level of exposure to physical violence and experience of depression

322 respondents in total had little experience with physical violence; 142 (100.0%) of them were not depressed and 180 (95.6%) were. A total of 8 respondents reported having experienced high levels of physical violence, of whom 8 (4.4%) were depressed and 8 (0.0%) were not.

A statistically significant correlation exists between physical assault experience and depression experience (X2=6.436, df=1, Pvalue=0.01).

Table 4.5.3 Categorization of respondents' level of exposure to physical violence and experience of depression

Experience of Depression	Not depressed (%)	Depressed (%).	Total	X 2	P-val.	Df
Level of experience Of physical violence						
Low experience of Physical violence	142(100.0)	180(95.6)	322	6.436	0.01	1
High experience of Physical violence	0 (0.0)	8(4.4).	8			
Total	**142**	**188**	**330**			

4.5.4 Relationship between experience of sexual violence and depression in pregnancy

A total of 86 respondents reported that their partners had been coerced into having sex, of whom 26 (or 18.3%) were not depressed and 60 (or 32%) were. A total of 244 respondents reported never being forced to have sex while pregnant by their partners; 116 (81.7%) of them did not report having depression, while 128 (68.0%) did. As a result, there was a strong correlation between experiencing sadness and experiencing violence in this group of responders. P value is 0.01, df=1, and X2 is 7.800.

Table 4.5.4 Experience of sexual violence and depression in pregnancy

Experience of Depression		**Not depressed (%)**	**Depressed (%)**	**X 2**	**P-val.**	**Df**
Ever been forced by	Yes	26(18.3)	60(32.0)	7.800	0.01	1
Partner to have sex With them while Pregnant?	No	116(81.7)	128(68.0)			
Total		**142.**	**188**			

4 5.5 Relationship Between Experience of Psychological Violence and Depression in Pregnancy

182 respondents said that their spouses had decreased their contributions to the relationship; 79 (55.6%) of these individuals did not report any signs of depression, while 103 (56.9%) of the population did. When it came to depression, 55 (43.1%) of the respondents with partners who did not limit their contribution to the relationship were found to be depressed, compared to 63 (44.4%) of the respondents who did not. According to statistics (X2=0.052, df=1, pvalue=0.82), there was no correlation between experiencing violence and experiencing depression in this group.

4.5.5 Categorization of Respondents' Level of Exposure to Psychological Violence and Experience of depression

A total of 118 respondents reported having little experience with psychological abuse, of which 55 (8.1%) were depressed and 63 (69.0%) were not. A total of 182 respondents reported having experienced high levels of psychological violence, of which 103 (59.1%) were depressed and 79 (1.0%) were not.

A statistically significant correlation exists between psychological violence experienced and depression experienced (X2=14.269, df=1, Pvalue=0.00).

Table 4.5.5 Categorization of Respondents' Level of Exposure to Psychological Violence and Experience of Depression

Experience of Depression	Not depressed (%)	Depressed (%)	Total.	X 2	P-val.	Df
Level of exposure to psychological violence						
Low experience of psychological violence	63(69.0)	55(48.1)	118	14.269	0.00	1
High experience of Psychological violence	79(31.0)	103(51.9)	182			
Total	**142**	**158**	**330**			

4.5.6 Relationship between Intimate Partner Violence and Experience of Depression

N=330

Experience of Depression		Not depressed (%)	Depressed (%)	X2	P-val.	Df
Physical Violence	Yes.	5(3.5)	21(11.6)	4.383	0.01.	1
	No.	137(96.5)	167(88.4)			
Psychological Violence	Yes.	94(66.5)	124(66)	7.021	0.01	1
	No	48(33.5)	64(34.0)			
Sexual Violence	Yes.	26(18.3)	60(32.0)	4.49	0.03	1
	No	116(81.7)	128(68.0)			
Total.		**142.**	**188**			

4.5.7 Relationship between parity and experience of depression

According to the third theory, there would be no connection between parity and the occurrence of depression during pregnancy.

According to the Edinburgh postnatal depression scale, 102 (70.4%) of the 204 respondents who stated that their pregnancy was intended were not depressed, while 102 (55.2%) were identified as depressed. On the other hand, using the same scale, of the 126 pregnant women who said their pregnancy was unintended, 70 (44.4%) were categorized as depressive and the remaining 56 (29.6%) as not depressed.

The difference was found to be statistically significant ($X2 = 7.770$, $df = 1$, $P = 0.01$)

Additionally, it was noted that individuals whose pregnancies were unintended appeared to experience despair more frequently. Table 4.8.9 presents the outcome.

Table 4.5.7 Experience of depression and the intention to get pregnant

		Not depressed (%)	Depressed (%)	X^2	P-val.	Df
Intended pregnancy	Yes	102(70.4%)	102(55.2%)	7.770	0.01	1
	No	56(29.6)	70(44.4)			
Total.	**158**		**172**			

4.5.8 Relationship between experience of depression and financial difficulties

When asked if they were having financial troubles, a total of 144 pregnant women said, "No." However, of the entire population of respondents, 58 (40.4%) were depressed while the remainder 85 (59.6%) were not depressed, and 186 respondents stated they were. According to the Edinburgh Postnatal Depression Scale, 59 (31.9%) of the respondents in this demographic were not depressed, leaving 127 (68.1) who were depressed.

(X2=24.756, df=1, Pvalue=0.00) The association between depression type and experience of difficulties is statistically significant.

So it was found that respondents who were having financial problems were more depressed than pregnant women who weren't having financial problems at the time the study was conducted. The outcome is displayed in Table 4.5.8

Table 4.5.8 Experience of depression and financial difficulties

Experience of Depression		Not depressed (%)	Depressed (%)	X^2	P-val.
Df					
Experience of Financial difficulties 1	Yes.	59(31.9)	127(68.1)	24.756	0.00
	No	86(59.6)	58(40.4)		
Total.		**145.**	**185**		

Chapter Five

Conclusion

5.1 Summary of Findings

Socio-Demographic Characteristics of Respondents

The respondents' ages varied from 17 to 44, which is consistent with the National Health Demographic Survey's (NDHS, 2008) classification of the women's reproductive age range (15-49years). Age was 28.23 5.86 on average. This finding is also consistent with the NDHS 2013 study, which found that the age-specific fertility rate pattern of women in urban settings shows a narrow pick at age 25-29 years. The majority of 182 (55.1%) of the respondents were between the ages of 25 and 34. The research location is located in the south-western region of the country, where the Yoruba ethnic group is the dominant ethnic group, which may account for the majority of respondents' ethnicity. With 167 (50.5%) Muslims and 162 (49.2%) Christians, the two most popular religious groups were virtually equally represented in this survey, which can also be attributed to the fact that the study location is made up of these two major religious groups. Given that pregnancy is expected in married partnerships in Nigerian society, the findings that the majority of respondents were married may be explained.

In Orolu local government, the study sought to identify the frequency of depression among pregnant women who visited specific primary health institutions (Osun state). It showed a prevalence of 56.0%, which is fairly high and significant for public health. The high

prevalence supports research by Hobfall and colleagues, who found that low-income populations have prevalence rates of depression ranging from 25% to 50% when utilizing a variety of techniques. The high prevalence rate of depression was caused by the risk variables' high frequencies, which were analyzed. More than half of all respondents do not receive assistance from their partners with household tasks or child care, and this lack of support is a significant risk factor for depression during pregnancy. Less than half of respondents indicated that the pregnancy was unintended, and few respondents report having had a miscarriage or stillbirth. Few respondents also reported having experienced miscarriages or stillbirths. These are the main prenatal risks that have been linked to the high prevalence of depression.

Less than half of pregnant women reported that they had not been able to laugh or see the funny side of things at all in the previous seven days. A small percentage of respondents reported that they have not been able to laugh or see the funny side of things as much as they used to. Furthermore, only a small percentage of respondents said they anticipate enjoyment of things significantly less than they did in the past. Meanwhile, 50 respondents (15.5%) said they anticipate enjoyment of things somewhat less than they did in the past, and 45 respondents (13.9%) said they barely enjoy anything. The World Health Organization reports that for at least two weeks, many women experience low mood, a loss of interest and enjoyment, and impaired energy. Many persons who experience depression also experience anxiety symptoms, irregular eating and sleeping patterns, guilt or feelings of low self-worth, impaired attention, and even symptoms that are medically unexplained.

When things went wrong, around half of the respondents blamed themselves unnecessarily. In comparison to 86 respondents (26.0%), 135 respondents (40.9%) indicated they blame themselves most of the time. Fewer than a third of those surveyed indicated they occasionally feel anxious or disturbed for no apparent cause, and fewer still said they do so frequently. This is consistent with what Fatoye and colleagues found, who stated that, "Pregnancy has traditionally been a happy and fulfilling period for women. However, data suggests that throughout this time there is an increase in psychiatric morbidity, especially despair and anxiety

In this study, less than half of the respondents claimed to have experienced fear or panic for no apparent reason in the previous seven days, but quite a few claimed to have had these feelings frequently. A small percentage of respondents admitted that they occasionally weren't dealing well because life had gotten in the way, but 60 pregnant women (or 18.3%) reported that this was the case the majority of the time. This is in line with research done by the organization for perinatal and postpartum depression. "While hormonal ups and downs impact all pregnant women, some experience the fluctuations more profoundly. Pregnancy hormones may lead to symptoms of depression. However, a variety of additional factors may also play a role in the emergence of depression during pregnancy. A pregnant woman could feel hesitant about the pregnancy, thinking that the timing is off, that long-term aspirations might need to be put on hold, or that there might be money issues. She might also be unsure of how she will handle labor and delivery as well as her new motherly responsibilities and worries about carrying the pregnancy. She can also feel bad about her discontent because everyone anticipates her to be joyful and blossoming (Post & Antenatal Depression Association.,2010).

Contrary to popular assumption, pregnancy is not always marked by accomplishments and joy. These times in the life of many women are times of melancholy or concern. The physical, hormonal, psychological, and social changes that occur during pregnancy and the postpartum period (puerperium) in women can directly affect her mental health (Camacho et al., 2006) This also applies to the study's findings, which showed that 79 (23.8%) pregnant women reported feeling depressed or gloomy rather frequently throughout the previous week. In the past week, 45 people (13.6%) reported feeling depressed or gloomy most of the time. Less than half of the respondents, or 73 (22.0%), reported experiencing occasional bouts of sadness that resulted in tears, while 67 (20.4%) reported experiencing bouts of sadness that resulted in tears rather frequently in the previous week.

Depression is distinct from common mood swings and fleeting emotional reactions to problems in daily life. Depression may develop into a significant medical illness, particularly if it lasts for a long time and is moderate to severe in intensity. The affected person may experience severe suffering and perform poorly at job, in school, and in the family. Suicide can result from depression at its worst. Every year, suicide is thought to be the cause of 1 million deaths (WHO.,2014). Eleven respondents (3.4%) stated they had either "sometimes" or "hardly ever" considered harming oneself, while 15 respondents (4.6%) indicated they did so rather frequently.

5.1.2 Assessment of risk factors associated with depression in pregnancy

The study found that more than half of the respondents had high exposure to risk factors for antenatal depression, and many of them had high exposure. It also found that more than half of the respondents did not receive assistance from their partners with household chores or

child care, and that about half of the respondents' pregnancies were unintended. Even few of the pregnant women reported having trouble getting pregnant. This study's findings on the causes of pregnant depression are consistent with those of Lancaster et al. Antenatal depression typically results from a variety of causes. It is typically linked to pregnancy-related anxiety and stress, as well as some of the most significant risk factors identified by the literature, such as a lack of social support, unwanted pregnancies, domestic abuse, low income, low education, smoking, and single status (Lancaster, Gold, Flynn, Yoo, Marcus.,2010).

Few respondents had health issues during their pregnancies, and few of the respondents relied on drugs, alcohol, or other substances to help them cope. Many respondents expressed anxiety about their ability to cope with the expected baby. This supports the conclusions reached by Pajulo et al. "Depression in pregnancy may reduce one's capacity for self-care, including inadequate nutrition, drug or alcohol abuse, and poor attendance at antenatal clinics, all of which may compromise a woman's physical and mental health and may reduce optimal fetal monitoring or restrict the growth and development of the fetus (Pajulo, Savonlahti, Sourander, Helenius, Piha., 2001; Hartley, Tomlinson, Greco.,2011)

5.1.3 Assessment of Intimate Partner Violence experience- A risk factor for depression in Pregnancy

Socioeconomic level, ethnicity, religion, and even pregnancy are not barriers to violence against women. Violence is another significant risk factor for depression during pregnancy, yet only a small percentage of respondents reported experiencing any kind of violence while they were pregnant (physical, psychological, and

emotional abuse). Less than half had their partners keep them away from their families and friends while they were pregnant, and few had their partners force them to have sex. The significant prevalence of depression among pregnant respondents among those who reported having experienced violence throughout their pregnancy could potentially be linked to this. Only 26 (8.0%) of the respondents reported being exposed to gender-based violence frequently while expecting. Many abused women experience constant fear. The results of this study are consistent with a survey by Helsie, which found that 10 to 58 percent of women had ever been physically abused by an intimate relationship.

5.2 Conclusion

The lack of studies on depression during pregnancy and the dearth of information on the IPV linked to perinatal depression are major issues. Traditional antenatal care prioritizes physical health over emotional wellbeing. As a result, antenatal depression is frequently underdiagnosed both locally and internationally. It is also perceived by the general public and the medical community as a time of emotional health that is immune to mental disorder. In order to make it impossible to ignore intimate partner violence and depression in pregnancy as normal or merely symptoms of pregnancy, the first and ongoing effort is to become deeply involved in data collection and statistics.

Orolu Local Government (Osun state) has a quite high prevalence of prenatal depression (56.0%). This demonstrates that the symptoms are simply disregarded. However, this study found that respondents in the 25-34 age range, the majority of whom are married, were most affected. Additionally, women who reported that their pregnancies were unintended were more depressed than those who reported that they were intended, proving that the desire to

become pregnant is a significant risk factor for depression in pregnancy. Other significant risk factors include level of income, experience with financial difficulties, experience with stress, and experience with strep throat (married women were more depressed compared to single, other factors could be responsible for this such as lack of social support, abuse by partners).

An important cause of prenatal depression is having experienced violence while pregnant. One-fourth of the respondents said they had encountered some kind of violence while pregnant. Therefore, it is crucial to step up efforts to avoid violence during pregnancy.

In conclusion, there has to be a shift in the way society views IPV; this will allow survivors to understand that it is not "normal," but rather wrong and illegal. It can be made more open by routinely screening for IPV during antenatal care, but this must be done in tandem with an action plan that includes access to pertinent agencies.

5.3 Recommendations

1. Raising awareness of the danger signs of depression in pregnancy in medical settings during antenatal care sessions
2. Programs during antenatal care sessions should include health talks, including health education on the risk factors associated with depression in pregnancy.
3. Hiring and educating medical professionals in the proper evaluation and diagnosis of antenatal depression
4. Setting up support groups in well-chosen locations to boost women's self-esteem and promote social and family support for expectant mothers.

5. Government policy in Nigeria should be changed to include initiatives for diagnosis and treatment that are crucial for identifying depression in pregnancy.
6. Supporting research on depression in pregnancy, sharing evaluation findings with pertinent organizations that can benefit from them, and encouraging investments in successful prevention, diagnosis, and treatment programs that are crucial for identifying pregnant women who require intervention to protect the health of both mother and child.
7. It is advised to screen for depression and IPV during antenatal visits and to refer patients to the appropriate care and services.

5.4 Contribution for Knowledge

By shedding light on the prevalence of IPV, depression, and risk factors associated with antenatal depression among pregnant women attending antenatal care sessions at chosen primary health centers in Orolu Local Government, Osun state, the findings of this study added to the body of knowledge regarding antenatal depression among pregnant women and served as a foundation for subsequent research in this area. The Ministry of Health and Non-Governmental Organizations concerned with the health of women of reproductive age and the general population of women shall find this information useful in developing intervention strategies to reduce concerns brought on by the prevalence of prenatal depression.

The results of this study also have consequences for health promotion and education, necessitating a variety of approaches to address the issue.

The majority of women are unaware that depression can occur during pregnancy because the signs and symptoms are typically confused with those seen in the first three months of pregnancy, so more awareness programs on antenatal depression are needed. Health education on IPV associated with depression in pregnancy is also crucial. Since health

education is a component of health care that is concerned with promoting healthy habits, raising awareness can be accomplished through health discussions at the antenatal care sessions. The significant orders should not be excluded from the health education program because society tends to view pregnancy as a time of joy and success, failing to recognize that many women do not experience these emotions as expected, instead experiencing depression for a variety of reasons. Thus, raising awareness of the important directives to offer social support to expectant mothers can help to lower the incidence of prenatal depression. To decrease alcohol-related IPV and sadness, there is a need to raise community knowledge of the negative impacts of spouse alcohol consumption. Future research should concentrate on evaluating IPV prevention and reduction strategies.

Public education initiatives like awareness campaigns and programs have the ability to change knowledge, perception, and attitude in addition to potentially reaching a huge audience. To reach a large portion of the target population and influence their understanding, it is important to use information, education, and communication tools including posters, pamphlets, documentaries, jingles, and billboards to disseminate information about the risk factors linked with prenatal depression.

Health professionals should receive training on how to accurately identify and diagnose depression in pregnancy: It is very important to find and train health care professionals.

One of the most effective methods for reducing sexual violence, according to the World Health Organization, is advocacy. It is a procedure that has the potential to transform important individuals, groups, and communities' key policies, laws, and practices. In order to modify sociocultural elements including conventions, cultural beliefs, and attitudes that

support or maintain violence in pregnancy, advocacy can be employed to advance gender equality.

In order to establish efforts for diagnosis and treatment that are crucial for recognizing depression in pregnancy, advocacy should be made to the appropriate bodies and institutions. Additionally, these women should be persuaded to use the services through ongoing, long-lasting awareness initiatives. In order to provide social support for expectant mothers, social mobilization should engage community leaders, traditional leaders, religious groups, faith-based institutions, and not simply families. In order to promote service accessibility, affordability, and utilization, non-governmental organizations might work with healthcare facilities.

5.5. Suggested Areas for Further Research

Future studies should evaluate the efficacy of partner relationship-enhancing therapies in lowering prenatal depression across all wealth levels.

Future research should examine mother trauma/anxiety symptom trajectories throughout pregnancy and postpartum given the high levels of exposure to violence in this study and other contexts of a similar nature.

Future studies should look into how longitudinal depression symptoms may alter as stressful life events, intimate partner violence, and trauma exposure change over time.

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Appendix

Questionnaire

Prevalence, risk factors associated with antenatal depression and experience of violence among pregnant women in Orolu local government

My name is Agboola Islamiyat Abiola, a post graduate student of LEAD CITY UNIVERSITY, Faculty of Medical and Applied Science, Department of Public Health, Ibadan. The purpose of this study is to assess the prevalence and correlates of both Intimate partner violence (IPV) and Depression among pregnant women attending selected primary health centers within Orolu local government. The findings from this study will help serve as input in designing educational programmes to reach out to pregnant women attending antenatal care sessions and would also contribute to improving the willingness of pregnant women to go on regular appointments with health-care providers, encourage uptake of the best treatment method which may include taking medication and probably go for therapy as prescribed by a professional health practitioner if depression in pregnancy is suspected using the Edinburgh postnatal depression scale. The data from the study could also be used to formulate informed policies on screening for depression in pregnancy in health facilities in the country. Your identity, responses and opinion will be kept strictly confidential and will be used for the purpose of this research only. Please note that you do not have to write your name on this questionnaire, your kind assistance is sought for you to answer the questions below as accurately as possible to make the research a success. However, your participation is voluntary and you may request to withdraw at any time. Would you want to participate in the study?

Yes ( )

No ( )

Section A- Socio-Demographic Data

Instruction; kindly provide all necessary

information requested by ticking ( ) the alternative answer you think are appropriate in line with your views.

1. What is your age as at your last birthday ……(Actual age or year of birth)

2. Ethnic group i. Yoruba { } ii. Hausa { } iii. Ibo { } iv. Others (specify……..)

3. Religion i. Christianity { } ii. Islam { } iii. African Traditional { } iv. Others

(specify……)

4. Highest level of Education i. No formal education { } ii. Primary { } iii. Secondary { } iv. Tertiary { }

5. Occupation i. Trading { } ii. Artisan { } iii. Housewife { } iv. Government worker { } V. Self- employed { }

6. Marital status i. Married { } ii. Widowed { } iii. Separated/divorced { } iv. Single { }

(Ask Q7 if married)

7. (For married only) what type of marriage i. Monogamy { } ii. Polygamy { }

8. Level of income 1. less than #5000 { } ii. #5000{ } iii. Greater than #5000{ }

9. Do you smoke? 1.Yes { } ii No { }

10. Do you take alcohol? I. Yes { } ii. No { }

11. Trimester in pregnancy i. First trimester { } ii. Second trimester { } iii. Third trimester { }

Section B: Edinburgh Postnatal Depression Scale 1 (EPDS) (Prevalence of depression) As you are pregnant or have recently had a baby, we would like to know how you are feeling. Please check the answer that comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today. Here is an example, already completed.

In the past 7 days:

12	I have been able to laugh and see the funny side of things o As much as I always could o Not quite so much now o Definitely not so much now o Not at all
13	I have looked forward with enjoyment to things o As much as I ever did o Rather less than I used to o Definitely less than I used to o Hardly at all
14	I have blamed myself unnecessarily when things went wrong o Yes, most of the time o Yes, some of the time o Not very often o No, never
15	I have been anxious or worried for no good reason o No, not at all o

	Hardly ever o Yes, sometimes
16	I have felt scared or panicky for no very good reason o Yes, quite a lot o Yes, sometimes o No, not much o No, not at all
17	Things have been getting on top of me o Yes, most of the time I haven't been able to cope at all o Yes, sometimes I haven't been coping as well o No, most of the time I have coped quite well o No, I have been coping as well as ever
18	I have been so unhappy that I have had difficulty sleeping o Yes, most of the time o Yes, sometimes o Not very often o No, not at all
19	I have felt sad or miserable o Yes, most of the time o Yes, quite often o Not very often o No, not at al
20	I have been so unhappy that I have been crying o Yes, most of the time o Yes, quite often o Only occasionally o No, never
21	The thought of harming myself has occurred to me o Yes, quite often o Sometimes o Hardly ever o Never

Section C: Assessments of Risk Factors for Depression

S/N	Variables	Yes	No
22	Do you have a good relationship with your parents and other family members?		
23	Do you have a good relationship with your		

	spouse?		
24	Does your husband help with house chores and in taking care of the children?		
25	Is this pregnancy intended?		
26	Did you have difficulty becoming pregnant?		
27	Do you and your partner have joint and concrete arrangements towards delivery?		
28	Does he encourage you to seek professional help when needed?		
29	Have you had previous episodes of miscarriage or still birth?		
30	Have you experienced prolonged labor in the past		
31	Are you anxious about being able to cope with the expected baby		
32	Do you have any health problems in this pregnancy		
33	Do you rely on drugs, alcohol or other substances to help you deal with things?		

Section D: Assessments of Intimate Partner Violence

Has your partner or husband ever done any of these to you while pregnant? Kindly tick yes or no

S/N	**Variables**	**Yes**	**No**
34	Hit you with his fists?		
35	Hit you with a hard object or anything that could hurt you		
36	Kicked you?		
37	Punched you?		
38	Slapped you?		
39	Beaten you?		
40	Dragged you?		
41	Call you names, or tell you you're worthless?		
42	Interrupt you?		
43	Throw things at you when angry?		
44	Has your husband ever threatened you with a knife?		
45	Has your partner ever forced you to have sex with him?		
46	Do you feel criticized by your partner?		
47	Does he minimize your contribution to the relationship?		
48	Does your partner or spouse try to keep you away from		

	your family or friends?		
49	Have you ever felt unsecure in this pregnancy?		
50	Has any of your partner's relative ever hit you?		

Section E: Assessment of Stressful Life Events that could Lead to Depression among Pregnant Women

Did any of these things happen to you recently?

S/N	**VARIABLES**	**YES**	**NO**
51	Death of a close relative or friend?		
52	Do you have housing issues?		
53	Are you experiencing financial difficulties?		
54	Did you or have you recently lost your job?		
55	Did you experience any form of natural disaster recently like flood, fire outbreak, etc?		

THANK YOU FOR PARTICIPATING IN THIS STUDY

Bio Data

AGBOOLA ISLAMIYAT ABIOLA

No. Olorunsogo Community Costain Area Osogbo, Osun State

Tel: 07039905368

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Career Objective

To create a positive and long-lasting impact in any organization I find myself through good analytical and professional skills, thereby achieving goals with an emphasis on organizational growth.

Personal Data

State of Origin:	Osun
Local Government Area:	Osogbo
Religion:	Islam
Marital Status:	Single
Sex:	Female
Nationality:	Nigerian

Demonstrated Knowledge and Abilities

To have a great impact on an organization and to maximize my in build toward organization goals and objectives.

Creative thinking in challenging situations

Effective use of initiative

Willingness to accept responsibilities.

Self motivated and target oriented with passion for discipline and analysis

Institutions Attended with Date

Lead city University. 2021 – till date

Masters in Public Health

University of Ilorin, Kwara State 2014-2018

Victoria Comprehensive High School, Osogbo 2007-2013

Rex-Versity Nursery and School, Osogbo. 2000-2007

Qualification Obtained with Date

Bachelor of Science (Bsc) 2018

Senior Secondary School Certificate {SSCE} 2013

Primary School Leaving Certificate. {FSLC} 2007

Working Experience

National Youth Service Corps at General Hospital Minna, Niger State 2018-2019

Post Held: Lab Scientist

HOBBIES

Reading

Meeting people

Learning anything beneficial

Travelling

Sport

LANGUAGE

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Referees

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Reference

Available upon request

Signature Date

University Compliance Certificate

This is to certify that this thesis by Islamiyat Abiola, AGBOOLA with Matric No: LCU/PG/001955 in the Department of Public Health, Faculty of Basic medical and Applied Sciences, Lead City University, Ibadan is in full compliance with the approved university format

SIGNATURE.

DATE