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DEPRESSION AND ANXIETY AMONG PREGNANT WOMEN

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"DEPRESSION AND ANXIETY AMONG PREGNANT WOMEN"

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DECLARATION

I declare that the work presented here is my own. All sources used have been cited appropriately. Any mistakes or inaccuracies are my own. I also decline that same any publication, presentation or dissemination of information of the study. I would bind to take consent from the department of Physiotherapy of Bangladesh Health Profession Institute (BHPI).

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Acronyms

AA	Antenatal Anxiety
AD	Antenatal Depression
BHPI	Bangladesh Health Professions Institute
CRP	Centre for the Rehabilitation of the Paralysed
GAD	Generalized Anxiety Disorder
IRB	Institutional Review Board
PHQ	Patient Health Questionnair**e**
PP	Pregnancy Period
QOL	Quality of Life
SHSMC	Shaheed Suhrawardy Medical College and Hospital
SPSS	Statistical Package for the Society Science
WHO	World Health Organization

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Abstract

Purpose: The purpose of the study was to identify the level of depression & anxiety with their association among pregnant women patients. ***Objectives:*** To identify the level of depression and anxiety among pregnant women. To explore the Socio-demographic information of the participants. To find out association of various socio-demographic characteristics with depression and anxiety among pregnant women. To detect association between antenatal depression and antenatal anxiety among pregnant women patients. To determine association of antenatal depression and antenatal anxiety with the level of outcome for pregnant patients. ***Methodology:*** The study was conducted by using cross sectional method. Total 105 samples were selected conveniently for this study from Gynecological unit of Shaheed Suhrawardy Medical College and Hospital (ShSMC), sher-e-bangla-nagar, Agargong, Dhaka. All data were collected through face-to face interview by using a semi-structured research question technique. ***Results:*** Among 105 participants 14% of the participants had severe depression and 25% of the respondents had moderate anxiety among pregnant women. There have no associations of age & family income that with antenatal depression and antenatal anxiety found in the study. Significant association of antenatal depression and antenatal anxiety was found in the study. Antenatal depression and Trouble sleeping anxiety were found to be associated with level of outcome indicating that antenatal depression and antenatal anxiety had impact on pregnant women. ***Conclusion:*** The results of the study suggest that depression and anxiety are commonly experienced among pregnant women in three trimester. Found association of antenatal depression and antenatal anxiety expressing that pregnancy period depression and pregnancy period anxiety may share a similar pathophysiological mechanism.

Key words: *Pregnancy, Depression, Anxiety.*

CHAPTER - I INTRODUCTION

1.1 Background:

Depression is a common mental condition that affects over 264 million people worldwide. It is characterized by chronic unhappiness and a loss of interest or pleasure in formerly rewarding or pleasurable activities. It can also induce sleep and appetite problems, as well as weariness and poor concentration. Depression is a leading cause of disability worldwide, accounting for a considerable portion of the global sickness load. The repercussions of depression can be long-term or recurring, and they can have a major influence on a person's ability to function and live a fulfilling life. (WHO, 2021).

According to WHO (2021), depression is a common disorder that affects 3.8 percent of the world's population, with 5.0 percent of adults and 5.7 percent of people over 60 suffering from it. Depression affects around 280 million people globally. A quarter of the world's population suffers from mental health illnesses. Anxiety and sadness affect over 7 million people in Bangladesh. (Arusha et al., 2020).

Pregnancy is thought to be a stressful time that might lead to mental illness. Common psychological illnesses are especially prevalent during the perinatal period. Maternal depression, postpartum depression, and puerperal psychosis have all been regarded as significant perinatal mental health conditions over time. The World Health Organization (WHO) estimates that one in ten women in industrialized nations and one in three to one in five in underdeveloped countries experience serious mental health issues during pregnancy and after giving birth. Anxiety, depression, and other mood disorders are frequent psychiatric illnesses during pregnancy. (Jane et al., 2012).

Anxiety is a sensation of tension, concerned thoughts, and physical changes such as elevated blood pressure. Anxiety disorders are characterized by repeated intrusive thoughts or concerns. They may avoid specific situations due to anxiety. Physical symptoms may include sweating, shaking, dizziness, or a rapid heartbeat (Brown et al., 1994). The most common psychiatric disorders are anxiety disorders. According to

epidemiological studies, one-third of the population suffers from an anxiety illness at some point in their lives. These illnesses are associated with significant disability, extensive health-care usage, and a massive financial burden for society. According to extensive community-based surveys, up to 33.7% of the population suffers from an anxiety illness at some point in their lives. (Bandelow et al., 2015).

Depression and anxiety during pregnancy are significant public health issues. By 2020, according to the World Health Organization (WHO), depressive disorders will rank as the second most common cause of illness burden worldwide. According to reports, women in the reproductive age group experience depression at twice the rate as males. While some pregnant women may have their first depressive episode, others who have had previous episodes of depression are more likely to experience a recurrence, continuation, or worsening of those episodes. Antenatal anxiety has recently drawn more attention because to its effect on infant outcomes as well as its role as a risk factor for postpartum depression. The main contributor to postnatal depression is prenatal psychiatric illness. Second, fresh information indicates that depression during pregnancy is also associated with adverse child outcomes including premature births, low birth, and poor infant growth. (Lovisi et al., 2005).

Women are more likely than men to experience somatic problems, anxiety, and depression. Depression and anxiety are two prevalent mental health disorders that can have significant implications for pregnant women and their unborn children. Pregnancy is a period of profound physical, emotional, and hormonal changes, making expectant mothers susceptible to experiencing psychological distress. The burden of these mental health issues during pregnancy can impact not only the woman's well-being but also the overall pregnancy outcome. (Jane et al., 2012).

Depression among pregnant women is characterized by persistent feelings of sadness, loss of interest or pleasure, changes in appetite or sleep patterns, and a sense of worthlessness. Anxiety, on the other hand, can manifest as excessive worry, restlessness, difficulty concentrating, and physical symptoms like rapid heartbeat and sweating. Both conditions can lead to a diminished quality of life and may contribute to adverse maternal and neonatal outcomes. Understanding the prevalence and risk factors associated with depression and anxiety during pregnancy is essential to provide

appropriate support and interventions for expectant mothers. Timely identification and management of these mental health challenges can positively impact maternal well-being, promote healthier pregnancies, and foster better developmental outcomes for the child. (Cunninghum et al., 2005).

During pregnancy, women undergo significant physical, hormonal, and emotional changes, which can make them susceptible to developing mental health disorders. These conditions not only impact the well-being of the expectant mother but can also have adverse effects on the health of the developing fetus and the overall pregnancy outcome. In Bangladesh, a developing country in South Asia, maternal mental health has become an area of growing concern. The prevalence of depression and anxiety among pregnant women in Bangladesh is likely to be influenced by a multitude of factors, including socioeconomic disparities, cultural norms, limited access to mental health services, and the overall stressors associated with pregnancy and childbirth in this setting. (Fisher at el., 2013).

Pregnancy, also known as gestation, is a natural and amazing process in which a fertilized egg develops into a fully developed human inside a woman's uterus. This lovely trip lasts about 40 weeks, or nine months, and ends with the delivery of a baby. Pregnancy begins with fertilization, when a sperm cell from one partner combines with an egg cell from the other. This happens during sexual contact, and once fertilization is complete, the newly formed cell, known as a zygote, begins to divide rapidly. The zygote then travels down the fallopian tubes and into the uterus, where it implants into the uterine lining, resulting in pregnancy. (Brown et al., 2004).

During pregnancy, the woman's body goes through many hormonal and physical changes in order to support the developing fetus. The placenta, a specialized organ that develops within the uterus, is critical in mediating the exchange of nutrients, oxygen, and waste products between the mother and the developing infant. Pregnancy is usually divided into three trimesters, each of which lasts about three months. Significant advancements occur during the first trimester as the fetus's primary organs and body structures begin to form. The second trimester is frequently a time of tremendous growth and refinement, as the baby becomes more visible and begins to move. The fetus acquires weight and prepares for birth in the third trimester by assuming a head-down

position. Regular prenatal care is required during pregnancy to monitor the health of both the mother and the baby. Various tests and screenings are performed by healthcare experts to ensure the pregnancy goes normally and to identify any potential difficulties. Each woman's pregnancy experience is unique. Some women may have common discomforts such as morning sickness, exhaustion, and mood swings, but others may have relatively trouble-free pregnancies with few symptoms. For pregnant parents, pregnancy is a transformational and emotionally momentous journey, bringing a mix of excitement, joy, and anticipation as they prepare to welcome a new life into the world. (Fisher et al., 2012).

Addressing mental health issues among pregnant women in Bangladesh is crucial as it can have significant implications for both maternal and child health. Identifying the risk factors and understanding the prevalence of depression and anxiety during pregnancy in this context is vital for developing effective interventions and support systems that can improve the overall well-being of pregnant women and contribute to better maternal and child health outcome. An assessment of data from six low- and middle-income nations revealed a link between poverty and mental illness. A recent study from a Pakistani urban community discovered a link between lower household wealth and antepartum anxiety/depression. Poor housing (rented housing, unhappiness with housing) was identified as a risk factor for prenatal depression in a multicenter prospective study of perinatal depression in Japan. Literate women are more likely to have supportive social networks, which has been highlighted as a protective factor in prior study investigations. In contrast, a study conducted in the United States identified education as a risk factor. Despite the high prevalence of depression and anxiety during pregnancy and their major harmful impact, this is still a largely unexplored field in Pakistan. The study's goal was to determine the prevalence and related risk factors for depression and anxiety in pregnant women. (Fatt et al., 2007).

In Bangladesh, depression and anxiety during pregnancy are uncommon. One study of 316 pregnant women in a rural sub district in southwest Bangladesh discovered a 33% prevalence of ADS. According to the study, relationship violence, an unsupportive husband and/or mother-in-law, and a preference for boy in the family were all predictors of antepartum depression. The few studies and partially conflicting results highlight the need for additional study on antepartum depression, particularly

antepartum anxiety in low-income women. The purpose of this study is to investigate and identify potential factors to antepartum anxiety and depressed symptoms among women in a rural area of Bangladesh. The current study sought to assess the prevalence of anxiety and depression among pregnant women using screening and clinical interviews, as well as to investigate the relationship with socio-demographic and obstetric parameters. (Patel et al., 2003).

1.2 Justification of the study:

Although some studies have deal with depression and anxiety among pregnant women in other countries. But there are hardly some studies which are specific about depression and anxiety of pregnant women. Moreover, the exact nature and depth of depression, anxiety has not been studied before in Bangladesh. Anxiety about labor and delivery is common among pregnant women, especially first time mothers. Fear of unknown and concerns about the birthing process can contribute to anxiety levels. Some women are worry about their ability to good parent, which can trigger anxiety and Self-doubt during pregnancy. Untreated depression and anxiety during pregnancy can have adverse effects on both the mother and the baby. It is associated with an increased risk of preterm birth, low birth weight, and developmental issues in the child. For the mother, untreated mental health conditions can affect prenatal care, lead to poor lifestyle choices, and impact the mother-child bond after birth. Recognizing the importance of maternal mental health, healthcare providers now emphasize routine screenings for depression and anxiety during prenatal care. Early detection and intervention through counseling, therapy, or medication can help manage these conditions effectively and reduce potential risks for both mother and child. Support from family, friends, and healthcare professionals is crucial in helping pregnant women cope with depression and anxiety. Creating an environment that fosters open communication and provides emotional support can make a significant difference in the mental well-being of expectant mothers. Pregnancy is an important part of our life. Pregnancy is a significant life event that brings about a range of physical, emotional, and psychological changes. While pregnancy is often associated with joy and excitement, it can also be a time of significant stress, anxiety, and depression for many women. The purpose of this study is to explore the level of anxiety and depression during pregnancy. By this study the health professionals will aware about the depression and anxiety among pregnant women and treat them as well.

1.3 Research Question

What are the level of depression and anxiety among pregnant women during pregnancy period?

1.4 Objectives

1.4.1 General Objectives

To explore the level of depression and anxiety among pregnant women and to reduce depression and anxiety level among pregnant women during pregnancy.

1.4.2 Specific Objectives

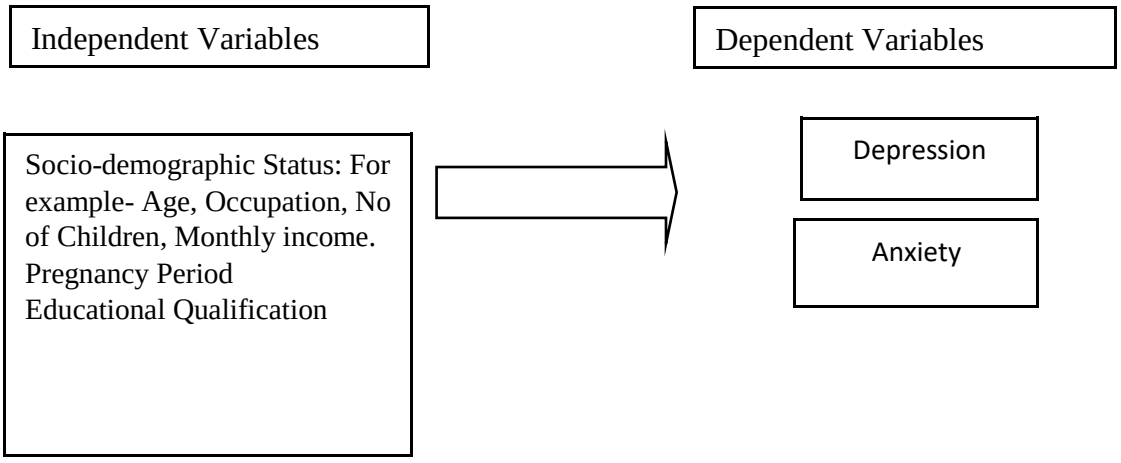
1. To identify the common socio-demographic pictures of the patients during pregnancy period.

2. To find out the common depressive symptoms among the patients during pregnancy period.

3. To find out the severity of depression and anxiety among the patients during pregnancy period.

4. To find out the specific depression and anxiety among the patients during pregnancy period.

1.5 List of variables



1.6 Operational Definition

Depression: Depression is a common mental condition characterized by a sad mood, lack of interest or pleasure, feelings of guilt or low self-worth, sleep or hunger disturbances, low energy, and impaired focus.

Anxiety: Anxiety is a sensation of tension, concerned thoughts, and physical changes such as increased blood pressure**.**

Pregnancy: Pregnancy is the term used to describe the period in which a fetus develops inside a woman's womb or uterus. Pregnancy usually lasts about 40 weeks, or just over 9 months, as measured from the last menstrual period to delivery. Health care providers refer to three segments of pregnancy, called trimesters.

First Trimester: The first trimester starts before you become pregnant. It lasts from the first day of your last menstrual period until the 12th week of your pregnancy.

Second Trimester: The second trimester is the intermediate stage of your pregnancy, lasting from weeks 13 to week 28. One of the best things about this trimester for many women is that the nausea may begin to subside.

Third Trimester: The third trimester of pregnancy is thought to be the longest. This trimester begins at week 29 of pregnancy and continues until the baby is born. Labor usually begins around week 40 of pregnancy, though some pregnancies may take longer.

CHAPTER- II LITERATURE REVIEW

Pregnancy refers to the period during which a fetus develops inside a woman's womb or uterus. Pregnancy typically lasts 40 weeks, or little more than 9 months, from the last menstrual cycle to delivery. Trimesters are the terms used by health care to describe the three stages of pregnancy. (Spong et al., 2013).

First trimester (week 1 to week 12) the process of becoming pregnant begins with conception, when a sperm penetrates an egg. The fertilized egg (called a zygote) subsequently goes to the uterus via the woman's fallopian tube and installs itself in the uterine wall. The zygote is a collection of cells that develops into the fetus and placenta. The placenta connects the mother to the fetus and feeds the fetus with nourishment and oxygen. (Stoll et al., 2010).

Second trimester (week 13 to week 28) You can often find out your baby's sex between the ages of 18 and 20 weeks, which is the traditional time for an ultrasound to test for birth problems. A woman may begin to feel movement at 20 weeks. Footprints and fingerprints have formed at 24 weeks, and the fetus sleeps and awakens frequently. According to the NICHD Neonatal Research Network, the survival rate for babies born at 28 weeks is 92%, yet those born at this time are still likely to have major health difficulties, such as respiratory and cognitive problems. (NICHD., 2013).

Third trimester (week 29 to week 40) At 32 weeks, the bones are fragile but nearly fully formed, and the eyes may open and close. Premature babies are those born before 37 weeks. These children are more likely to experience developmental delays, visual and hearing issues, and cerebral palsy. Infants born between 34 and 36 weeks of pregnancy are labeled late preterm. Infants born at the 37th and 38th weeks of pregnancy, which were previously considered term, are now called early term. These babies suffer more health risks than babies born at 39 weeks or later, which is now considered full term. Full-term infants are those delivered at 39 or 40 weeks of pregnancy. Full-term infants are those born at 39 or 40 weeks of gestation. Infants born at full term have superior health results than those born earlier or, in some situations, later. If there is no medical reason to deliver sooner, it is ideal to do so at or after 39 weeks to allow the infant's

lungs, brain, and liver to fully develop. Late term babies are those born between 41 week and 6 days. Post-term babies are those delivered at 42 weeks or after. (NICHD., 2013).

The following are the most common early signs and symptoms of pregnancy: If you are in your reproductive years and a week or more has gone without the start of your normal menstrual cycle, you could be pregnant. However, if you have an irregular menstrual cycle, this symptom can be deceptive. Breasts are painful and swollen. Early in pregnancy, hormonal changes might make your breasts uncomfortable and sore. The soreness will usually subside after a few weeks as your body adjusts to hormonal changes. Nausea, with or without vomiting. Morning sickness, which can occur at any time of day or night, usually occurs one to two months after you become pregnant. However, some women suffer nausea earlier than others. While the exact reason of nausea during pregnancy is unknown, pregnancy hormones are most likely to blame. You may feel yourself urinating more frequently than normal. During pregnancy, the volume of blood in your body rises, leading your kidneys to process more fluid that ends up in your bladder. Fatigue is also one of the most common early pregnancy symptoms. Nobody knows for sure what causes tiredness during pregnancy's first trimester. However, a rapid surge in progesterone levels during early pregnancy may lead to weariness. (Bastian et al., 2021).

Other less noticeable pregnancy signs and symptoms that you may experience throughout the first trimester include: The surge of hormones in your body during early pregnancy can cause you to become abnormally emotional and tearful. Mood swings are also prevalent hormonal changes during early pregnancy can make you feel bloated, similar to the start of a menstrual cycle. One of the early indicators of pregnancy could be light spotting. It is known as implantation bleeding, and it occurs about 10 to 14 days after conception when the fertilized egg adheres to the uterine lining. Implantation bleeding happens around the time would expect to have period. However, not all women are endowed with it. Early in pregnancy, some women suffer minor uterine cramps. Hormonal changes slow down digestive system, which can lead to constipation. Sensitive to some odors and sense of taste may change while pregnant. (Norwitz et al., 2021)

These food choices, like most other pregnant symptoms, can be attributed to hormonal changes. Increased hormone levels and blood production might cause nose's mucous membranes to expand, dry out, and bleed readily. This could result in a stuffy or runny nose. (Lockwood et al., 2021).

Depression and anxiety are two typical mental health issues that can afflict pregnant women all around the world. Women go through major physical, hormonal, and emotional changes during pregnancy, which might render them vulnerable to developing mental health disorders. These conditions not only have an impact on the expectant mother's well-being, but they can also have a negative impact on the developing fetus's health and the overall pregnancy result. Maternal mental health is a significant concern in Bangladesh, a developing country in South Asia. A variety of factors, including socioeconomic disparities, cultural norms, limited access to mental health treatments, and the overall pressures associated with pregnancy and childbirth in this country, are likely to influence the frequency of depression and anxiety among pregnant women in Bangladesh. (Jemere et al., 2020)

The gestational period is critical for pregnant women because substantial changes in a woman's life, such as changes in appearance, mood, and health, occur during this time, resulting in increased stress, anxiety, depressive symptoms, poor sleep, and a lower quality of life. A study conducted in two upazillas of Bangladesh's Mymensingh district found that 18.3% of participants had antepartum depressive symptoms, whereas another study conducted in Matlab, a rural area in the Chandpur district, discovered that 82.2% of women reported any depressive symptoms in the previous week. According to the National Sleep Foundation, 78% of women in the United States of America (USA) had sleep changes, while another study revealed that 76% of women had poor sleep quality throughout the year. Pregnancy, like any big life event accompanied by hormonal changes, can increase women's chances of developing or relapsing to depressive symptoms. Poor sleep quality is a risk factor for depressive symptoms both during pregnancy and after birth (also known as postpartum depression). Some women experience their first depressive episode during pregnancy, whilst others with a history of depression are more likely to have it repeat, prolong, or worsen. Depressive symptoms were experienced by 10-25% of pregnant women in Brazil. Several studies have found that poor sleep quality has a negative impact on expectant moms. Sleep

deprivation during pregnancy, for example, has been linked to an increased risk of premature birth. Even after controlling for depressive symptoms, Poor sleep quality during pregnancy was associated with a 1.7-fold greater risk of suicidal ideation.

Depression is the most common psychiatric condition during pregnancy, according to studies from developed countries, ranging from 10% to 20%. Significant depression rates have been documented, particularly during the second and third trimesters of pregnancy. Kim et al. found a 26% frequency of depression and a 10% prevalence of anxiety during pregnancy in low-income, ethnically diverse Minnesota patients. A population-based study in rural Bangladesh found that antepartum anxiety symptoms (29%) and antepartum depressive symptoms (18%) were common. A rural sub district in the southwest of Bangladesh had a greater prevalence of antepartum depression symptoms (33%). Depression was shown to be prevalent in roughly 16% of South Indian women during their third trimester. According to a study conducted in a rural area of Pakistan, 25% of pregnant women experienced depression. Another study from an urban Pakistani neighborhood discovered that 18% of pregnant women were nervous and/or sad. The majority of previous studies of mental health during pregnancy in Pakistan have been conducted in hospitals. According to a study conducted at the antenatal clinic of a teaching hospital in Lahore, Pakistan, 34.5% of pregnant women had anxiety and 25% had depression. A tertiary care hospital in Karachi, Pakistan, produced nearly identical results. (Conde et al., 2010).

Several research have found that antenatal depressive symptoms are connected with young maternal age, lower women's educational level, lower couple's income, stressful life events, and unemployment. Humiliating occurrences that directly devalue an individual in a core function are highly associated to the development of depressive symptoms. According to a systematic review, life stress, a lack of social support, and marital abuse are all significantly connected with an elevated risk of depression during pregnancy. Increasing age, lower educational levels, husband abuse, extramarital affairs, not giving time to family and putting restrictions on women, interference by in-laws, and heavy household work are all significantly associated with depression during pregnancy. In an urban population in Pakistan, the following factors were found to be predictors of antepartum depression and anxiety: husband's unemployment, poor household wealth, having 10 or more years of formal education, undesired pregnancy,

and relationship abuse. Partner abuse, an unsupportive husband or mother-in-law, and a preference for boy in the family were all predictors of antepartum depression in rural Bangladeshi women. (Faisal et al., 2007).

Depression is present in 7.4% of pregnant women during the first trimester, 12.8% during the second trimester, and 12.0% during the third trimester. Anxiety and depression in pregnant women have been observed to range between 18% and 39% in Pakistan (Munk-Olsen et al, 2006).

Severe anxiety and depression during pregnancy are linked to poor obstetric, fetal, and neonatal outcomes. So far, research has focused on the extent of anxiety and depression during pregnancy, as well as the impact of these disorders on the mother and child. However, little is known about the underlying risk factors, such as maternal stress, which is a forerunner to perinatal anxiety and depression. Women who are stressed are more likely to experience prenatal and postnatal anxiety and depression. 8 studies have found a link between prenatal stress and preterm delivery, low birth weight, or both. Age, marital status, health status, stressful life events, and a history of traumatic experiences have all been linked to an elevated risk of psychopathology in pregnant and postpartum women. Specific stress reduction in anxious pregnant women has been found to lessen numerous maternal problems and the adverse development of the unborn child. Local research in Pakistan have revealed that stressors might range from a strained relationship with one's husband to a variety of social difficulties in the area. The current study aimed to identify numerous stressors among pregnant women in our setting and to investigate the relationship between stress and anxiety and depression in prenatal women (Munk-Olsen et al, 2006).

According to studies from affluent countries, depression is the most common psychiatric condition during pregnancy, affecting 10 to 20% of women. Significant rates of depression have been documented, particularly during the second and third trimesters of pregnancy. Depression was shown to be 26% more common than anxiety during pregnancy in low-income ethnically diverse Minnesota patients. A population-based study in rural Bangladesh found a prevalence of antepartum anxiety symptoms (29%) and antepartum depressive symptoms (18%). A rural sub-sub-district in southwest Bangladesh had a greater prevalence of antepartum depression symptoms

(33%). Depression was shown to be prevalent in roughly 16% of South Indian women during their third trimester. According to a study conducted in a rural area of Pakistan, 25% of pregnant women experienced depression. Another study from an urban Pakistani neighborhood discovered that 18% of pregnant women were nervous and/or sad. The majority of previous studies of mental health during pregnancy in Pakistan have been hospital-based (Cunningham et al, 2005).

According to a study from a teaching hospital's antenatal clinic in Lahore, Pakistan, 34.5% of pregnant women had anxiety and 25% had depression. Almost identical results were discovered in a teeny care hospital in Karachi, Pakistan. Several research have found that young maternal age, lower women's educational level, lower couple's income, stressful life events, and unemployment are all connected with prenatal depressive symptoms. A systematic analysis found that life stress, a lack of social support, and marital abuse are all strongly connected with an elevated risk of depression during pregnancy. has claimed that growing age, lower educational levels, concerns involving husband abuse, extramarital affairs, not giving time to family and putting limits on women, interference by in-laws, and heavy (Cunninghum et al, 2005).

In an urban population in Pakistan, the predictors of antepartum depression and anxiety were husband's unemployment, poor household wealth, having 10 or more years of formal education, undesired pregnancy, and relationship abuse. Partner abuse, an unsupportive husband and/or mother-in-law, and a family preference for a son were factors that predicted antepartum depression in rural Bangladeshi women. An assessment of data from six low and middle-income nations revealed a link between poverty and mental illness. (Jane et al, 2012).

A recent study from a Pakistani urban community discovered a link between lower household wealth and antepartum anxiety/depression. Poor housing (rented housing, unhappiness with housing) was identified as a risk factor for prenatal depression in a multicenter prospective study of perinatal depression in Japan. Literate women are more likely to have supportive social networks, which has been highlighted as a protective factor in prior study investigations. In contrast, a study conducted in the United States identified education as a risk factor. Despite the high prevalence of

depression and anxiety during pregnancy, as well as their major harmful impact, this is a relatively understudied issue in Pakistan. (Jane et al, 2012).

Depression is a mood condition characterized by poor self-esteem, a sense of inadequacy, a lack of self-sufficiency, and a negative self-image. It is a painful feeling that is triggered by either a forceful strike or the anticipation of danger from an unknown source. (Pashang et al., 2012).

Depression manifests differently in each individual, although there are some similar indications and symptoms. It's vital to realize that these symptoms can be a natural part of life's lows. However, the more symptoms it has, the more powerful they are and the longer they have endured. (Pashang et al., 2012).

A common symptom of depression is agitation, restlessness, and irritability, a dramatic change in appetite, often with weight gain or loss, difficulty concentrating, fatigue and lack of energy, feelings of hopelessness and helplessness, feelings of worthlessness, self-hate, and guilt, withdrawing or isolating oneself, loss of interest or pleasure in previously enjoyed activities, thoughts of death or suicide, trouble sleeping or excessive sleeping. (Zieve et al., 2011).

American Psychiatric Association (2020) stated that Depression symptoms can vary from mild to severe and can include:

Feeling sad or having a depressed mood.
Loss of interest or pleasure in activities once enjoyed.
Changes in appetite — weight loss or gain unrelated to dieting.
Trouble sleeping or sleeping too much.
Loss of energy or increased fatigue.
Changes in appetite — weight loss or gain unrelated to dieting.
Trouble sleeping or sleeping too much.
Loss of energy or increased fatigue.
Increase in meaningless physical activity (e.g., difficulty to sit still, pacing, and handwringing) or delayed motions or speech (these activities must be severe enough for others to notice).

Feeling insignificant or sorry.
Having trouble thinking, concentrating, or making judgments.
Suicide or death thoughts.

Types of depression:

Depression comes in various forms. The following are examples of common types:

Major depression disorder: Major depression is distinguished by a persistently depressed mood that lasts at least two weeks. Major depressive illness is classified as "a single episode" or "recurrent," based on whether the time of depression happens as discrete events or recurs over the course of an individual's life.

Minor depression disorder: Because it does not match the complete criteria for serious depression, it is sometimes known as "subclinical" or "subsyndromal" depression. For example, the individual exhibits some depressive symptoms (4 or 5). Minor depression, like major depression, is associated with impairment and a lower quality of life, and it responds effectively to the same treatments as major depression (Abraham et al., 1993).

Depression treatment can be physical or non-physical.

A. Physical treatment: There are three types of medications used to treat depression. Tricyclic antidepressants, monoamine oxidase inhibitors, and lithium salts are among them.

B. Non-physical treatment: A number of psychotherapeutic treatments have been shown to be useful in the treatment of depression. Group psychotherapy is one of them.
Therapy for relaxation.
Change in behavior.
Social skills development.
Social, occupational, industrial, musical therapy.
Psychodrama.
Various leisure activities training.

A diagnosable depressive syndrome is defined as a cluster of observable symptoms that may include tearfulness, apathy, irritability, loss of appetite, disturbed sleep, lack of energy, death thoughts, and so on, in addition to a depressed mood; a depressive syndrome is recognized in an individual when behavioral characteristics deviate from the norm in several states of functioning. According to a recent study, up to 26% of people fulfill the criteria for Major Depressive Disorder (MDD) (Kraft et al., 2015).

Anxiety is defined as a state of uneasiness that can range from mild to severe (Appukuttan and D.P., 2016). According to Bandelow et al. (2015), there are various forms of anxiety disorders, including:

• GAD (generalized anxiety disorder).
• Anxiety disorder.
• Phobias.
• Anxiety about separation: Anxiety disorders have characteristics with other mental health issues. Post-traumatic stress disorder and obsessive compulsive disorder are two examples.

According to Videbeck (2010), common anxiety symptoms and signs include:

• feeling worried, restless, or tense.
• A sensation of impending danger, terror, or impending disaster.
• An elevated heart rate.
• Excessive breathing (hyperventilation)
• Sweating
• Trembling.
• Feeling weak or tired.
• Trouble concentrating or thinking about anything other than the present worry.

According to Mayo Clinic (2018), Risk Factors of Anxiety include:
These factors may raise your risk of getting an anxiety condition.

Trauma: Children who have experienced or witnessed abuse or trauma are more likely to develop an anxiety condition later in life. Anxiety problems can develop in adults who have experienced a stressful event.

Illness-related stress: Having a health condition or major illness can create significant anxiety about problems such as treatment and the future.

Stress buildup: A big event or a buildup of smaller stressful life situations may trigger excessive anxiety — for example, a death in the family, work stress or ongoing worry about finances.

Personality: People with certain personality types are more prone to anxiety disorders than others are.

Other mental health disorders: People with other mental health disorders, such as depression, often also have an anxiety disorder.

Having blood relatives with an anxiety disorder: Anxiety disorders can run in families.

Drugs or alcohol: Drug or alcohol use or misuse or withdrawal can cause or worsen anxiety.

There is significant evidence that prenatal anxiety and depression are risk factors for poor maternal and child outcomes. Antenatal anxiety and depression, in particular, are linked to preterm birth (Orr et al., 2007; Fransson et al., 2011) and have negative consequences for fetal neurodevelopment (Kinsella et al., 2009) and child outcomes (Conde et al., 2010; Alder et al., 2007). Furthermore, prenatal anxiety and depression have been linked to postnatal depression (Milgrom et al., 2008; Yonkers et al., 2001). Negative affective states during pregnancy, in turn, reduce parenting quality and effectiveness (Paulson et al., 2006).

The majority of current research on negative emotional states during pregnancy is based on symptomatology studies employing screening instruments rather than validated diagnoses. This could be owing to a lack of time, resources, or clinical expertise on the part of the investigators to conduct clinical interviews. The applicability of the symptom criteria for diagnosing mood and anxiety disorders for women in the perinatal period has recently been called into doubt due to the overlap of diagnostic symptoms with typical symptoms caused by pregnancy's physiologic changes. (Matthey et al., 2011).

CHAPTER - III METHODOLOGY

3.1 Study Design:

The purpose of the study was to find out the level of depression and anxiety among pregnant women during their pregnancy periods at the selected urban area in Bangladesh. The design of the study was cross sectional. A cross sectional survey, a researcher collects data from a sample drawn from a predetermined population. This design enlists identifying the people and then gathering the information that the researcher requires when they use a specific service. This type of data can be used to find out a population's level of depression and anxiety. Survey research is one of the common types of research that implies asking a huge numbers of people question about a specific topic or issue that is of interest to the participant. A survey is a data collecting method that involves measuring relevant sample variables (often using a questionnaire) without any manipulation or systemic interference. The survey idea typically approaches a sample of the intended people of interest, interviews them or ask them a questionnaire.

3.2.1 Study Site

Shaheed Suhrawardy Medical College and Hospital (ShSMC) was chosen for this study. This place had chosen because it was suitable for the study and there had the samples which met inclusion and exclusion criteria of my study. At this place patient with Gynecological problem came for treatment from different area of Bangladesh. As the pregnant women patients were available so that this place was selected.

3.2.2 Study area

Gynecological unit was preferred to accomplish this study.

3.3 Sample size

The equation of sample size calculation are given below-

$$n = \left\{\frac{Z\left(1-\frac{\alpha}{2}\right)}{d}\right\}^2 \times pq$$

Here,

$$Z\left(1-\frac{\alpha}{2}\right)= 1.96$$

p = 0.573

q = 1-p

= 1-0.573

= 0.427

d = 0.05

So,

$$n = \left\{\frac{Z\left(1-\frac{\alpha}{2}\right)}{d}\right\}^2 \times pq$$

=375.97

According to this equation the sample should be more than 375 people but due to lack of opportunity the study sample was 105 patients with pregnancy who had come Hospital for treatment.

3.4 Sampling Technique

Sampling is the process of selecting the right quantity and type of people to participate in a study. The samples in this investigation were collected using convenience sampling procedures.

3.5 Data collection technique

The data was collected by semi- structural questionnaire and a face-to-face interview. The sample was taken by using a convenience sampling procedure. 105 participants had been taken for this study through the inclusion criteria. The questionnaire sought information on socio-demographic information, depression related questions, anxiety related questions and. A Bengali questionnaire was used for data collection. Data was collected from May to July, 2023.

Firstly, i.The researcher assessed the patients to confirm inclusion and exclusion criteria.

ii. At the first day of data collection the researcher introduced with the patients. Then given a consent form to the patients and explained the subject of research and objective of the research project to the patients.

iii. When the participant permitted to collected data then started the interview with the form.

3.7 Inclusion criteria:

- ☐ Age (15-40) years.
- ☐ Only female patient were included.
- ☐ Pregnant Women.
- ☐ Willingly participation.
- ☐ Urban people were included.

3.8 Exclusion Criteria:

- ☐ Age – not less than 13 years old and not more than 40 years old.
- ☐ Rural people were not included.
- ☐ Patients who were unwillingness to participate.

3.9 Data collection tools

- ➢ Patient Health Questionnaire (PHQ-9).
- ➢ Generalized Anxiety Disorder (GAD-7) questionnaire.
- ➢ Pen.
- ➢ Pencils.
- ➢ white paper.
- ➢ Approved forms.
- ➢ Consent forms.
- ➢ Clip board and
- ➢ Bag for storing these tools.

3.10 Questionnaire

The questionnaire were semi-structured type for collecting the data for the findings of the study.

3.11 Data Analysis

Data were analyzed by using Statistical Package for the Social Science (SPSS) version 29 software. The variables were labeled in a list and the researcher created a computer

based data definition record file that contained a list of variables in order. The researcher inputted the name of the variables and defined the types, values, decimal, label alignment and data measurement level in the variable view of SPSS. The next task was to check the inputted data set to confirm that all data had been correctly copied from the questionnaire paper to the SPSS data view. The raw data were then ready to be analyzed in SPSS. Data were analyzed by descriptive statistics and calculated as percentages and presented by using tables, bar charts, column charts, pie charts etc. Microsoft office Excel 2013 was used to decorating the column charts, bar charts and pie charts. By this study a lot of information were collected. All results gave idea about level of depression & anxiety among pregnant women patients and also about their outcome. To find out the association among the different variables ChiSquare test was performed.

Chi-Square (x2) test

Chi-Square (x2) test is the most popular discrete data hypothesis testing method. It is a nonparametric test of statistical significance for bivariate tabular analysis with a contingency table. Chi-Square test helps to analyze data come in the form of counts. This test can be applied to nominal or categorical data which can't be analyzed using the ranking technique.

Calculation of Chi-Square

Chi square (x2) is the sum of the square difference (O —E)2 between observed (O) and the expected (E) data divided expected (E) in all possible data completing by the following equation-

(Observed count – Expected count)2

———————————————

Expected count

$$(x^2) = \frac{(O-E)^2}{E}$$

The mathematical notation, the formula looks like this:

$$\chi^2 = \sum_{i=1}^{k} \frac{(O-E)^2}{E}$$

3.12 Informed consent

Written consent was given to all participants prior to completion of the questionnaire. The researcher explained to the participants about his or her role in this study. The researcher received a written consent form every participants including signature. So the participant assured that they could understand about the consent form and their participation was on voluntary basis. The participants were informed clearly that their information would be kept confidential. The researcher assured the participants that the study would not be harmful to them. It was explained that there might not a direct benefit from the study for the participants but in the future cases like them might get benefit from it. Information from this study was anonymously coded to ensure confidentiality and was not personally identified in any publication containing the result of this study.

3.13 Ethical consideration

An oral dissertation presentation was presented in front of member of Institutional Review Board (IRB) of Bangladesh Health Professions Institute (BHPI). The research proposal was then submitted for approval to the Institutional Review Board (IRB). The ethical review board approved this research. At first the researcher applied for official permission for the study to the authority of Bangladesh Health Professions Institute (BHPI) and unit of gynecology to collect data from Shaheed Suhrawardy Medical College and Hospital (ShSMC), Dhaka. During the course of this study, interested participants were given written consent forms and also they were informed about the purpose of the study and the consent form was explained to them verbally in Bengali. The participants were made aware that their participation was entirely voluntary and they had the unrestricted right to withdraw or discontinue at any time without any kind of hesitation. They were also ensured about maintaining confidentiality of their identity. The participants were informed that the information would be collected through a written questionnaire. The consent form and questionnaire were also checked by the supervisor. For this study researcher took permission from every interested participant with signature on a written consent form during interview. The participants were given

information about their role in the study. Aim of the research and procedures involved in the study were also described to the participants. Participants were also informed that the informations they provided might be published but their personal identities like names and addresses would not be mentioned or used. The study information was only discussed with the supervisor and it was never shared with anyone else. These materials will be exposed of after completion of the study. Although the findings of the study may not have a direct impact on the participants but health professionals may get benefit from it in the future.

CHAPTER IV RESULT

Data were analyzed by descriptive statistics and calculated as percentages and presented by using column charts, pie charts, bar chats and tables.

Socio demographic information

4.1 Age of the participants

The study was conducted on 105 participants of having pregnancy. In the study the minimum age of a participant was 14 and maximum age of a participant was 38. Participants in between 13-20 years were found 21.9% (n=23), participants in between 21-30 years were found 60% (n=63), participants in between 31-40 years were found 18.1% (n=19).

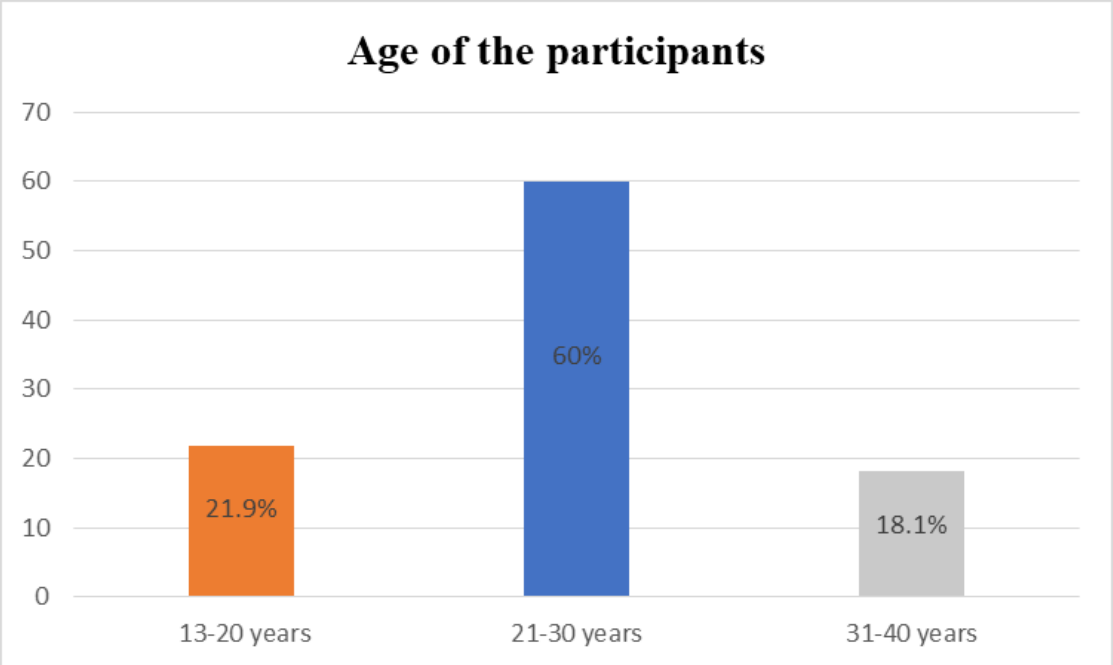


Figure-4.1: Age of the participants

4.2 Educational Qualification

Among the 105 participants 2% (n=2) participants were primarily educated, 76% (n=80) participants were SSC Completed, 22% (n=23) participants were HSC Completed.

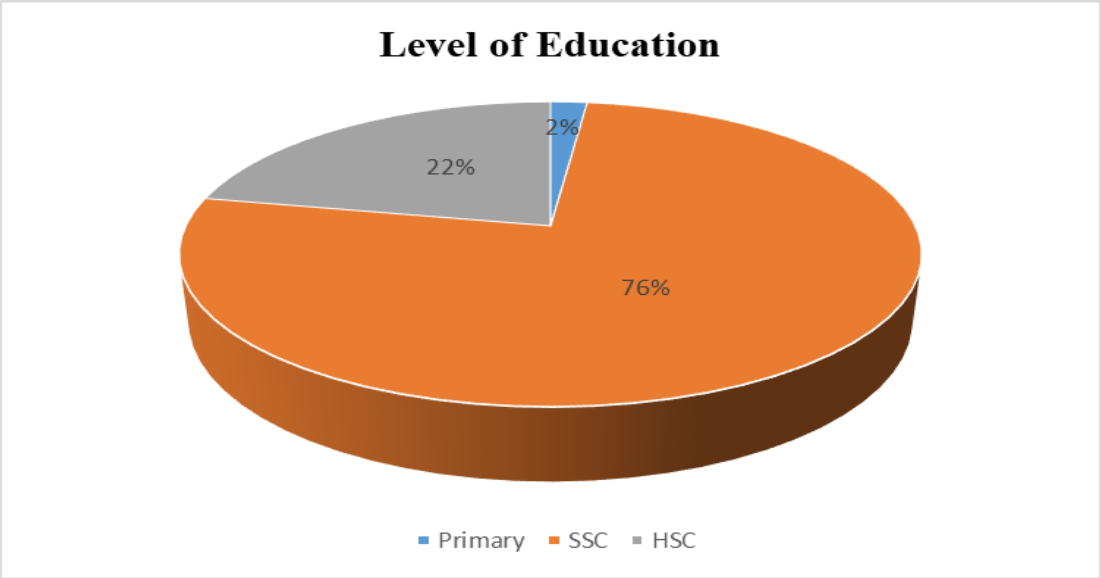


Figure-4.2: Educational level of the participants

4.3 Pregnancy Period

Among the 105 participants 46% (n=48) participants were 1st trimester, 22% (n=23) participants were 2nd trimester, 32% (n=34) participants were 3rd trimester.

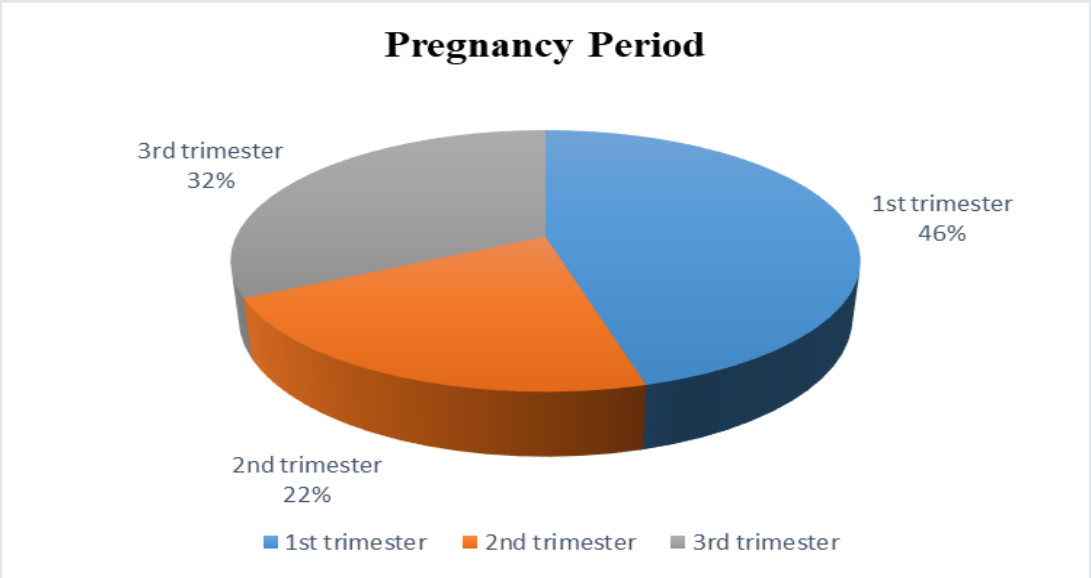


Figure-4.3: Pregnancy Period

4.4 Children's No

Among the 105 participants 37.1% (n=39) participants were no child, 31.4% (n=33) participants were one child, 31.4% (n=33) participants were two or more than two child.

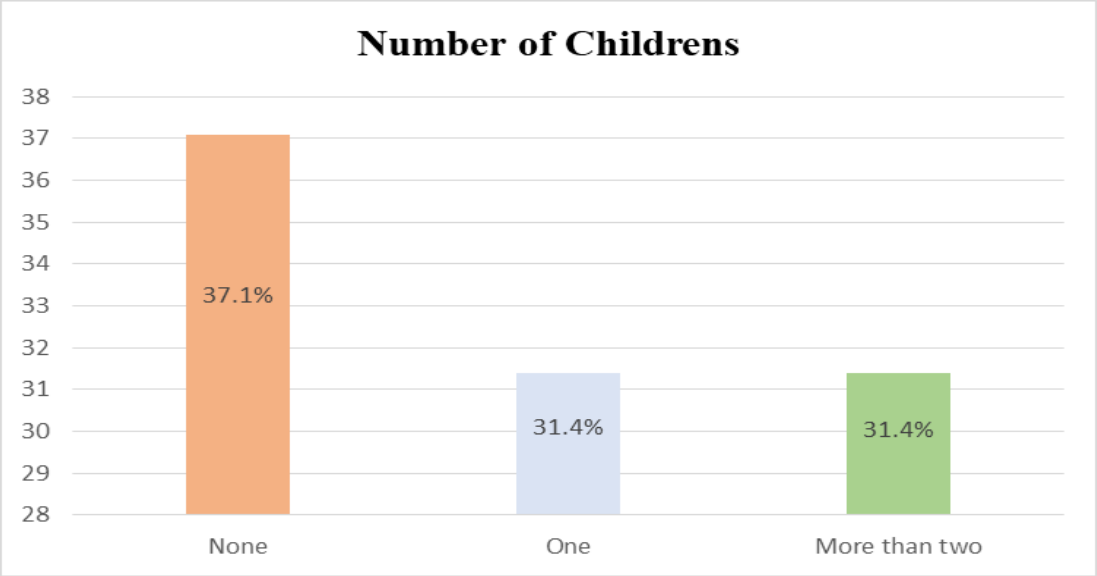


Figure-4.4: Number of children's

4.5 Occupation

Among the participants a highest number of respondents 68% (n=72) found those were Housewife, 9.5% (n=10) participants were service holder, 1% (n=1) were Garment's worker, 1% (n=1) were House maid and 20% (n=21) had found with others professions.

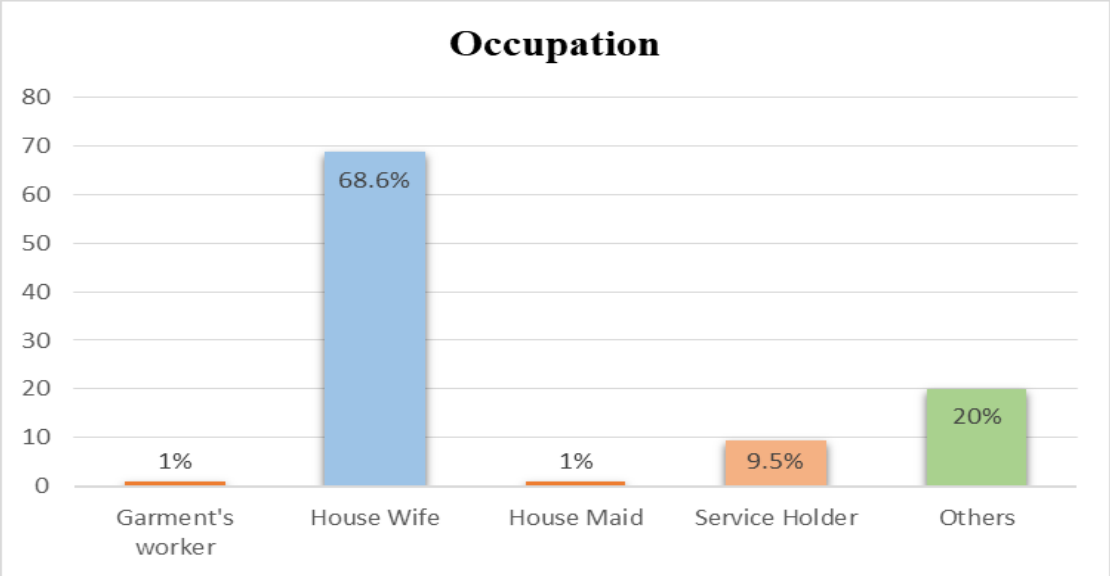


Figure-4.5: Occupation

4.6 Family Income

It my study it was found that Among 105 participants 61% (n=64) of the respondents have their total family income in average 11000-20000 taka monthly, 29% (n=31) of the respondents have their total family income in average 21000-30000 taka monthly, 5.7% (n=6) of the respondents have their total family income in average 31000-50000 taka monthly and 3.8% (n=4) of the respondents have their total family income in average 8000-10000 taka monthly.

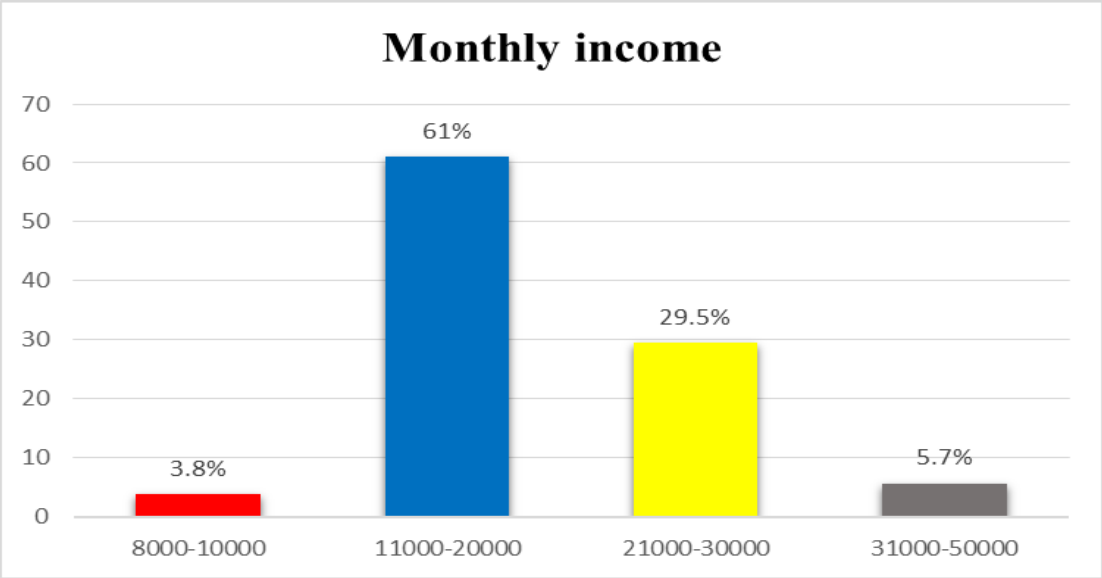


Figure-4.6: Family income

4.7 Worried about baby's health

Among the 105 participants 81% (n=85) participants were worried about baby's health, 19% (n=20) participants were not worried about baby's health.

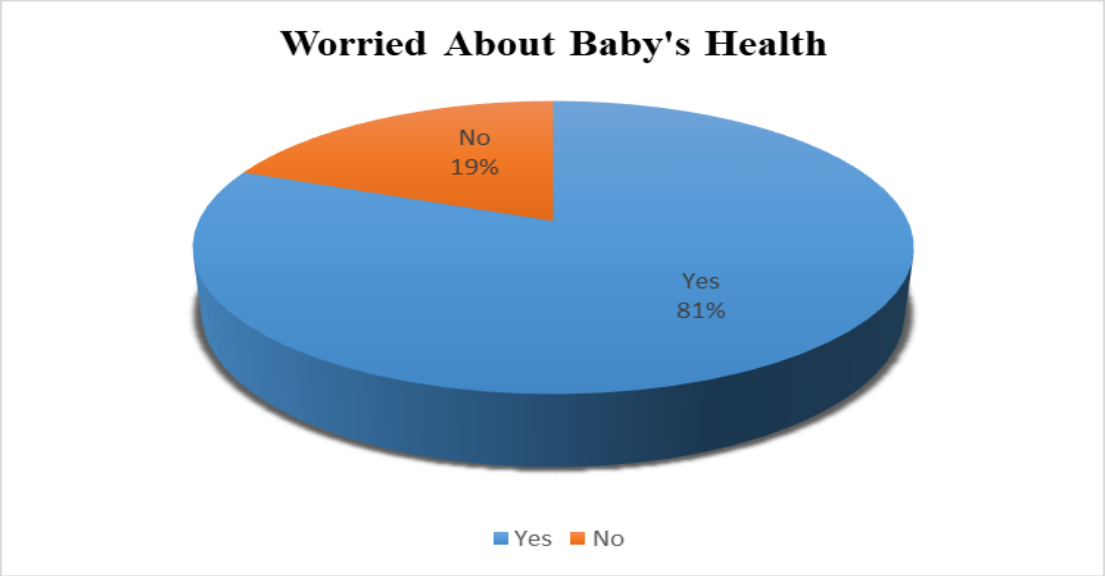


Figure-4.7: Worried about baby's health

4.8 Feeling depressed in pregnancy

In my study it was found that among 105 participants 53% (n=56) participants were feeling depressed in pregnancy period, 47% (n=49) participants were not feeling depressed in pregnancy period.

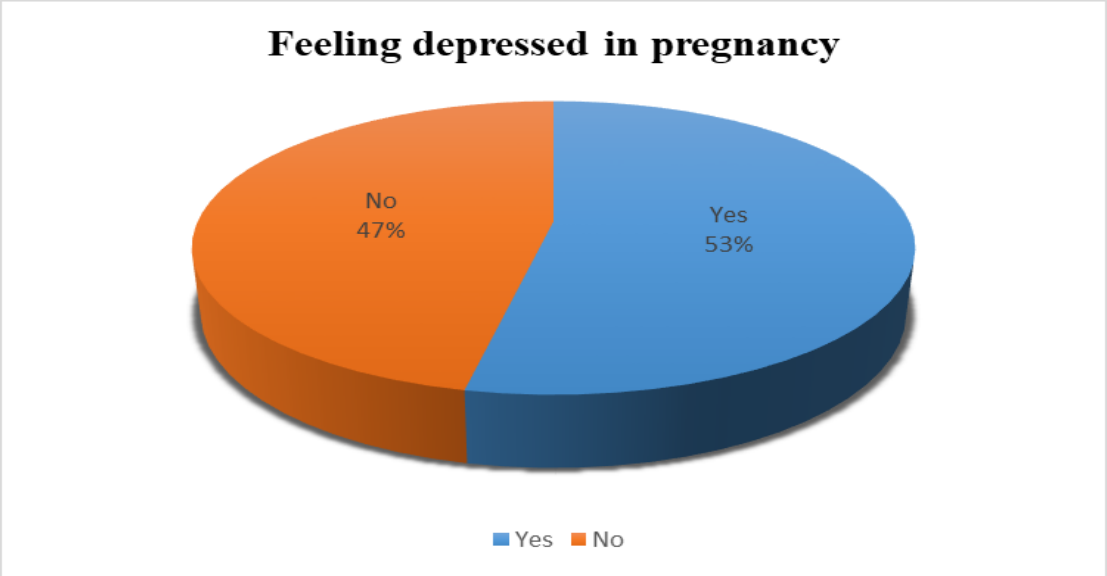


Figure-4.8: Feeling depressed in pregnancy

4.9 Anxious about financial impact

Among the 105 participants 64% (n=67) participants were anxious about financial impact, 36% participants were not anxious about financial impact.

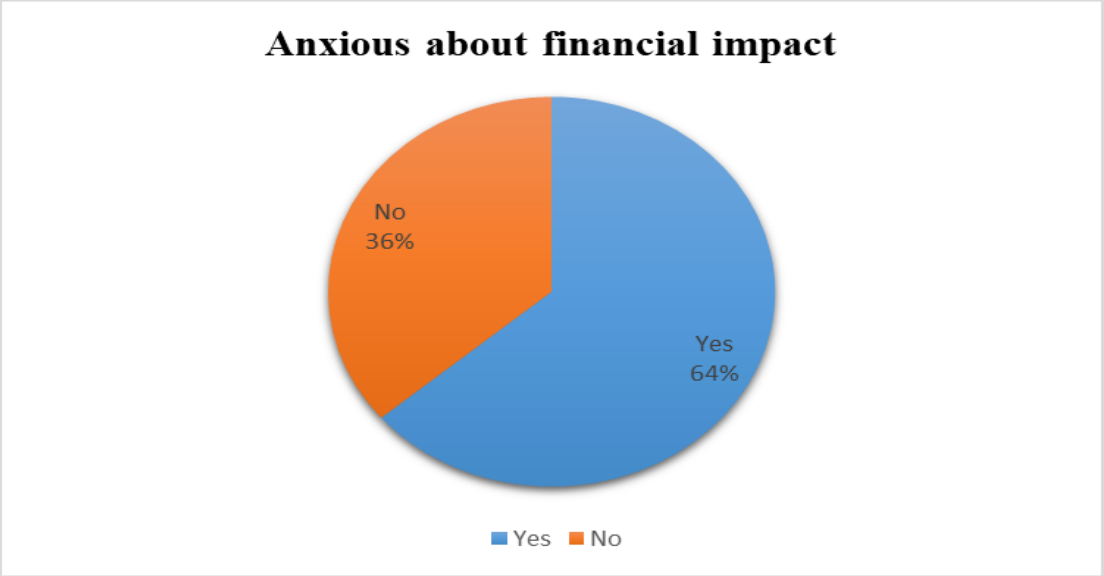


Figure-4.9: Anxious about financial impact

4.10 Expected Family support

Among the 105 participants 44% (n=46) participants were feeling unsupported by family & partner, 56% (n=59) participants were feeling enough supported by family & partner.

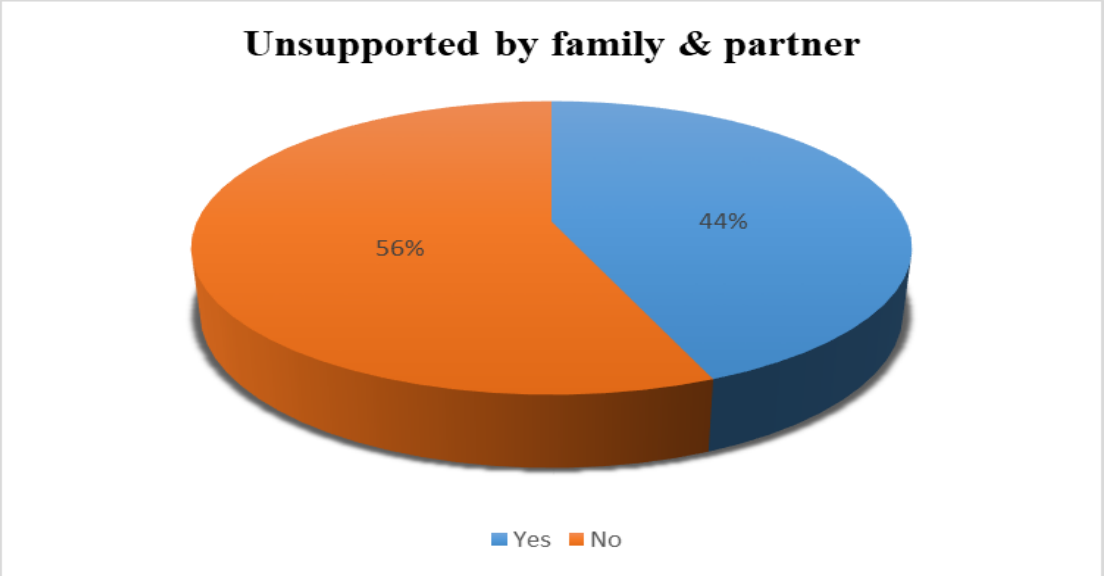


Figure-4.10: Expected Family support

4.11 Search about pregnancy related topics in online

It is found in my study that among 105 participants 33% (n=35) were search about pregnancy related topics in online, 67% (n=70) participants were not search about pregnancy related topics in online.

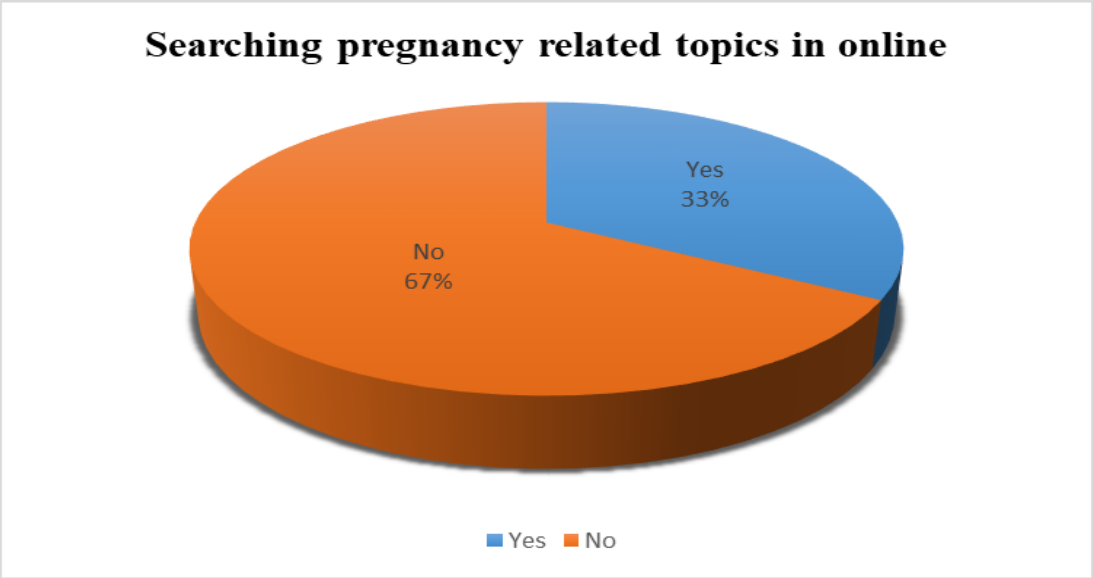


Figure-4.11: Search about pregnancy related topics in online

4.12 Sleeping Problem

Among the 105 participants 16.2% (n=17) were trouble sleeping or experience nightmare, 83.8% (n=88) were not trouble sleeping or experience nightmare.

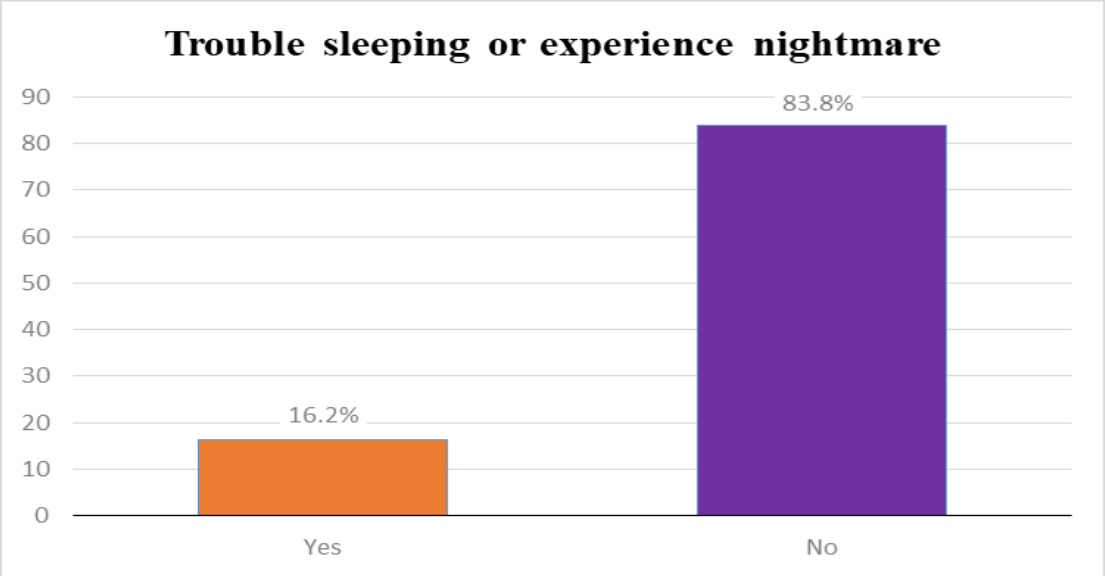


Figure-4.12: Sleeping Problem

4.13 Practice Self-care activities

Among the 105 participants 11.4% (n=12) participants were practice self-care activities to alleviated anxiety, 88.6% (n=93) participants were not practice self-care activities to alleviated anxiety.

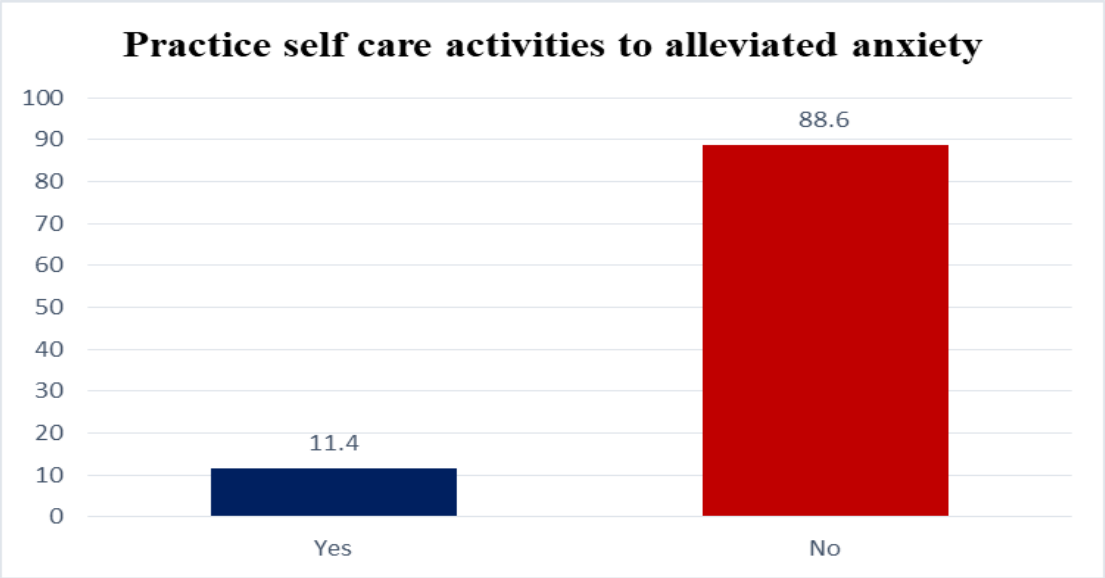


Figure-4.13: Practice self-care activities

4.14 Generalized Anxiety Disorder (GAD) total score

Among the 105 participants it was found that 33.3% (n=35) of the participants had minimal anxiety, 41% (n=43) participants had mild anxiety, 21% (n=22) participants had moderate anxiety and 4.8% (n=5) participants had severe anxiety.

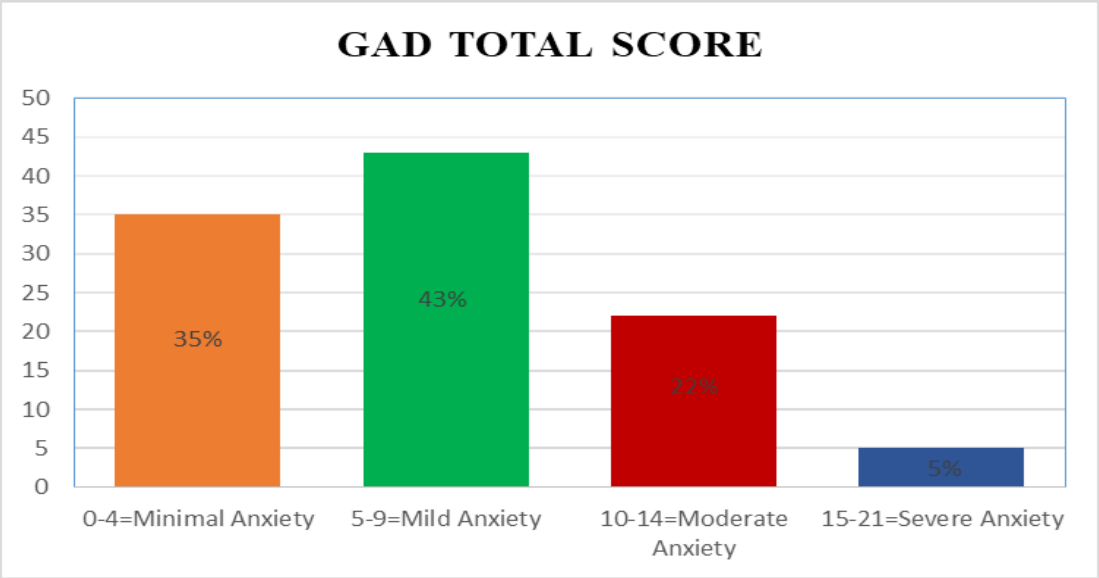


Figure-4.14: GAD total score

4.15 Patient Health Questionnaire (PHQ) total score

Among the 105 participants it was found that 20% (n=21) of the participants had minimal depression, 44.8% (n=47) participants had mild depression, 21% (n=22) participants had moderate depression, 12.4% (n=13) participants had moderately severe and 1.9% (n=2) participants had severe depression.

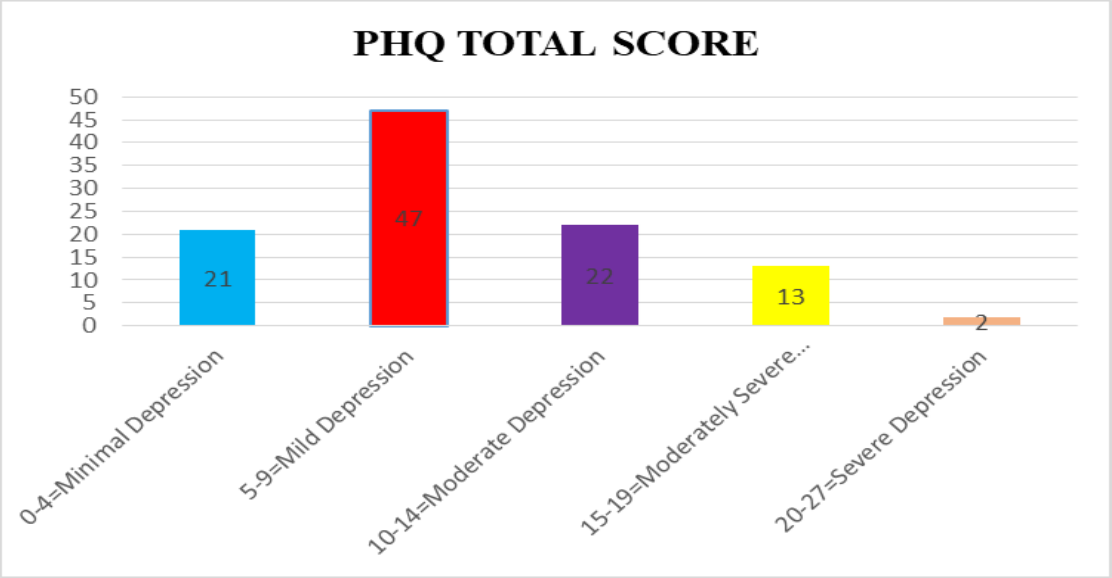


Figure-4.15: PHQ total score

4.16 Analysis between subjects for association

In Chi-square test we see the association. If the P-value is <0.05 then the result is significant which means there is association between the variables.

Table 4.16.1: Association of age and Generalized Anxiety Disorder (GAD) total score

Age and Generalized Anxiety Disorder (GAD) total score	Chi-Square	P-Value
	33.635	0.388

The observed P-value for association of age and Generalized Anxiety Disorder (GAD) total score is 0.388. So the result is not significant that means there is no association between age and Generalized Anxiety Disorder (GAD) total score.

Table 4.16.2: Association of age and Patient Health Questionnaire (PHQ) total score

Age and Patient Health Questionnaire (PHQ) total score	Chi-Square	P-Value
	49.104	0.153

For association of age and Patient Health Questionnaire (PHQ) total score, P-value is 0.153 which is more than 0.05. So the result is not significant that indicates there is no association between age and Patient Health Questionnaire (PHQ) total score.

Table 4.16.3: Association of Pregnancy Period and Generalized Anxiety Disorder (GAD) total score

Pregnancy Period and Generalized Anxiety Disorder (GAD) total score	Chi-Square	P-Value
	36.997	0.249

The observed P-value for association of Pregnancy Period and Generalized Anxiety Disorder (GAD) total score is 0.249. So the result is not significant that means there is no association between age and Generalized Anxiety Disorder (GAD) total score.

Table 4.16.4: Association of Pregnancy Period and Patient Health Questionnaire (PHQ) total score

Pregnancy period and Patient Health Questionnaire (PHQ) total score	Chi-Square	P-Value
	64.389	0.009

The observed P-value for association of Pregnancy Period and Patient Health Questionnaire (PHQ) total score is 0.009 which is less than 0.05 that indicates there is association of Pregnancy Period and Patient Health Questionnaire (PHQ) total score.

Table 4.16.5: Association of educational level and Generalized Anxiety Disorder (GAD) total score

Educational level and Generalized Anxiety Disorder (GAD) total score	Chi-Square	P-Value
	28.644	0.637

The observed P-value for association of Educational level and Generalized Anxiety Disorder (GAD) total score is 0.637. So the result is not significant that means there is no association between Educational level and Generalized Anxiety Disorder (GAD) total score.

Table 4.16.6: Association of educational level and Patient Health Questionnaire (PHQ) total score

Educational level and patient Health Questionnaire (PHQ) total score	Chi-Square	P-Value
	35.367	0.679

For association of Educational level and Patient Health Questionnaire (PHQ) total score, P-value is 0.679 which is more than 0.05. So the result is not significant that indicates there is no association between Educational level and Patient Health Questionnaire (PHQ) total score.

Table 4.16.7: Association of number of children and Generalized Anxiety Disorder (GAD) total score

Number of children's and Generalized Anxiety Disorder (GAD) total score	Chi-Square	P-Value
	25.139	0.800

The observed P-value for association of Number of children's and Generalized Anxiety Disorder (GAD) total score is 0.800. So the result is not significant that means there is no association between Number of Children's and Generalized Anxiety Disorder (GAD) total score.

Table 4.16.8: Association of number of children and Patient Health Questionnaire (PHQ) total score

Number of children's and Patient Health Questionnaire (PHQ) total score	Chi-Square	P-value
	64.607	0.008

The observed P-value for association of Number of children's and Patient Health Questionnaire (PHQ) total score is 0.008 which is less than 0.05 that indicates there is association of Number of children's and Patient Health Questionnaire (PHQ) total score.

Table 4.16.9: Association of occupation and Generalized Anxiety Disorder (GAD) total score

Occupation and Generalized Anxiety Disorder (GAD) total score	Chi-Square	P-Value
	78.907	0.099

The observed P-value for association of Occupation and Generalized Anxiety Disorder (GAD) total score is 0.099. So the result is not significant that means there is no association between Occupation and Generalized Anxiety Disorder (GAD) total score.

Table 4.16.10: Association of occupation and Patient Health Questionnaire (PHQ) total score

Occupation and Patient Health Questionnaire (PHQ) total score	Chi-Square	P-Value
	82.091	0.414

For association of Occupation and Patient Health Questionnaire (PHQ) total score, P-value is 0.414 which is more than 0.05. So the result is not significant that indicates there is no association between Occupation and Patient Health Questionnaire (PHQ) total score.

Table 4.16.11: Association of family income and Generalized Anxiety Disorder (GAD) total score

Family income and Generalized Anxiety Disorder (GAD) total score	Chi-Square	P-Value
	124.343	0.983

The observed P-value for association of Family income and Generalized Anxiety Disorder (GAD) total score is 0.983. So the result is not significant that means there is no association between Family income and Generalized Anxiety Disorder (GAD) total score.

Table 4.16.12: Association of family income and Patient Health Questionnaire (PHQ) total score

Family income and Patient Health Questionnaire (PHQ) total score	Chi-Square	P-Value
	148.427	0.997

For association of Family income and Patient Health Questionnaire (PHQ) total score, P-value is 0.997 which is more than 0.05. So the result is not significant that indicates there is no association between Family income and Patient Health Questionnaire (PHQ) total score.

Table 4.16.13: Association of worried about baby health and Generalized Anxiety Disorder (GAD) total score

Worried about baby's health and Generalized Anxiety Disorder (GAD) total score	Chi-Square	P-Value
	33.265	0.007

The observed P-value for association of Worried about baby's health and Patient Health Questionnaire (PHQ) total score is 0.007 which is less than 0.05 that indicates there is association of Worried about baby's health and Patient Health Questionnaire (PHQ) total score.

Table 4.16.14: Association of worried about baby's health and Patient Health Questionnaire (PHQ) total score

Worried about baby's health and Patient Health Questionnaire (PHQ) total score	Chi-Square	P-Value
	30.502	0.062

For association of Worried about baby's health and Patient Health Questionnaire (PHQ) total score, P-value is 0.062 which is more than 0.05. So the result is not significant that indicates there is no association between Worried about baby's health and Patient Health Questionnaire (PHQ) total score.

Table 4.16.15: Association of feeling depressed in pregnancy and Generalized Anxiety Disorder (GAD) total score

Feeling depressed in pregnancy and Generalized (GAD) total score	Chi-Square	P-Value
	43.409	0.001

The observed P-value for association of feeling depressed in pregnancy and Patient Health Questionnaire (PHQ) total score is 0.001 which is less than 0.05 that indicates there is association of feeling depressed in pregnancy and Patient Health Questionnaire (PHQ) total score.

Table 4.16.16: Association of feeling depressed in pregnancy and Patient Health Questionnaire (PHQ) total score

Feeling depressed in pregnancy and Patient Health Questionnaire (PHQ) total score	Chi-Square	P-Value
	24.204	0.234

For association of feeling depressed in pregnancy and Patient Health Questionnaire (PHQ) total score, P-value is 0.234 which is more than 0.05. So the result is not significant that indicates there is no association between feeling depressed in pregnancy and Patient Health Questionnaire (PHQ) total score.

Table 4.16.17: Association of sleeping problem and Generalized Anxiety Disorder (GAD) total score

Sleeping problem and Generalized Anxiety Disorder (GAD) total score	Chi-Square	P-Value
	11.897	0.751

The observed P-value for association of sleeping problem and Generalized Anxiety Disorder (GAD) total score is 0.751. So the result is not significant that means there is no association between sleeping problem and Generalized Anxiety Disorder (GAD) total score.

Table 4.16.18: Association of sleeping problem and Patient Health Questionnaire (PHQ) total score

Sleeping problem and Patient Health Questionnaire (PHQ) total score	Chi-Square	P-Value
	33.648	0.029

The observed P-value for association of sleeping problem and Patient Health Questionnaire (PHQ) total score is 0.029 which is less than 0.05 that indicates there is association of sleeping problem and Patient Health Questionnaire (PHQ) total score.

Table 4.16.19: Association of expected family support and Generalized Anxiety Disorder (GAD) total score

Expected Family Support and Generalized (GAD) total score	Chi-Square	P-Value
	20.266	0.208

The observed P-value for association of expected Family support and Generalized Anxiety Disorder (GAD) total score is 0.208. So the result is not significant that means there is no association between expected Family support and Generalized Anxiety Disorder (GAD) total score.

Table 4.16.20: Association of expected family support and Patient Health Questionnaire (PHQ) total score

Expected family support and Patient Health Questionnaire (PHQ) total score	Chi-Square	P-Value
	15.627	0.739

For association of expected family support and Patient Health Questionnaire (PHQ) total score, P-value is 0.739 which is more than 0.05. So the result is not significant that indicates there is no association between expected family support and Patient Health Questionnaire (PHQ) total score.

Table 4.16.21: Association of Patient Health Questionnaire (PHQ) total score and Generalized Anxiety Disorder (GAD) total score

Patient Health Questionnaire (PHQ) total score and Generalized Anxiety Disorder (GAD) total score	Chi-Square	P-Value
	478.146	0.001

There is strong association of Patient Health Questionnaire (PHQ) total score and Generalized Anxiety Disorder (GAD) total score as their found P-value is 0.001 which is <0.05.

CHAPTER V DISCUSSION

5.1 Discussion

The purpose of the analysis and discussion is to locate previously published research and determine their relevance to the collected data. This chapter represents the discussion of the results of the study in relation to the research questions and objectives of the study. The discussion is focused on identifying the level of depression, anxiety with their association for patients with Pregnancy Period.

In my study, 105 participants were selected who were pregnant. The age range of the participants were 13-40 years and their mean age was 0.93. The highest number (60%) of the participants were aged between 21-30 years. According to a systematic review, life stress, a lack of social support, and marital abuse are all significantly connected with an elevated risk of depression during pregnancy. Increasing age, lower educational levels, husband abuse, extramarital affairs, not giving time to family and putting restrictions on women, interference by in-laws, and heavy household work are all significantly associated with depression during pregnancy. (Munk-Olsen et al, 2006).

Among 105 participants in my study it was found that 86% of the participants had minimal to moderate depression and 14% of the participants had moderately severe to severe depression. A study conducted in two upazillas of Bangladesh's Mymensingh district found that 18.3% of participants had antepartum depressive symptoms, whereas another study conducted in Matlab, a rural area in the Chandpur district, discovered that 82.2% of women reported any depressive symptoms. (Faisal et al., 2007).

In my study among 105 respondents there were 73.3% of the respondents who had minimal to mild anxiety, 24.7% of the respondents had moderate to severe anxiety. According to Ali., (2012) found in the study that among 165 where most of the participants (70%) were suffered from anxiety there was prevalence of moderate to severe anxiety were 30% which is very much similar to my study.

The Chi-square value between pregnancy related depression and age observed was 49.104 and P value was 0.153 (>0.05), that means the result was not significant that indicate there didn’t have strong association of pregnancy related depression and age. This finding is contradictory to that of Ali et al., (2012) who found that age is the single most important determinant of depressive symptoms: older patients were more often

depressive than relatively younger patients (Ali et al., 2012). Because my study was conducted with short number of participants of 105, if large number of participants were included in the study. In my study it was also indicated that there was no significant association of pregnancy related anxiety and age as found Chi-square value was 33.635 and P value was 0.388 (>0.05).

In my study for association of pregnancy period and depression there observed Chi-square value was 64.389 and P value was 0.009 (<0.05) meaning that the result was significant that indicate there have association of pregnancy period and depression, respectively it was found in my study that among all the participants who were suffering from depression there were 46% of them first trimester of their pregnancy period, 22% of them second trimester and 32% of them third trimester of their pregnancy period. A population-based study in rural Bangladesh found that antepartum anxiety symptoms (29%) and antepartum depressive symptoms (18%) were common. A rural sub district in the southwest of Bangladesh had a greater prevalence of antepartum depression symptoms (33%). Significant depression rates have been documented, particularly during the second and third trimesters of pregnancy. Depression was shown to be prevalent in roughly 16% of South Indian women during their third trimester. Depression is present in 7.4% of pregnant women during the first trimester, 12.8% during the second trimester, and 12.0% during the third trimester. Anxiety and depression in pregnant women have been observed to range between 18% and 39% in Pakistan (Munk-Olsen et al, 2006).

In my study for association of number of children's and depression there observed Chi-square value was 64.607 and P value was 0.008 (<0.05) meaning that the result was significant that indicate there have association of number of children's and depression. Maternal mental health is a significant concern in Bangladesh, a developing country in South Asia. A variety of factors, including socioeconomic disparities, cultural norms, limited access to mental health treatments, and the overall pressures associated with pregnancy and childbirth in this country, are likely to influence the frequency of depression and anxiety among pregnant women in Bangladesh. (Jemere et al., 2020).

In my study for association of sleeping problem and depression there observed Chi-square value was 33.648 and P value was 0.029 (<0.05) meaning that the result was significant that indicate there have association of sleeping problem and depression.

According to the National Sleep Foundation, 78% of women in the United States of America (USA) had sleep changes, while another study revealed that 76% of women had poor sleep quality throughout the year. Pregnancy like any big life event accompanied by hormonal changes, can increase women's chances of developing or relapsing to depressive symptoms. Poor sleep quality is a risk factor for depressive symptoms both during pregnancy and after birth (also known as postpartum depression). Some women experience their first depressive episode during pregnancy, whilst others with a history of depression are more likely to have it repeat, prolong, or worsen. Depressive symptoms were experienced by 10-25% of pregnant women in Brazil. Several studies have found that poor sleep quality has a negative impact on expectant moms. Sleep deprivation during pregnancy, for example, has been linked to an increased risk of premature birth. (Lovisi et al., 2005). Even after controlling for depressive symptoms. (Nonacs et al., 2005).

For association of pregnancy related depression and anxiety observed Chi-square value was 478.146 and P value was 0.001 (<0.05). That means the result was significant that indicate there have strong association of pregnancy related depression and anxiety. Depression is the most common psychiatric condition during pregnancy, according to studies from developed countries, ranging from 10% to 20%. Significant depression rates have been documented, particularly during the second and third trimesters of pregnancy. Faisal et al., (2007) found a 26% frequency of depression and a 10% prevalence of anxiety during pregnancy in low-income, ethnically diverse Minnesota patients. A population-based study in rural Bangladesh found that antepartum anxiety symptoms (29%) and antepartum depressive symptoms (18%) were common. A rural sub district in the southwest of Bangladesh had a greater prevalence of antepartum depression symptoms (33%). Depression and anxiety are two typical mental health issues that can afflict pregnant women all around the world. Women go through major physical, hormonal, and emotional changes during pregnancy, which might render them vulnerable to developing mental health disorders. These conditions not only have an impact on the expectant mother's well-being, but they can also have a negative impact on the developing fetus's health and the overall pregnancy result. Maternal mental health is a significant concern in Bangladesh, a developing country in South Asia. A variety of factors, including socioeconomic disparities, cultural norms, limited access to mental health treatments, and the overall pressures associated with pregnancy and

childbirth in this country, are likely to influence the frequency of depression and anxiety among pregnant women in Bangladesh. (Jemere et al., 2020).

5.2 Limitations:

Regarding this study there were some situational limitation or barriers to consider the result of the study. The limitations are as below:

The study had small sample size. Only 105 samples were taken in this study. Only 105 samples do not represent the condition of entire country's pregnant women patients. It would be more effective if a large number of samples were taken. Time was one of the major limitation. I had a short period of time to complete the research so that large number of sample couldn't be managed for the study. The sample was collected only from Shaheed Suhrawardy Medical College and Hospital (ShSMC), sher-e-bangla nagar, agargong, Dhaka. If it was collected from other many Hospitals and Community of the country, the result would be more reliable and appropriate and also give a clear impression about the level of depression and anxiety among pregnant women patients in Bangladesh. As it was the first research of the researcher so there might be some mistakes that should be overlooked by the supervisor and the honorable teachers.

CHAPTER VI CONCLUSION AND RECOMMENDATION

6.1 Conclusion

The researcher explored the level of depression and anxiety among pregnant women and also search for association of pregnancy related depression and anxiety. The results of the study suggest that depression and anxiety are commonly experienced in pregnancy period. Researcher didn't find any associations of age & family income with pregnancy period depression and anxiety. In the study it was found that there was strong association of depression & pregnancy period ($P<0.05$) and also there was association among anxiety and warried about baby's health ($P<0.05$). So depression and anxiety are prevalent in pregnant women patients. Researcher also found strong association of depression with anxiety among pregnant women as observed P-value was 0.001 ($P<0.05$). Pregnant anxiety patients are more likely to have severe depressive symptoms. Pregnant women may be more prone to having anxiety and depression because of a variety of circumstances, such as hormonal changes, stress in their lives, a lack of social support system, a history of mental illness, and pregnancy-related worries.

If anxiety and depression are not treated, it may have a harmful effect on the unborn child and the pregnant woman. Preterm birth, low birth weight, and other difficulties during pregnancy and childbirth may be increased by them. A pregnant woman's general health can be negatively impacted by depression and anxiety, which can result in sleep issues, changes in food, less physical activity, and trouble bonding with the unborn child. Prenatal exposure to depression and anxiety in the mother might impact the child's emotional, cognitive, and behavioral development in the long run, thus raising the child's risk of emotional and behavioral issues in later life. Pregnant women who experience anxiety and depression may benefit from a variety of therapeutic modalities. Pregnancy is a time when non-pharmacological therapies like support groups and cognitive-behavioral therapy (CBT) are often favored. However, under a doctor's supervision, medication may occasionally be required .anxiety and depression are common mental health issues among expectant mothers. The overall experience of pregnancy can be enhanced and the negative effects can be lessened with early detection and suitable therapies. In order to guarantee a safe pregnancy and delivery, expectant mothers should have access to sufficient support and mental health services.

6.2 Recommendation

After completing the research, the researcher found some recommendation. Some points to be noted that might be taken for the better accomplishment for further study.

The main recommendations would be as follow:

Should take more samples for generating the result and make more valid and reliable. Sample should collect from different Hospitals and Community in different districts of Bangladesh to generalize the result. To find out an effective and efficient result in generalized form, other measurement scales should be used in consideration. A larger sample size may increase the statistical significance of some of the results. A long-term follow-up examination may provide the long-term effect of depression and anxiety among pregnant women. There were some limitations of this study mentioned at the relevant section and it is recommended to overcome those limitations during further study.

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Appendix

Appendix-1 (A)

Permission Letter

Date: March 28,2023

To

The Principal

Bangladesh Health Professions Institute (BHPI)

CRP, Savar, Dhaka-1343

Through: Head, Department of Physiotherapy, BHPI

Subject: Prayer for seeking permission to collect data for conducting a research project.

Sir,

With due respect and humble submission to state that I am Niama Akter Mim, student of 4th year B.Sc. in Physiotherapy at Bangladesh Health Professions Institute (BHPI). The Ethical committee has approved my research project entitled: **"Depression & Anxiety among Pregnant Women"** under the supervision of Md. Shofiqul Islam, Associate Professor and Head, Department of Physiotherapy, BHPI, CRP, Savar, Dhaka-1343. Conducting this research project is partial fulfillment of the requirement for the degree of B.Sc. in Physiotherapy. I want to collect data for my research project from Shaheed Suhrawardy Medical College and Hospital, Sher-E-Bangla Nagar, Dhaka. So, I need your kind permission for data collection at Gynecological Unit of Shaheed Suhrawardy Medical College and Hospital, Sher-E-Bangla Nagar, Dhaka. I would like to assure that nothing of the study would be harmful for the participants.

I therefore, pray and hope that your honor would be kind enough to grant my application and give me permission for data collection and oblige thereby.

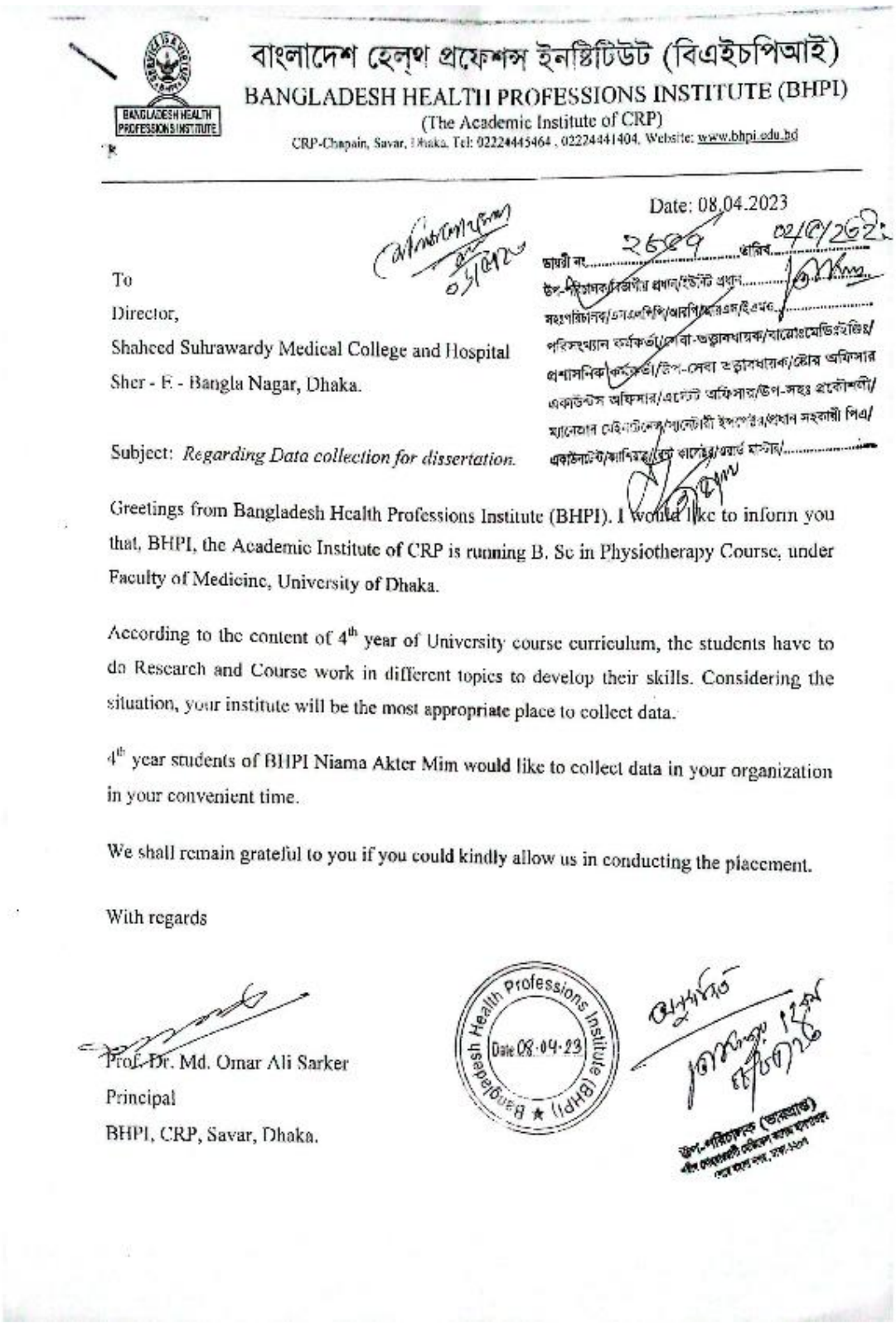
Sincerely

Niama Mim

Niama Akter Mim
4th Year
B.Sc. in Physiotherapy
Class Roll: 25; Session: 2017-18
Bangladesh Health Professions Institute (BHPI)
Chapain, CRP, Savar, Dhaka, 1343.

Recommended
Shofiq
28.03.2023
Md. Shofiqul Islam
Associate Professor & Head
Department of Physiotherapy
Bangladesh Health Professions Institute (BHPI)
CRP, Chapain, Savar, Dhaka-1343

Appendix-1 (B)



বাংলাদেশ হেল্‌থ প্রফেশন্স ইনষ্টিটিউট (বিএইচপিআই)

BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)

(The Academic Institute of CRP)

CRP-Chapain, Savar, Dhaka. Tel: 02224445464 , 02224441404, Website: www.bhpi.edu.bd

Date: 08.04.2023

To

Director,

Shaheed Suhrawardy Medical College and Hospital

Sher - E - Bangla Nagar, Dhaka.

Subject: *Regarding Data collection for dissertation.*

Greetings from Bangladesh Health Professions Institute (BHPI). I would like to inform you that, BHPI, the Academic Institute of CRP is running B. Sc in Physiotherapy Course, under Faculty of Medicine, University of Dhaka.

According to the content of 4th year of University course curriculum, the students have to do Research and Course work in different topics to develop their skills. Considering the situation, your institute will be the most appropriate place to collect data.

4th year students of BHPI Niama Akter Mim would like to collect data in your organization in your convenient time.

We shall remain grateful to you if you could kindly allow us in conducting the placement.

With regards

Prof. Dr. Md. Omar Ali Sarker

Principal

BHPI, CRP, Savar, Dhaka.

Bangladesh Health Professions Institute (BHPI) Date 08-04-23

Appendix-1 (C)

বাংলাদেশ হেল্‌থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)
Bangladesh Health Professions Institute (BHPI)
(The Academic Institute of CRP)

Ref: CRP/BHPI/IRB/03/2023/706

Date: 13/03/2023

To
Niama Akter Mim
B.Sc. in Physiotherapy,
Session: 2017-2018, DU Reg. No: 8646
BHPI, CRP, Savar, Dhaka- 1343, Bangladesh

Subject: Approval of the dissertation proposal **"Depression & Anxiety among Pregnant Women"**–by the ethics committee.

Dear Niama Akter Mim,
Congratulations!
The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application to conduct the above-mentioned dissertation, with you, as the Principal Investigator Md. Shofiqul Islam, Head of the Department, Department of Physiotherapy, and BHPI. As dissertation supervisor. The following documents have been reviewed and approved:

Sr. No.	Name of the Documents
1	Dissertation Proposal
2	Questionnaire (English and Bengali versions)
3	Information sheet & consent form

The purpose of the study is to find out the Depression & Anxiety among pregnant women. Should there be any interpretation, type, spelling, or grammatical mistakes in the title, it is the responsibility of the investigator. Since the study involves a questionnaire that takes a maximum of 20- 25 minutes and has no likelihood of any harm to the participants. The members of the Ethics committee approved the study to be conducted in the presented form at the meeting held at 09:00 AM on January 9, 2023, at, 34th IRB Meeting, BHPI.

The institutional ethics committee expects to be informed about the progress of the study, any changes occurring in the course of the study, any revision in the protocol, and patient information or informed consent and ask to be provided a copy of the final report. This Ethics committee is working on Nuremberg Code 1947, the World Medical Association Declaration of Helsinki, 1964 – 2013, and other applicable regulations.

Best regards,

Muhammad Millat Hossain
Associate Professor, Dept. of Rehabilitation Science
Member Secretary, Institutional Review Board (IRB) BHPI,
CRP, Savar, Dhaka-1343, Bangladesh

সিআরপি-চাপাইন, সাভার, ঢাকা-১৩৪৩, বাংলাদেশ। ফোন: +৮৮ ০২ ২২৪৪৪৫৪৬৪-৫, +৮৮ ০২ ২২৪৪৪১৪০৪, মোবাইল: +৮৮ ০১৭৩০ ০৫৯৬৪৭
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Appendix-2 (A)

সম্মতি পত্র (বাংলা)

(অনুগ্রহ করে অংশগ্রহণকারীকে পড়ে শুনাতে হবে)

আসসালামুআলাইকুম,

আমার নাম নাঈমা আক্তার মিম, ৪র্থ বর্ষ বিএসসি ইন ফিজিওথেরাপি শিক্ষার্থী ,বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউট (বি এইচপি আই)। আমি এই গবেষণা অধ্যয়ন পরিচালনা করছি যা এর অংশ। বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউট (বি এইচপি আই), ঢাকা বিশ্ববিদ্যালয়ের অধীনে ফিজিওথেরাপি প্রোগ্রামে এবং আমার গবেষণার শিররোনাম হল "**গর্ভবতী মহিলাদের মধ্যে বিষণ্নতা এবং উদ্বেগ**"। সেই কারণে আমি কিছু ব্যক্তিগত এবং অন্যান্য সম্পর্কিত তথ্য সম্পর্কে জানতে চাই। এটি প্রায় ১৫-২০ মিনিট সময় নেবে।আমি আপনাকে জানাতে চাই যে এটি একটি সম্পূর্ণরূপে পেশাদার অধ্যয়ন এবং অন্য কোন উদ্দেশ্যে ব্যবহার করা হবে না। আপনার দ্বারা প্রদত্ত সমস্ত তথ্য গোপনীয় হিসাবে বিবেচিত হবে এবং কোনও প্রতিবেদন বা প্রকাশনার ক্ষেত্রে এটি নিশ্চিত করা হবে যে তথ্যের উৎস বেনামী থাকবে। এই অধ্যয়নে আপনার অংশগ্রহণ স্বেচ্ছাকৃত এবং আপনি কোন নেতিবাচক পরিণতি ছাড়াই এই অধ্যয়নের সময় ৭ দিনের মধ্যে নিজেকে প্রত্যাহার করতে পারেন। সাক্ষাতের সময় আপনি পছন্দ করেন না বা উত্তর দিতে চান না এমন একটি নির্দিষ্ট প্রশ্নের উত্তর না দেওয়ার অধিকারও আপনার রয়েছে । অধ্যয়ন বা অংশগ্রহণকারী হিসাবে আপনার অধিকার সম্পর্কে আপনার কোন প্রশ্ন থাকলে, আপনি আমার সাথে বা আমার সুপারভাইজার মোঃ শফিকুল ইসলাম, সহযোগী অধ্যাপক ও বিভাগীয় প্রধান,, ফিজিওথেরাপি বিভাগ, বিএইচপিআই-এর সাথে যোগাযোগ করতে পারেন। আমি শুরু করার আগে আপনার কোন প্রশ্ন আছে ?

তাই ইন্টারভিউ সামনে দিকে এগিয়ে যাওয়ার জন্য আমি কি আপনার সম্মতি পেতে পারি ?

হ্যাঁ ন্া

অংশগ্রহণকারীর স্বাক্ষর..... ..... তারিখ্

তথ্য সংগ্রহকারীর স্বাক্ষর্ তারিখ্

Appendix-2 (B)

Informed consent

(Please read out to the participant)

Assalamu Alikum,

I am **Niama Akter Mim**, a student of B.Sc. in physiotherapy, Session 2017-20 18, at Bangladesh Health Professions Institute, Under the Faculty of Medicine, University of Dhaka. To obtain B.Sc. in physiotherapy degree I have to complete a dissertation. My dissertation title is "Depression & Anxiety among pregnant women". The aim of the study is to explore the pregnant women use to manage anxiety and depression. I would like to ask you some questions regarding the dissertation. I am assuring you that the management provided to you would not cause any harm. Moreover, treatment would be provided by a physiotherapist. The information will be kept confidential and will be used only for dissertation purposes. You have the right to withdraw your participation at any time. Besides If you feel uncomfortable giving answers to any question you can escape that question. The questionnaire will take 20 to 30 minutes to fill up. Please give me the correct answer to the question and allow the data collector to examine your health condition.

If you have any queries please contact me and my supervisor **Md. Shofiqul Islam, Head of the department, Department of physiotherapy, BHPI, CRP.**

If you kindly give your consent, we can start.

Yes ☐ No ☐

Thank you for your participation as well as in the formation.

Participants signature & Date: ……..

Data Collector signature & Date: ……

Appendix-3 (A)

Questionnaire- বাংলা

পার্ট ১

সামাজিক-জনসংখ্যা সংক্রান্ত তথ্যঃ
(√ বসান এবং আপনার উত্তর লিখুন))

প্রশ্ন	উত্তর
১ .অংশগ্রহণকারীর নাম:	
২. রোগীর আইডি:	
৩. বয়স:	
৪. ধর্ম:	
৫ .ঠিকানা:	
৬ .মোবাইল নম্বর:	
৭. শিক্ষাগত যোগ্যতা:	১ . নিরক্ষর ২. প্রাথমিক ৩. মাধ্যমিক ৪. উচ্চ মাধ্যমিক ৫. স্নাতক ৬. স্নাতকোত্তর
৮. গর্ভাবস্থার সময়কাল:	১. ১ম ত্রৈমাসিক (১ থেকে ৩ মাস) ২. ২য় ত্রৈমাসিক (৪ থেকে ৬ মাস) ৩. ৩য় ত্রৈমাসিক (৭ থেকে ৯ মাস)
৯ .শিশুদের সংখ্যা:	১ ☐ ২ ☐ ৩ বা ৩ এর অধিক ☐
১০. পেশা:	১. গার্মেন্টস কর্মী ২. গৃহিণী ৩. গৃহ পরিচারিকা ৪. চাকুরীজীবী ৫.অন্যান্য(নির্দিষ্ট করুন):
১১. মাসিক আয়:	

পার্ট ২

গর্ভাবস্থার সাথে সম্পর্কিত প্রশ্নসমুহ ঃ

১। আপনি কি ঘন ঘন আপনার অনাগত শিশুর স্বাস্থ্য নিয়ে চিন্তা করেন?

ক) হ্যাঁ

খ) না

২। আপনি কি আপনার গর্ভাবস্থায় বিষণ্নতা উপসর্গ অনুভব করছেন?

ক) হ্যাঁ

খ) না

৩। আপনি কি আপনার শিশু হওয়াতে আপনার আর্থিক প্রভাব বা অভাব সম্পর্কে উদ্বিগ্ন?

ক) হ্যাঁ

খ) না

৪। আপনি কি আপনার গর্ভাবস্থায় আপনার সঙ্গী বা পরিবারের সদস্যদের দ্বারা অসমর্থিত বোধ করেন?

ক) হ্যাঁ

খ) না

৫। আপনি কি ঘন ঘন গর্ভাবস্থা-সম্পর্কিত বিষয়গুলি অনলাইনে গবেষণা করছেন বা আপনার উদ্বেগ সম্পর্কে আপনার স্বাস্থ্যসেবা প্রদানকারীর সাথে কথা বলছেন?

ক) হ্যাঁ

খ) না

৬। আপনি কি আপনার গর্ভাবস্থা এর সাথে সম্পর্কিত যে কোন ঘুম অথবা অভিজ্ঞ দুঃস্বপ্ন আছে?

ক) হ্যাঁ

খ) না

৭। গর্ভাবস্থা-সম্পর্কিত উদ্বেগ দূর করার জন্য আপনি কি ঘন ঘন স্ব-যত্ন ক্রিয়াকলাপ অনুশীলন করেন যেমন ধ্যান, ব্যায়াম, বা বন্ধু এবং প্রিয়জনের সাথে সময় কাটাতে?

ক) হ্যাঁ

খ) না

পার্ট - ৩

সাধারন উদ্বেগজনিত ব্যাধি ৭ (জি এ ডি -৭) দ্বারা পরিমিত উদ্বেগ

গত দুই সপ্তাহ ধরে আপনি কতবার নিম্নলিখিত সমস্যা গুলি দ্বারা বিরক্ত হয়েছেন?	একদমই না	বেশ কিছুদিন	অর্ধেক দিনের বেশি	প্রায় প্রতিদিনই
১) স্নায়ুবিক উদ্বিগ্ন বা ক্লান্তি বোধ করা।	০	১	২	৩
২) দুশ্চিন্তা নিয়ন্ত্রন করতে না পারা।	০	১	২	৩
৩। রোগীর অবস্থা নিয়ে খুব বেশি চিন্তা করা।	০	১	২	৩
৪। কষ্ট শিথিল।	০	১	২	৩
৫। এত অস্থির হওয়া।	০	১	২	৩
৬। সহজেই বিরক্ত ও বা খিটখিটে হওয়া	০	১	২	৩
৭। কোন কিছু নিয়ে ভীত হওয়া ।	০	১	২	৩

সর্বমোট স্কোর =

স্কোরের ব্যাখ্যা ঃ

(০ু ৪) = সর্বোনিম্ন উদ্বেগ

(৫- ৯) = হালকা উদ্বেগ

(১০ু ১৪) = মাঝারি উদ্বেগ

(১৫-২১) = গুরুতর উদ্বেগ

পার্ট ৪

রোগীর স্বাস্থ্য প্রশ্নবলি (পি এইচ কিউ) দ্বারা পরিমাপিত বিষণ্নতা

গত দুই সপ্তাহ ধরে আপনি কতবার নিম্নলিখিত সমস্যা গুলি দ্বারা বিরক্ত হয়েছেন?	একদমই না	বেশ কিছুদিন	অর্ধেক দিনের বেশি	প্রায় প্রতিদিনই
১। কাজ করার সামান্য আগ্রহ	০	১	২	৩
২। নিচু, বিষণ্ন , বা আশাহীন বোধ করা ।	০	১	২	৩
৩। ঘুমিয়ে থাকা ।	০	১	২	৩
৪। ক্লান্ত বোধ করা বা অল্প শক্তি থাকা ।	০	১	২	৩
৫। ক্ষুধা মন্দা ।	০	১	২	৩
৬। নিজের সম্মর্কে খারাপ বোধ ।	০	১	২	৩
৭। গৃহস্থলি অন্যান্য কাজে মননিবেশ করতে সমস্যা ।	০	১	২	৩
৮। নিজেকে উত্তেজিত বলে মনে হওয়া ।	০	১	২	৩
৯। নিজেকে আঘাত করার প্রবণতা ।	০	১	২	৩

সর্বমোট স্কোর =

স্কোরের ব্যাখ্যা ঃ

(০ ৪) = সর্বনিম্ন বিষণ্নতা

(৫- ৯) = হালকা বিষণ্নতা

(১০ ১৪) = মাঝারি বিষণ্নতা

(১৫-১৯) = গুরুতর বিষণ্নতা

(২০-২৭) = অধিক গুরুতর বিষণ্নতা

Appendix-3 (B)

Part-01

Socio-Demographic Information:
(Put √ and write your answer)

Question	Response
1. Participant Name:	
2. Patient ID:	
3. Age:	
4. Religion:	
5. Address:	
6. Mobile No:	
7. Educational Qualification:	1. Illiterate 2. Primary 3. Secondary 4. Higher Secondary 5. Graduation 6. Post-Graduation
8. Pregnancy period:	1. 1st Trimester (1-3 Months) 2. 2nd Trimester (4-6 Months) 3. 3rd Trimester (7-9 Months)
9. No. of children's:	1 ☐ 2 ☐ more than 3
10.Occupation:	1. Garments worker 2. House Wife 3. House Maid 4. Service Holder 5. Others (Specific):
11. Monthly Income:	

Part: 2

Pregnancy-Related Questions:

1. Do you worry about the health of your unborn baby?

a) Yes

b) No

2. Do you experience any symptoms of depression during your pregnancy?

a) Yes

b) No

3. Are you anxious about the financial impact of having a baby?

a) Yes

b) No

4. Do you feel unsupported by your partner or family members during your pregnancy?

a) Yes

b) No

5. Do you find yourself researching pregnancy-related topics online or speaking with your healthcare provider about your concerns?

a) Yes

b) No

6. Have you had any trouble sleeping or experienced nightmares related to your pregnancy?

a) Yes

b) No

7. Do you practice self-care activities such as meditation, exercise, or spending time with friends and loved ones to alleviate pregnancy-related anxiety?

a) Yes

b) No

Part-3: Anxiety was measured by Generalized Anxiety Disorder-7 (GAD-7)

Over the last 2 weeks, how often have you been bothered by the following problems?	**Not at all sure**	**Several days**	**Over half the days**	**Nearly every day**
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it's hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3
Add the score for each column =		+	+	+
Total Score (add your column scores) =				

Part-4: Depression was measured by The Patient Health Questionnaire (PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems?	**Not at all**	**Several days**	**More than half the days**	**Nearly every day**
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the oppositebeing so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3
(For office coding: Total Score _____ = _____ + _____ + _____+ _____)				