Faculty of Medicine

University of Dhaka

LEVEL OF DEPRESSION IN WOMEN AT POST PARTUM PERIOD IN SAVAR, DHAKA.

Shammy Akter Eti

Bachelor of Science in Physiotherapy (B.Sc. In PT)

Registration No: 8622

DU Roll No: 1112

Session: 2017-18

Bangladesh Health Professions Institute

Department of Physiotherapy

CRP, Savar, Dhaka-1343

September,2023

Declaration

I declare that this is my own work and has not been previously submitted for assignment; and it does not contain unreferred material copied from any other source. I am aware about plagiarism, if it is shown that the material has been plagiarized, or I have otherwise attempted to obtain an unfair advantage for myself or others, I understand that I may face sanction in accordance with the policies and procedures of the Institute. A mark of zero may be awarded and the rewarded and the reason for that mark will be recorded on my file.

Name of the Student: **Date:**

Shammy Akter Eti

Bachelor of Science in Physiotherapy (B.Sc.in PT)

DU Roll No: 1112

Registration No:8622

Session: 2017-2018

BHPI, CRP, Savar, Dhaka1343

CONTENTS

ACKNOWLEDGEMENT

At first, I want to pay my gratitude to almighty Allah who has given me the ability to complete this research project without any kind of difficulties. Then I would like to pay my gratitude towards my respected parents who constantly encouraged me to carry out this project. My deepest great-fullness goes to my honorable supervisor & respected teacher **Asma Islam**, Assistant Professor, Department of Physiotherapy, Bangladesh Health Professions Institute (BHPI), CRP, Savar, Dhaka, for her keen supervision and tireless effort with excellent guidance and support without which I could not able to complete this project. In addition, I am thankful to all of my honorable teachers specially; **Dr. Mohammad Anwar Hossain ,PhD** Associate Professor of Physiotherapy, BHPI, senior consultant & Head Department of Physiotherapy ,CRP, Savar, Dhaka; **Professor Md. Obaidul Haque**, Vice principal, BHPI,CRP,Savar,Dhaka ; **Ehsanur Rahman**, Associate Professor, Department of Physiotherapy, BHPI; **Fabiha Alam** Assistant Professor, Department of Physiotherapy, and our mentor**,** and all faculty member of physiotherapy department, for their advice, support and guidelines and also given me the permission to collect the data from Neurology Unit of Physiotherapy Department. I wish to thank to all respectable Physiotherapy staff working at CRP Paediatric Department, specially honorable teacher **Hosneara Parveen,** Head of Paediatric Department , CRP, Savar, Dhaka for helping me in collection of my data. I would also like to give thanks to BHPI librarian Mrs. Mohosina to her heartily help and library assistant Mr. Anis for their positive help, kind support to find out related books, journals and also access to internet during the project study. I thank all of my friends for their direct and indirect inspiration, suggestion as well as support. Finally, I would like to thanks my data collector and all the participants who willingly participated as the study population during the conduction of my study and the entire individual who were directly or indirectly involved with this study.

ACRONYM

BHPI: Bangladesh Health Profession's Institute

CRP: Centre for the Rehabilitation of the Paralysed

CNHC: Complementary and Natural Healthcare Council

IRB: Institutional Review Board

WHO: World Health Organization

SPSS: Statistical Package for the Social Sciences

PPD: Post Partum Depression

PND: Post Natal depression

CBT: Cognitive Behaviorial Therapy

IPT: Inter Personal Therapy

PMAD: Perinatal Mood and Anxiety Disorders

MMSE: Mini-Mental State Examination

EPDS: Edinburgh Post Pattum Depression Scale

ADL: Activity of Daily Living

LIST OF TABLE

LIST OF FIGURES

Abstract

Purpose: The purpose of the study was to find out the level of depression in women at post partum period and association of socio-demograohic factors for developing post partum depression in Savar, Dhaka. ***Objectives:*** The objectives of this study were to identify the level of depression, to know association between the post partum depression with socio-demographic information like (mother's age, child age,co-morbidities of mother, health condition of child, relationship with husband, sexual life, family support) and the importance of screening mother's mental health thoughtout the post partum period. ***Methodology:*** The study design was cross-sectional. Total 107 samples were selected conveniently for the study from residential area of Savar. Data was collected by using of questionnaire, post partum depression is measured by Edinburgh Post Partum Depression Scale (EPDS) scale. The study was conducted by descriptive and inferential analysis through using SPSS software 20.0version. ***Results:*** This study found that among 107 participants 2.8% mothers have none or minimal depression, 28% have mild depression, 46.7% have moderate depression, 22.4% have severe depression, a significant association found between the post partum depression and family income, also the association found between level of depression with level of motivation. Not found any association between post partum depression with other socio-demographic information and such as type of delivery, mother's age, child age, education level, occupation of mother etc. ***Conclusion:*** Post partum depression is very common in Bangladesh.It has an impact on day to day life and it is dangerous for child health.It may impaire mothers child relationship. So it is vital to pay attention following post partum period.Mothers should be screening regularly.Post partum depression.if left untreated, can have very negative long-term effects on the mother,the child, and the entire family.AS a result, specific consideration and care are required. This calls for adjustments to existing psychological, pharmacological therapies as well as the physiotherapy treatment.

Key word **:** Post partum depression, EPDS, antidepressant, psychotherapy, physiotherapy, treatment.

Word count: 10,309

CHAPTER - I INTRODUCTION

1.1 Background

Post partum depression (PPD) is described as "a special state of mental health disorder and a variant of depression"- according to the World Health Organization [WHO] (2011). PPD is described as "a serious mental health problem characterized by a prolonged period of emotional disturbance, occurring at a time of major life change and increased responsibilities in the care of the newborn" by the American Psychological Association [APA] (2015).

Most women like nothing more than welcoming a child into the world. But giving birth has a lot of difficulties, some of which are not given enough attention. The post-partum depression is one of these. Up to 13%–15% of all new mothers worldwide suffer from postpartum depression (PPD), a serious health problem that typically manifests itself in the first three months of the postnatal period (Dennis et al. 2015). The postnatal period is deemed by the World Health Organization (WHO) to be both the most crucial and the most overlooked time in a mother's and baby's lives. An hour after the fetus is born and the placenta is expelled, the postpartum period starts. This time frame represents the approximate amount of time needed for uterine involution and the restoration of the majority of the mother's bodily systems to a non-pregnant state. The first three weeks following childbirth are considered the early postpartum phase, while the remaining four to six weeks are known as the late postpartum period (Song et al. 2012).

A woman's physical, mental, and social health undergo numerous changes after giving birth. During pregnancy and into the postnatal phase, there are significant changes in both hormones and social origin. In order to prepare a woman's body for the growing baby and delivery process, increased sex hormone levels create laxity of the ligaments and muscles, which renders women more vulnerable to injury and a variety of ailments (Amanda et al. 2018).Regardless the fact that childbirth is a normal process, difficulties might occur and negatively impact the postpartum individual. These include thrombophilia, wound infections, endometritis, mastitis, and urinary tract infections; endocrine problems

including postpartum thyroditis; and psychological disorders such postpartum depression and the postpartum blues (PPD) and post partum psychosis. Postpartum depression affects moms physiologically and behaviorally, and it can have a significant influence on the child and family as a whole (Daley et al., 2011). The biology of postpartum depression is not well known. While the length of time varies from mother to mother, it is believed to be influenced by sociocultural variables, including the woman's self-worth, her experience giving birth, her connection with her spouse, the availability of support from friends and family, and community resources. A woman's self-esteem is impacted by her work decisions, sleep deprivation, and how she views herself as a new mother, all of which have an impact on her capacity to parent (Huang et al. 2018).

One of the mood disorders that can occur after childbirth is post-partum depression (PPD), which has the potential to progress to major depressive disorder (Nynas at el. 2015). Baby blues and post-partum psychosis are two more post-partum mental disorders. Anxiety, mood fluctuations, a lack of confidence, irritability, a loss of appetite, and lack of interest are some of the clinical characteristics of PPD (Nynas et al.2015). Because PPD presents similarly to other mood disorders, making an accurate diagnosis of it can be challenging (Arifin et al. 2018).

Although the precise origin of PPD is unknown, it is thought that a mix of physical, emotional, genetic, and social factors are to blame. These could include things like hormone adjustments and lack of sleep. Stewart and Vigod (2019) have argued that previous experiences of postpartum depression, bipolar disorder, a history of depression in the family, psychological stress, problems during childbirth, a lack of social support, or a drug use disorder are all factors.

It is well acknowledged that depression has a more severe and long-lasting impact on women because of their higher stress thresholds, maladaptive coping mechanisms, and many social duties in the community. As a result, researchers have proposed that bio-psycho-social variables may play a role in the etiology of PPD. Biological risk factors, prior psychiatric disease, demographic and psychological risk variables, and obstetrical risk factors are all thought to be crucial in determining the aetiology of PPD. Most studies examined the prevalence of PPD between two and six weeks after delivery. Additionally,

there is a dearth of information addressing the relationship between stressful situations, loneliness, and low self-esteem in women, as well as the emergence of PPD (Gupta et al., 2013). Numerous factors have been linked to PPD; reported intimate partner violence, a history of psychiatric disease, low maternal literacy rates, stress, early-life abuse, anxiety. Although the actual cause of PPD is unknown, a combination of physical, emotional, genetic, and social factors is responsible (Gelaye et al. 2016).

These might include things like hormonal changes and sleep deprivation. Risk factors include prior experiences with postpartum depression, bipolar disorder, a family history of depression, psychological stress, complications during childbirth, a lack of social support, or a substance use disorder (Soares and Zitek 2008)

It is commonly known that depression affects women more severely and persistently than it affects males due to women's higher stress tolerances, maladaptive coping methods, and extensive social responsibilities. Therefore, it has been suggested by researchers that bio-psycho-social factors may operate as risk factors for depression (Stewart et al. 2003). Associating factors were unemployment, inadequate child support, marital troubles, significant family concerns, unintended pregnancies, and challenges with infant feeding and sleeping (Ghogomu et al.2016). If PPD is not treated, long-term adverse effects may happen. Examples include serious depression, cognitive, behavioral, and physical problems that may have an impact on the entire maternal family, the link between a mother and her kid, as well as the growth and development of the child (Myers and Johns 2018). Both pregnancy and the postpartum period are accompanied by significant physical and psychological changes. Additionally, they have been linked to mental health issues ranging in intensity from extremely mild to psychotic (Brockington and Geller 2004).

Postpartum disorders are differentiated by their timing within the first four weeks postpartum—rather by their phenomena, according to the **DSM IV-TR** [APA] (2000). From the brief "postpartum blues" to the severe postpartum psychosis, there are various types of postpartum diseases. After delivery, usually 4–7 days later, "postpartum blues" or "maternity blues" last for a brief period of hours or days. It involves signs including restlessness, irritability, depression, moderate confusion, and/or hypochondria. After

giving birth, postpartum depression (PPD), which is a later, more severe condition, typically sets in between four and six weeks later (Patel et al. 2002). PPD symptoms include low mood, anhedonia, forgetfulness, irritability, anxiety, sleep disturbance, and impaired functioning (Stuchbery et al., 2008). According to the American Psychiatric Association (2010) and Wickberg and Hwang (2007), PPD shares many characteristics with clinically significant major depressive disorder (MDD), including description, symptoms, course, and outcome. The most severe form of the group, postpartum psychosis, is uncommon, occurring in 1–2 cases for every 1000 deliveries. According to Rahim and al-Sabiae (2009), it is distinguished by an acute psychotic state of disorientation, delirium, delusions, hallucinations, and sleeplessness.

Primary and mental health care experts are concerned about PPD because it has the potential to negatively impact both the mother's health and the health and development of her unborn child (Leiferman et al. 2012). According to research, depressive moms frequently exhibit behaviors that harm their kids, such as being overbearing or distant, being disengaged, and not engaging with their infants (Wolf et al. 2013) and having less sensitivity to their infants.

Young infants may be more susceptible to the unresponsive or rejecting care associated with PPD because they depend so heavily on their caregivers throughout the crucial imprinting phase of infancy (Campbell and Cohn 2007). Poor mother-child interactions can cause infants to experience negative cognitive, behavioral, and emotional outcomes as well as long-term developmental disturbances (Rahman et al .2005).

The efficacy of antidepressant drugs, cognitive behavioral therapy, and interpersonal psychotherapy (IPT) as therapies for serious depression has been established. Depression therapy trials have frequently excluded pregnant and breastfeeding postpartum women due to concerns about the potential effects of antidepressant drugs on the breastfed infant. The majority of antidepressants are categorized by the American Academy of Pediatrics as medications whose impact on nursing infants is uncertain but may be concerning. It is crucial that non pharmacologic therapies be chosen when working with postpartum women in light of these factors (Perfetti et al. 2014). Studies have indicated that several forms of psychotherapy, such as individual interpersonal psychotherapy, cognitive

behavioral therapy, and group or family therapy, are efficacious in treating postpartum depression (Stuart 2012). Interpersonal psychotherapy is a dynamically informed, time-limited treatment that attempts to enhance patients' interpersonal functioning and reduce symptoms. The foundation of interpersonal psychotherapy for PPD is the idea that there is a link between interpersonal distress and depressive symptoms. Accordingly, biopsychosocial treatment aims to address the following three areas: social support, interpersonal problem areas (i.e., the disputes, transitions, and loss experiences in the patient's relationships), and mental symptoms (Norman 2010).

According to Michael (2013), IPT is a successful postpartum depression treatment. As an alternative to medication, it lessens depressed symptoms and enhances social adaptations, especially for nursing mothers (Milgron et al. 2019). A brief, goal-oriented psychotherapy treatment known as cognitive behavioral therapy (CBT) applies a practical, hands-on approach to problem solving. According to Huang's findings (2012), postpartum depression can be effectively treated with cognitive behavioral therapy in order to alleviate its psychiatric symptoms and enhance the quality of life for new mothers, hence decreasing the incidence of postnatal depression. Through family therapy, the mother's confidence and self-esteem are bolstered, enabling her to confront her circumstances and devise change-making methods. The mother may benefit from additional techniques such as stress reduction, learning techniques like deep breathing, meditation, or being in the present moment, in addition to coping mechanisms like active problem resolution (Miguez et al. 2021).

1.2 Rationale

There is no one cause of postpartum depression; it is not a distinct entity. Instead, it appears that having a kid, with all of its biological and psychosocial ramifications, acts as a significant stressor, which, according to a vulnerability-stress model, can cause the condition to manifest in women who are predisposed to it. In spite of this, it may still be appropriate to use this diagnostic label because depression in the first few months of motherhood presents us with particular demands. Therefore, because of shame and stigma, people put off getting treatment, and because of incorrect symptom interpretation, diagnoses are frequently missed. Services frequently fall short of these women's needs because they don't consider their unique circumstances, issues, or worries. Postpartum depression, if left untreated, can have very negative long-term effects on the mother, the child, and the entire family. As a result, specific consideration and care are required. This calls for adjustments to existing psychological, pharmacological, and non-pharmacological therapies as well as the introduction of new, low-threshold mother-infant services.

Through a combination of manual therapies, targeted therapies (such pelvic floor muscle training), and therapeutic exercise, physiotherapy can enhance postpartum health outcomes for new moms. Physical activity during the postpartum period enhances blood flow, strengthens the muscles in the abdomen and back, stimulates lactation, speeds up uterine constriction, reduces urogynecological dysfunction, and enhances mothers' mental and physical health (Jurikova and Havelka 2019). Depending on the type of birth, women's recovery after giving birth differs. Physical therapy following a cesarean section may begin in postpartum patients between 10 and 12 hours (Walowska and Usprawniani 2019) and 6 hours (Karowicz et al. 2010) after the birth. The obstetrician's current condition should be taken into account when choosing safe physical activity (Artal and Toole 2003).

This study's goal is to assess the level of depression (via Edinburgh Post Partum Depression Scale), as well as the association of socio demographic factors.

The study believe that early detection of level of post partum depression, as well as treatment of depression , may help to prevent more serious effects on newborn baby and families. The purpose of the study is to explore the level of depression during post partum period.

The study will highlight the importance of screening mother's mental health throughout the post partum period. We hope that the study will help to increasing awareness of PPD & find out the risk factors.

After completing this study both the patients and physiotherapy professionals will be benefited because after that they will aware about the occurrence of post- partum depression . This study also will be helpful in making physiotherapist to aware about the different socio-demographic factors of the patients. It will assist to make current physiotherapy practice more holistic and effective for post partum patients. So it will also be helpful for physiotherapist in working in this gynecological area for delivering the best treatment service

1.3Research question

What are the levels of depression during post partum period in women?

What is the association of socio-demographic factors for developing post partum depression?

1.4 Objectives

1.4.1 General objectives

- To determine the level of depression in women at post partum period and association of socio-demographic factors for developing post partum depression.

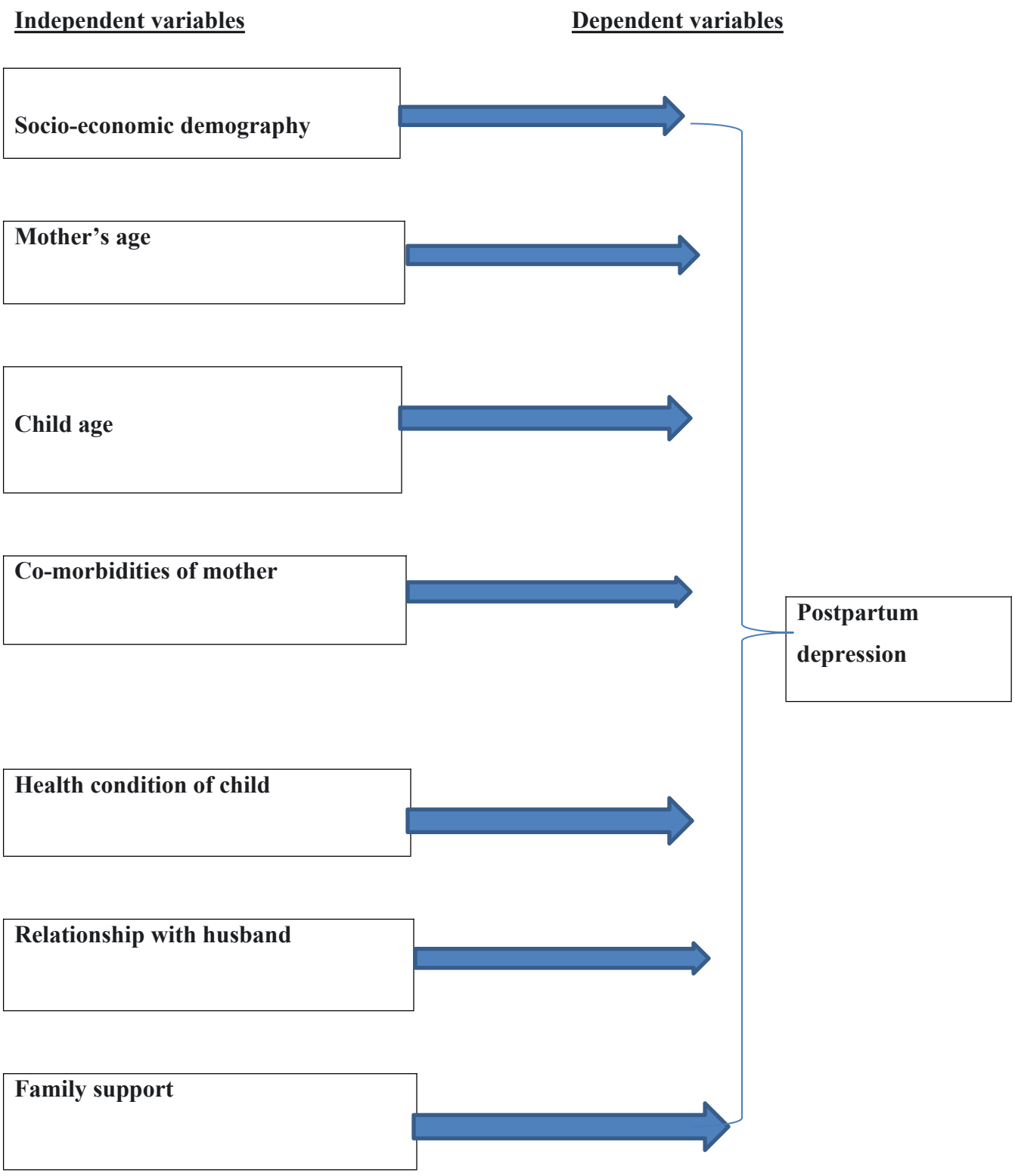
1.4.2 Specific objectives

i) To find out sociodemographic information

ii) To find out association between socio-demographic information and post partum depression.

iii) To find out the level of depression in women in post partum period.

1.5 Conceptual Framework



1.6 Operational Definition

Post partum depression: PPD is described as "a special state of mental health disorder and a variant of depression" (WHO, 2011) by the World Health Organization (WHO).

Major depressive disorder: Major depressive disorder (MDD), also known as a mental disorder characterized by at least two weeks of pervasive low mood, low self-esteem, and loss of interest or pleasure in normally enjoyable activities in daily life.

Post partum psychosis: A more severe form of postpartum mood illness called postpartum psychosis. The sudden onset of psychotic symptoms after childbirth, usually within two weeks of delivery but not more than four weeks postpartum, is known as postpartum psychosis (PPP), also known as puerperal psychosis or peripartum psychosis.

Bipolar disorder: A mental disease called bipolar disorder, formerly known as manic depression, is characterized by bouts of melancholy and periods of unusually elevated mood, each lasting anywhere from days to weeks.

Postpartum blues: Post partum blues, sometimes referred to as baby blues and maternity blues, is a highly frequent yet self-limiting illness that starts soon after childbirth and can manifest with a variety of symptoms, including mood swings, impatience, and tearfulness.

Edinburgh Post Partum Depression Scale: EPDS is commomly used to improve the detection of women suffering from post partum depression. The scale is widely validated in many developed countries and commonly used for PPD screening**.**

CHAPTER -II LITERATURE REVIEW

Postpartum depression is characterized as a severe mental illness that appears within one month of giving birth (Edvinssion et al. 2017). 6.5% to 20% of women experience postpartum depression at this time (Chen et al. 2019). The likelihood of experiencing depression increases from 5.7% in the second month of the postnatal period to 5.6% in the sixth (Patel et al. 2012). Some of the most significant times in a woman's life are during pregnancy, childbirth, and the postpartum period (Sharifah 2014). During these times, there are changes to both a woman's physical and mental well-being (Bjelica et al., 2018). A woman's pre-pregnancy condition is restored during the postpartum period, which lasts 6 to 8 weeks after the delivery of the child (Altuntug et al. 2018), thanks to processes like uterus involution, postpartum wound healing, and increased abdominal muscular tension.

Tronick and Reck (2009) demonstrated that epidemiological studies found that PPD prevalence rates ranged from 3.5–63.3% in Asia, 15.8% in the Middle East, and 34.7% in South Africa among women in high income countries. There is evidence that PPD harms the health of newborns. Within fourteen weeks following delivery, the prevalence of depression ranged from 11% to 16% in India (Hegde et al. 2012). The frequency of PPD among rural women was shown to range from 18% to 35% in several studies done in rural Bangladesh (Islam et al. 2017)

About 8.9-10.1% of women in high income nations and 17.8-19.7% of women in low and middle income countries have postpartum depression (Woody et al. 2017). Additionally, 1% to 26% of new fathers are thought to be affected by this mood condition(Paulson 2010) A more severe form of postpartum mood illness called postpartum psychosis affects 1 to 2 women out of every 1,000 after giving birth (Seyfried and Marcus, 2003) One of the main factors contributing to the 8 murders of infants under one year of age per 100,000 births in the United States is postpartum psychosis (Spinelli 2004).

Physical and historical When at least five depressive symptoms are present for at least two weeks, postpartum depression is said to have occurred. Postpartum depression is not included as a separate illness in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) but is instead taken into account when a patient experiences both the peripartum start and a major depressive episode. A significant depressive episode that begins during a pregnancy or occurs within four weeks of birth is what is meant by the definition. The nine symptoms are different from the preceding pattern and are virtually always present. Along with the five symptoms to be identified, the diagnosis should also include either depression or anhedonia (lack of interest).

The majority of the day is marked by an observed or subjectively down mood. daily decline in enjoyment or interest Hypersomnia or incontinence agitation or mental retardation guilt or lack of value weariness or a loss of energy Suicidal ideation or attempt, as well as persistent thoughts of suicide Having trouble focusing or being indecisive Weight change of 5% over one month, or change in appetite. Significant distress and/or disability can result from these symptoms. Additionally, neither a substance nor a health issue can be blamed for these symptoms. There hasn't been a previous manic or hypomanic episode, and the episode is not caused by a psychotic disorder.

A postpartum onset is characterized as beginning within six weeks of delivery in the **International Statistical Classification of Diseases and Related Health Problems (ICD-10) 10th version. According to ICD-10, the depressed episode looks like this:**

1) The patient typically exhibits a low mood and a decrease in activity and energy during mild, moderate, or severe depressive episodes.

2) Reduced capacity for interest, enjoyment, and concentration. Even with minimal effort, the patient has extreme fatigue, sleep disturbances, and decreased appetite. Along with diminished self-esteem and self-confidence, guilt or a sense of worthlessness are frequently prevalent.

3) Somatic signs, such as anhedonia and atypical early-morning walking, associated with agitation, weight loss, libido loss, decreased appetite, and pronounced psychomotor impairment. Little daily variation and no response to environment characterize these symptoms.

4) Depending on the severity and number of symptoms, a depressive episode can be categorized as mild, moderate, or severe.

PPD has the same warning signs and symptoms as non-puerperal depression, but with a history of delivery added. Depressed mood, loss of interest, altered sleep and eating patterns, feelings of worthlessness, difficulty focusing, and suicidal thoughts are a few symptoms. Anxiety can occur in women too. In addition to PPD, patients may also have psychotic symptoms like as hallucinations (voices threatening to harm infants) and delusions. PPD can result in negative parenting styles, failure to breastfeed, poor maternal-infant connections, marital instability, and worse consequences for the child's physical and psychological development. Remission of symptoms lowers a child's likelihood of developing behavioral and mental health issues as an adult. The chance of developing major depression, bipolar illness, and PPD is increased by having experienced PPD in the past. Also must be considered are any prior instances of postpartum depression and postpartum psychosis in the individual or family.

Postpartum depression's primary symptoms are anxiety, a sense of helplessness, sleep issues, concentration and eating abnormalities, loss of interest in the kid, and the environment (Ghaedrahmati,2017). Suicidal ideas may also appear in serious cases (WHO Maternal Mental Health 2019).

Hormonal changes in females during pregnancy, labor, and delivery can affect the development of postnatal depression (Rai et al. 2015). Progesterone concentration drops dramatically between the first and second stages of labor, but estrogen levels fall once the placenta is removed. Due to the drop in estrogen concentration, serotonin and dopamine levels are impacted, which is bad for psychological health. Additionally, the development

of anxiety disorders is impacted by low levels of progesterone and estrogen. The posture is also more vulnerable to fast and rapid reductions in B-endorphin levels in cases of mood disorders (Rymaszewska et al., 2005).

(Ghaedrahmati et al., 2017) discussed that - there are some risk factors of post partum depression. These are:

1)Psychological:

Premenstrual syndrome (PMS), a negative attitude toward the infant, the baby's gender, and a history of sexual abuse are all enduring risk factors for postpartum depression.

2) Obstetric risk factors: Risky pregnancy, including prenatal hospitalizations and emergency cesarean sections. PPD is linked to meconium passage, umbilical cord prolapse, preterm or low birth infants, and low hemoglobin levels.

3) Social factors: Postpartum depression may be brought on by a lack of social support. The condition can also develop as a result of physical, sexual, and verbal abuse by the spouse. Smoking during pregnancy is also responsible for developing PPD.

4) Lifestyle: Postpartum depression may be impacted by eating patterns, sleep patterns, physical activity, and exercise.

It is recognized that vitamin B6 contributes to postpartum depression by converting to tryptophan and then serotonin, which both influence mood. One of the elements affecting the risk of depression is the sleep cycle. It is clear that less sleep and postpartum depression are related. Exercise and physical activities lessen depressed symptoms. Depression-related low self-esteem is reduced by exercise. Exercise raises endogenous opioids and endorphin levels, which has beneficial impacts on mental health. Additionally, this boosts one's ability to solve problems, promotes self-confidence, and aids in maintaining awareness of one's surroundings [WHO Maternal Mental Health]

(2019). In addition compared to previous depressive episodes, depression and anxiety during pregnancy, self-esteem issues, the baby blues after delivery, issues with partner relationships, depression during pregnancy, loneliness, low socioeconomic status, and perinatal complications are other risk factors for postnatal depression. Depressive disorders may occur in the postpartum period as a result of prematurity, low birth weight, or the newborn's impaired functioning (Mathisen et al. 2013)

Additionally, women who are vulnerable to perinatal issues, hospitalization during pregnancy, or cesarean section termination following an earlier start of labor are also at risk (Blom et al. 2010). Depression in women can also be caused by the stress of raising a child (Hung 2007) and the inability to accept a woman's body after giving birth (Mehta 2014).

The duration of postpartum depression ranges from three to nine months, and in certain cases, it may persist up to a year (Janik et al. 2018). Additionally, the growth of the mother-child bond may be negatively impacted by depressive disorders in the postnatal period (Vigod et al. 2010).Due to the potential for depressive disorders, the first month of the postnatal period is crucial (Takashasi and Tamakoshi 2014). Baby blues, postnatal depression, and postpartum psychosis are the three primary depressive illnesses that can affect new mothers (Tuteja and Niyogi 2016).

Baby blues, also known as postnatal sadness, can start four days after the baby is born and continue for up to 12 days (Fiala et al. 2017). According to estimates, it could happen in between 15.3% and 84% of mothers (Henshaw 2003). Baby blues are a 25% (Reck et al., 2009) risk factor for postpartum depression. Only 0.1-0.2% of women experience postpartum psychosis (Schipper et al. 2019).

The onset of the illness in direct relation to the birth of the child is a requirement for postpartum depression diagnosis (Sit and Wisner). Psychotherapy (Fitelson et al. 2011), antidepressant use (Breese 2011), and hormonal therapy are some of the approaches used

to manage postpartum depression. Exercise and light therapy are other methods of treatment (Charbrol and Callahan 2007).

Pregnant women's physical and mental health are significantly impacted by physical activity (Poudevinge and O'Connor 2006). The American College of Obstetricians and Gynecologists advises pregnant women and those recovering from childbirth to engage in at least 150 minutes of moderate physical exercise per week . Prenatal exercise enhances postpartum recovery, lowers the likelihood of postpartum depression, and lessens depressive symptoms (Blum et al. 2008). Physical activity increases milk, speeds up the constriction of the uterus, improves blood circulation, strengthens the muscles in the abdomen and back, reduces urogynecological dysfunction, and generally benefits mothers' mental and physical health during the postpartum period (Jurikova and Havelka 2019). Depending on the manner of birth, different women recover differently after giving birth. Physical therapy following a cesarean section may begin in postpartum patients 10–12 hours following delivery (Walowska 2018) and 6 hours following physiological labor (Karowicz et al. 2010). Exercise ought to be secure and tailored to the obstetrician's current condition (Artal and O'Toole 2009).

Primary and mental health care experts are concerned about PPD because it has the potential to negatively impact both the mother's health and the health and development of her unborn child (Leiferman 2010). According to studies (Wolf et al. 2002), depressive mothers frequently exhibit behaviors that are invasive or withdrawing, disengaged, and don't interact with their infants.

Young infants may be more susceptible to the unresponsive or rejecting care associated with PPD because they depend so heavily on their caregivers throughout the crucial imprinting phase of infancy (Campbell and Cohn 1991). Poor mother-child interactions can cause infants to experience negative cognitive, behavioral, and emotional outcomes as well as long-term developmental disturbances (Rahman et al. 2003). Additionally, research from countries with higher poverty rates indicates that baby malnutrition and poor physical health are linked to poor maternal mental health. Since it has been shown

that partners of postnatally depressed women are more prone to develop clinical depression (Stuchbery et al.1998) and the marital relationship might become strained, the new mother's sadness affects her entire family. PPD may raise the chance of persistent or recurrent depression, which has a detrimental long-term impact on mental health (Wolf et al. 2022).

Women at risk are rarely identified during pregnancy or in the delivery ward, and postpartum depression is frequently not recognized and underdiagnosed (Nielsen et al. 2020) submitted for publication. This is particularly true in underdeveloped nations where there is a general lack of attention given to mental health (Reichenheim and Harpham 2011). According to some studies (Yonkers et al. 2015), up to 80% of women who have PPD are not aware of it and are not given a diagnosis by their doctors.

Montgomery (2011) have argued that the high prevalence of depression among mothers of small children poses a serious threat to the public's health and emphasizes the need for additional study to advance care and prevention. Although research on the effectiveness of screening all pregnant women and offering a preventative intervention to those scoring at or above a certain level during pregnancy and the early postpartum period is lacking, early identification and intervention during pregnancy and the early postpartum periods may reduce the long-term negative effects on child development as well as the debilitating effect on new mothers.

Although there hasn't been a thorough investigation and evaluation of the evidence on the effectiveness of screening all pregnant women and offering a prophylactic intervention to those who score at high risk (Gaynes et al. 2003).According to surveys and epidemiological studies, postpartum depression is becoming more common in a variety of global cultures (Rahman et al. 2003). To ascertain if this issue is unique to certain cultural contexts or is greatly influenced by them, it is crucial to evaluate the incidence of PPD and its social and biological correlates across various groups and cultures (Wolf et al. 2008).Postpartum depression is the subject of the majority of reviews, meta-analyses, and

opinions published to date; estimates range from 10% to 15% of women in Western nations (Beck 2011).

A recent report that was commissioned and was intended to be a systematic, evidence-based evaluation (Gaynes et al. 2005) illustrates the extremely narrow emphasis of many experienced investigators in the field. It was restricted to studies from developed nations "to increase the likelihood of it being generalized to the US population" and required structured clinical interviews for the diagnosis of major and minor depression, even though the time period was 12 months postpartum and excluded self-reports (as the Edinburgh Postnatal Depression Scale EPDS) (Cox et al. 2007). 7 Studies found a point prevalence of 8.8% for minor and serious depression at 1 month postpartum, while one Study found a period prevalence of 13.6%.

A closer examination of the USA reports reveals significant variation. Numerous inner-city women of varied ethnic backgrounds, predominantly Hispanic but also Asian, were included in the majority (though not all) studies of high prevalence of postpartum depressive symptoms (Heilemann et al. 2004). These samples have an over representation of single women with low socioeconomic level (Zlotnick et al. 2021). Even though earlier studies suggested that racial and socioeconomic factors may not always affect the occurrence of PPD, more current studies indicate that having a low SES, poverty, and being a single mother are all positively related with PPD. Since many inner-city impoverished women are Hispanic or African American, there is still a correlation between these two criteria.

It's essential to disclose all medication and over-the-counter drugs, smoking habits, and alcohol histories throughout the evaluation. PPD screening can be done between two and six months following childbirth. The Edinburgh Postnatal Depression Scale (EPDS), numerous screening instruments available, is utilized most commonly. The 10-item questionnaire just takes a few minutes to finish and is completed by patients. Patients must have an EPDS cutoff score of 13 or higher in order to be considered at risk for PPD.The foundation for further clinical examinations is provided by this screening test.

The goals of the clinical evaluation are to establish the diagnosis, evaluate the likelihood of suicidal and homicidal behavior, typically infanticide, and rule out other psychatric illness (Lakkis and Mahmassani 2015).

There is a need to assess the global varied cross-cultural prevalence and incidence of PPDs (postpartum disorders) and their culturally-sensitive correlations because the majority of reports focus on the prevalence of PPD (postpartum depression) in industrialized countries. In order to improve the wellbeing of women, prevention approaches and treatment processes may be devised and integrated once the biological and cultural causes of the diseases are understood. Before beginning this massive project, it is important to document the cross-cultural variability of PPD rates as determined by systematic interviews and the widely used and recognized Edinburgh Postnatal Depression Scale (EPDS).

Edinburgh Postnatal Depression Scale (EPDS)

The tool, which consists of 10 questions with scores ranging from 0 to 3, is well-known for detecting depression in postpartum women. The minimum and maximum scores are 0 and 30, respectively. It contains four categories. Which are:

1)None or minimal depression (0-6)
2) Mild Depression: 7-13
3)Moderate Depression: 14-19
4)Severe Depression: > 19

CHAPTER-III METHODOLOGY

3.1 Study design

The purpose of the study was to determine the level of depression in women at post partum period and the association of socio-demographic factors for developing post partum depression.The cross-sectional study was chosen to conduct and it was found to be an appropriate design to find out the objectives. Cross-sectional studies simultaneously examine exposure and health consequence in a specific population and geographic region at a given period. This study included the maximum portion of post partum women, 0-12 months after child delivery. Moreover, this study was cost and time effective for the researcher compare to an experimental study.

3.2 Population and sample

Population: Population is the set of all observable items or occurrences on which the research is conducted.

Sample: A sample is a representative part of a population (Hannan, 2016).

The study population were post partum women from Shahibag, Savar. Data was collected from April 2023 to June 2023. Sample size was 107 which were selected randomly.

3.3 Sampling technique

The study was conducted by using the convenient sampling technique. Due to the time limitation, it was selected and as it was the one of the easiest, cheapest and quicker method of sample selection. The researcher used this procedure, because, getting of those samples whose criteria were concerned with the study purpose.

3.4 Study site and study area

The researcher collected data from Shahibag residential area, Savar. The study area was post partum women, 0-12 months after child delivery.

3.5 Sample size calculation

The equation of finite population correction in case of cross –sectional case of cross - sectional study is:

$n=Z^2pq/d^2$

$= (1.96)^2 \times 0.394 \times 0.606/ (0.05)2 = 380$

Here, Z (confidence interval)

P (prevalence) =39.4% (Azad et al., 2019)

And, q= (1-p) = (1-0.3 94) =0.606

The actual sample size was, n=379.003=380

3.6 Inclusion Criteria

1) Post partum women, 0-12 months after child devilery.

2) Mother's with both natural birth delivery or ceaserean section both were included.

3)Maternal age level was 18-45 years.

4)Willingly participate in this research.

5)Medically stable women had the capacity of better understanding.

3.7 Exclusion criteria

1. Maternal age less than 18 or more than 50.

2. Medically unstable mothers.

3.Women with lack of interest to participate to the study..

3.8 Outcome measurement Tool

Edinburgh Postnatal Depression Scale (EPDS).

3.9 Data collection tools

3.10 Data collection procedure

The participant has the right to refuse to respond to any question when completing the questionnaire, the researcher explained at the start of the study. They are free to leave the study whenever they like. The purpose of the study is also made clear to all participants by the researcher. Participants received assurances that no personal information would be made public. Using a written consent form, the researcher obtained each volunteer participant's consent. Following the participants' agreement, a standard questionnaire was utilized to determine the complaint and gather demographic data. The format of the questions was in both Bangla & English form. The interview was performed face-to-face, and questions were posed by the researcher. Only the physical conditions was taken into account. To ensure the interviewee maintained appropriate attention, distracting stimuli were taken away. As far as possible, the interviewee was questioned alone with their consent because sometimes close relatives can provide guidance for their answers. During the interview, the researcher established a rapport and clarified her questions. The best method for securing participants' full cooperation in a survey is face-to-face interviews. Face-to-face interviews are also useful for describing population characteristics. Face-to-face interviews were conducted to gather particular information that will be utilized to describe the demographic in discussion. In order for the patients to fully understand the questions and provide accurate answers, the questions were occasionally described in the native language of the participants, depending on their degree of comprehension. To prevent inaccuracies, the researcher independently collected all of the data. Before collecting data researcher clarified all the procedure of data collection to data collectors and trained up well before data collection. Every questionnaire was rechecked by researcher for missing information or unclear information.

3.11 Data analysis:

To analyze the data, descriptive statistics were utilized. According to Hicks (2009), descriptive statistics refers to techniques for describing a group of findings in terms of its most interesting aspects. Statistical Package for the Social Science (SPSS) version 20 was used to analyze the data. The researcher created a computer-based data definition record file that contains a list of the variables in order after labeling them in a list. The researcher defined the types, values, decimal, label alignment, and measurement level of the data and entered the names of the variables in the variable view of SPSS. The next step was to organize up new data files and verify that all data had been appropriately entered from the questionnaire sheet into the SPSS data view before examining the inputted data set. The raw data were then prepared for SPSS analysis. On frequency and sensitivity tables, data were gathered. The mean plus standard error (SE) for each variable was used to calculate central tendency.After completing the initial data collection, every answer was cross checked to find out mistakes or unclear information. T Microsoft word 10 was used to create most of the graphs and charts. Then data was analyzed through descriptive and interferential statistics. In descriptive part in case of parametric data the central tendency and the measure of dispersion was presented through mean and standard deviation. The categorical data was presented as frequency and percentage of proportion through different visualization tool such as pie chart, bar chart.

To find out the relationship among sociodemographic, physical parameters and presence of depression in women at post partum period, chi- square test for independence and Pearson's co-relation test was applied. In case of two categorical variable chi- square test and for two continuous variable pearson correlation test was applied. In this study the level of significance is considered as 5% (p= <.05).

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-

$$\frac{(\text{Observed count} - \text{Expected count})^2}{\text{Expected count}}$$

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

The mathematical notation, the formula looks like this

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

3.12 Informed consent

In this study interested subjects were given consent forms and the purpose of the research and consent forms were explained to the subject verbally. They were told that participation is fully voluntary and they have the right to withdraw at any time. They were also told that confidentiality will be maintained. Information might be published in any presentations or writing but they will not be identified. The study results might not have any direct effect on them but the members of Physiotherapy population may be benefited from the study in future.

3.13 Ethical consideration

The researcher followed the following ethical guidelines: The researcher adhered to the guidelines set forth by the WHO and the Bangladesh Medical Research Council (BMRC). The BHPI physiotherapy department received a research proposal for approval, which was granted by the faculty. The proposal also received initial approval from the course coordinator and the research project supervisor before the study could be taken out. The Institutional Review Board (IRB) of Bangladesh Health Professions Institute (BHPI) received the dissertation proposal, together with the methodology, for an oral presentation defense. The Institutional Review Board then gave its approval and gave permission for this research to proceed. The researcher began the study after receiving approval from the academic center to do it. The Housing Committee of Shahibag, Savar has given the researcher permission to collect data. Before inviting them to participate in the study, the participants would be informed. A written consent form was utilized to get each participant's consent for the study. The researcher made sure that each participant was made aware of their rights and liberties as well as the purpose and goals of the study. The researcher made sure the study didn't hinder the organization (CRP). Highly maintained confidentiality for all types. The researcher took care to keep all information secret. After learning the academic and clinical guidelines for conducting the study, including what should be done and what should not, the researcher was qualified to conduct the study. All participant rights were protected, and the researcher was obligated to respond to any participant questions about the study. . Meanwhile, it was purely observation research, so nothing was intervene through which the research is considered as limited ethical issue.

3.14 Rigor of the study

The study was conducted with a strict and systematic approach, ensuring its rigor. Care was taken to maintain a clean and organized environment during data collection. Participants' responses were gathered without any influence from the researchers' experiences, and both positive and negative impressions were accepted without bias. The questions posed to the participants were neutral and not suggestive in any way. To prevent errors, participant information was accurately coded and carefully reviewed by the supervisor. Confidentiality was paramount throughout the study, and all information was handled discreetly. In the results section, personal interpretations were avoided to maintain objectively.

CHAPTER-IV RESULT

4.1:Socio-demographic information of the participants

Socio-demographic characteristics of the participants include age of mother, family members, numbers of children,total score of Edinburgh Post Partum Depression Scale (EPDS).

Table.01: Continuous data table

Variable	Mean	SD	Median
Age of mother (18-45 years)	25.45	5.471	
Family member (3-10 members)	5.9	2.004	
Number of children (1-3 child)	1.62	0.709	
Total score of Edinburgh post Partum Depression scale (0-30)	15.85	4.694	**00

**Median value was considered in case of non-normally distributed continuous data.

4.1.1 Mother's Age:

Among the 107 participants in this study, minimum age of the participiants (mother) was of 18 (n=6) years and the maximum age of the participants was 39 (n=2) years. Their mean age was 25.57 and standard deviation was 5.348.

Mother's age

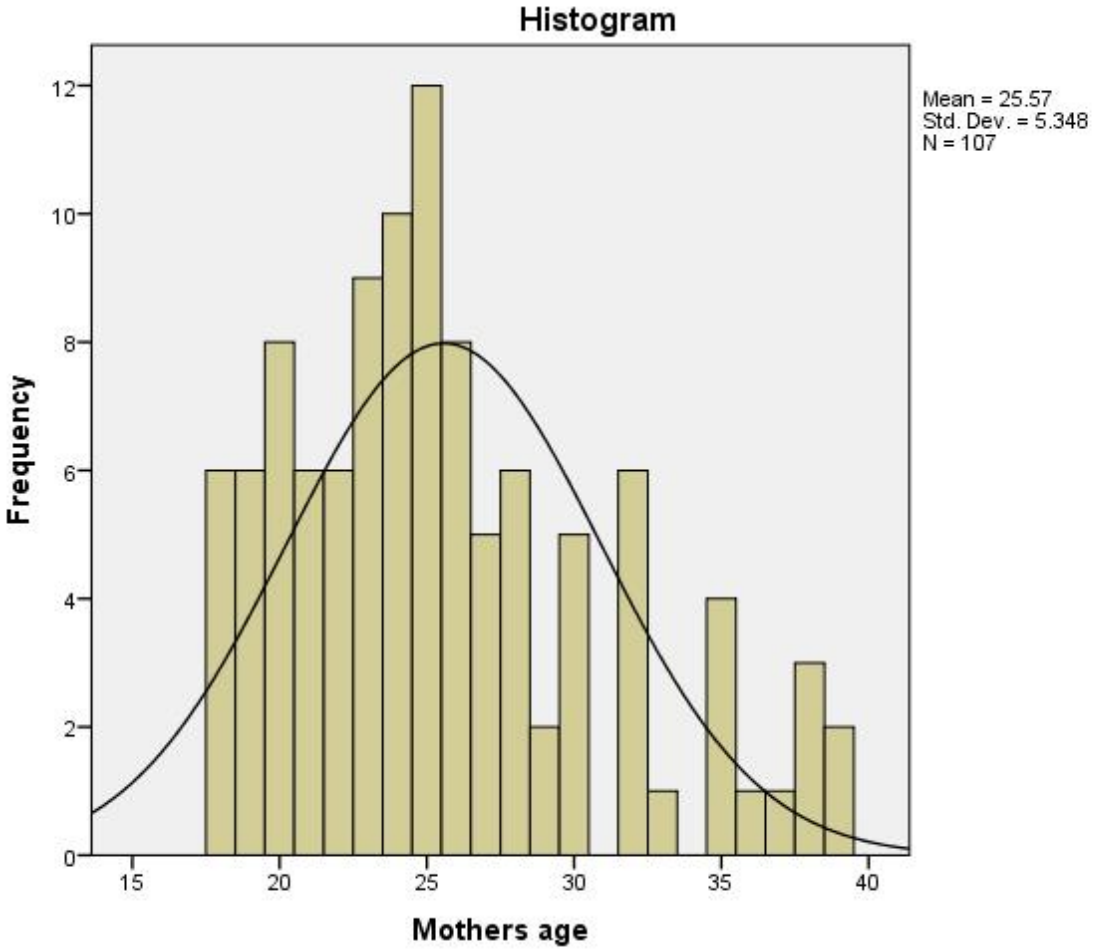


Fig.1: Mother's age

4.1.2 Family members: Among 107 participants the number of the minimal family members was 3 and the number of the maximum family members was 10 in their family. The mean number was 5.90 and standard deviation was 2.004.

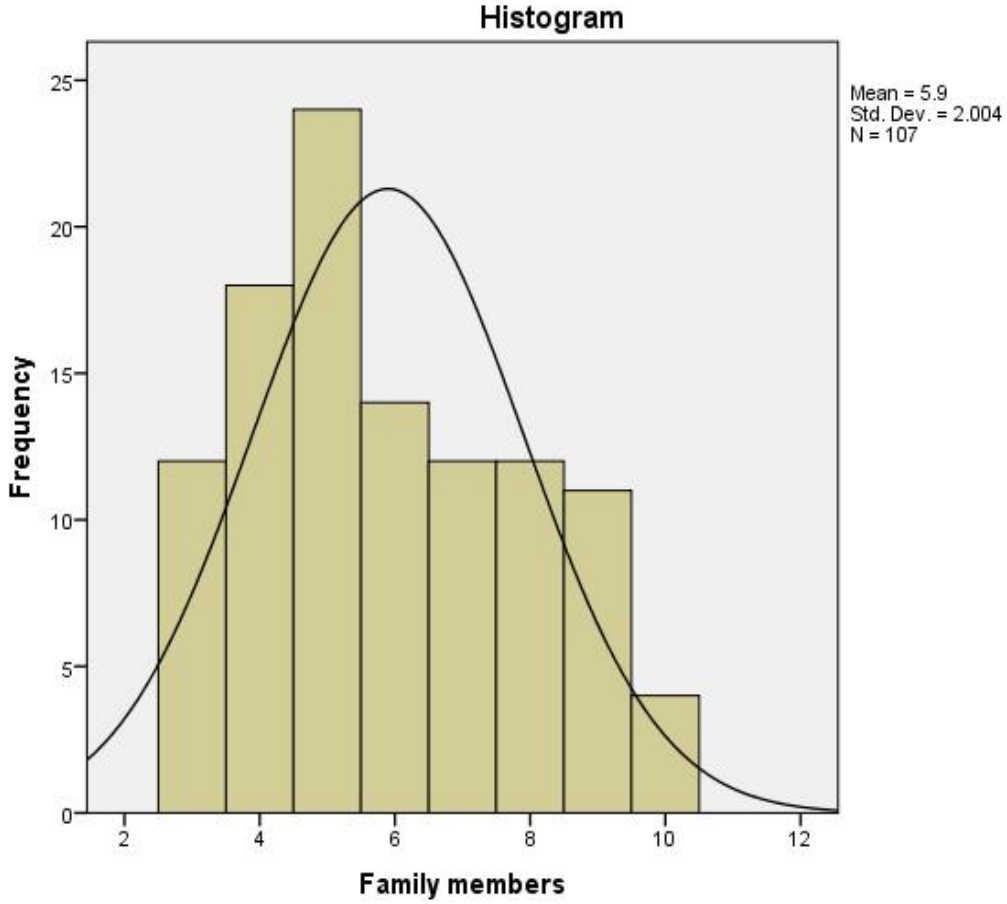


Fig. 2: Family members

Number of children: Among 107 participants maximum 54 participants has 1 child in their family and minimum 9 participants has 3 children in their family. The mean number of children is 1.58 and standard deviation is 0.645.

4.1.3 Total score of EPDS scale : Among 107 participants the maximum EPDS scale score was 28 (n=1) and minimum EPDS scale score was 5(n=2). Mean score is 15.85 and their standard deviation is 4.694.

Total score of EPDS scale

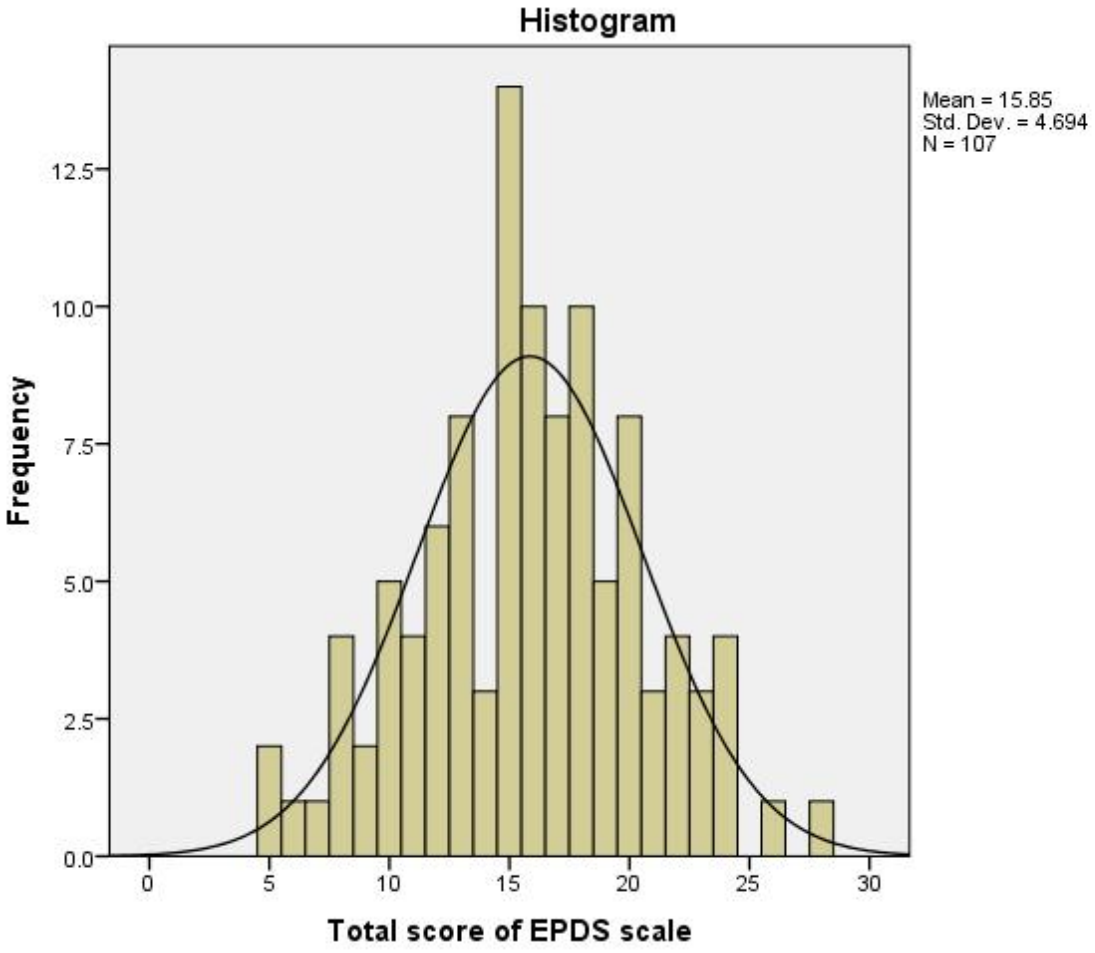


Fig.3 : Total score of EPDS scale

Table.02: Categorical data table

Variables		Frequency	Percentage
Mothers age in category	15-25 years	63	58.9%
	26-36 years	35	32.7%
	37-47 years	9	8.4%
Child age	0-6 months	51	47.7%
	7-12 months	56	52.3%
Living area	Urban	45	42.1%
	Rural	62	57.9%
Co-morbidities diagnosis before	Yes	44	44.1%
	No	63	58.9%
Type of delivery	Normal vaginal delivery	53	49.5%
	Caesarean section	54	50.5%
Health condition of child	Good	81	75.7%
	Poor	26	24.3%
Mothers health condition during pregnancy	Good	71	66.4%
	Poor	36	33.6%
Education level of mother	Illiterate	9	8.4%
	Primary	12	11.2%
	High school	25	23.4%
	SSC	24	22.4%
	HSC	21	19.6%
	Honor's	12	11.2%
	Masters	4	3.7%
Occupation of mother	Housewife	79	73.8%
	Service holder	14	13.1%
	Student	14	13.1%

Duration of mother staying outside of home	Almost at home	79	73.8%
	8 hours	17	15.9%
	3-4 hours	11	10.3%
Family income per month	Tk (>10,000)	14	13.1%
	Tk (10,000-<25,000)	65	60.7%
	Tk (25,000-50,000)	25	23.4%
	Tk (>50,000)	3	2.8%
Family members with disability	Yes	22	20.6%
	No	85	79.4%
Relationship with husband	Good	77	72%
	Not good	30	28%
Sexual life	Normal	84	7 8.5%
	Abnormal	23	21.5%
Family supportive	Yes	87	81.3%
	No	20	18.7%
Level of motivation	High	50	46.7%
	Low	57	53.3%
EPDS scale score category	None or minimal depression(0-6)	3	2.8%
	Mild depression(7-13)	30	28.0%
	Moderate depression(14-19)	50	46.7%
	Severe depression(>19)	24	22.4%

4.1.4 Mothers age in category

Among 107 participants-

58.90 % mother's age in between 15-25 years

32.70 % mother's age in between 26-36 years

8.70 % mother's age in between 37-47 years

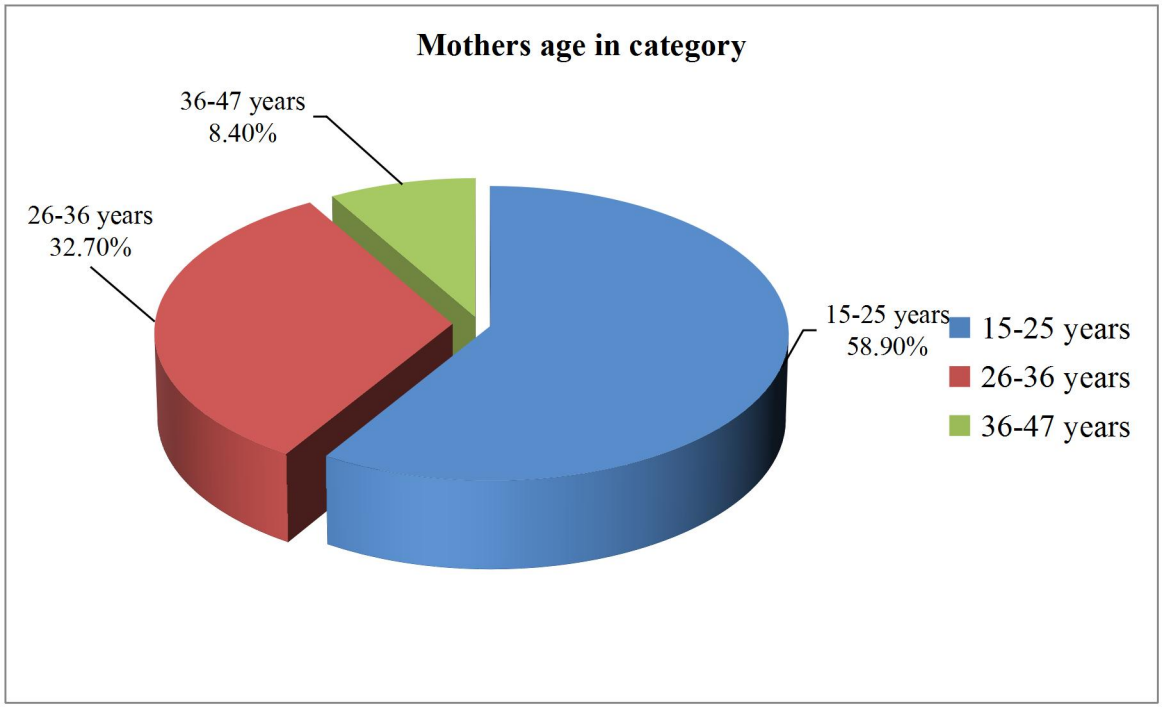


Fig .4: Mother's age in category

4.1.5 Child age

47.7 % child age in between 0-6 months

52.30% child age in between 7-12 months

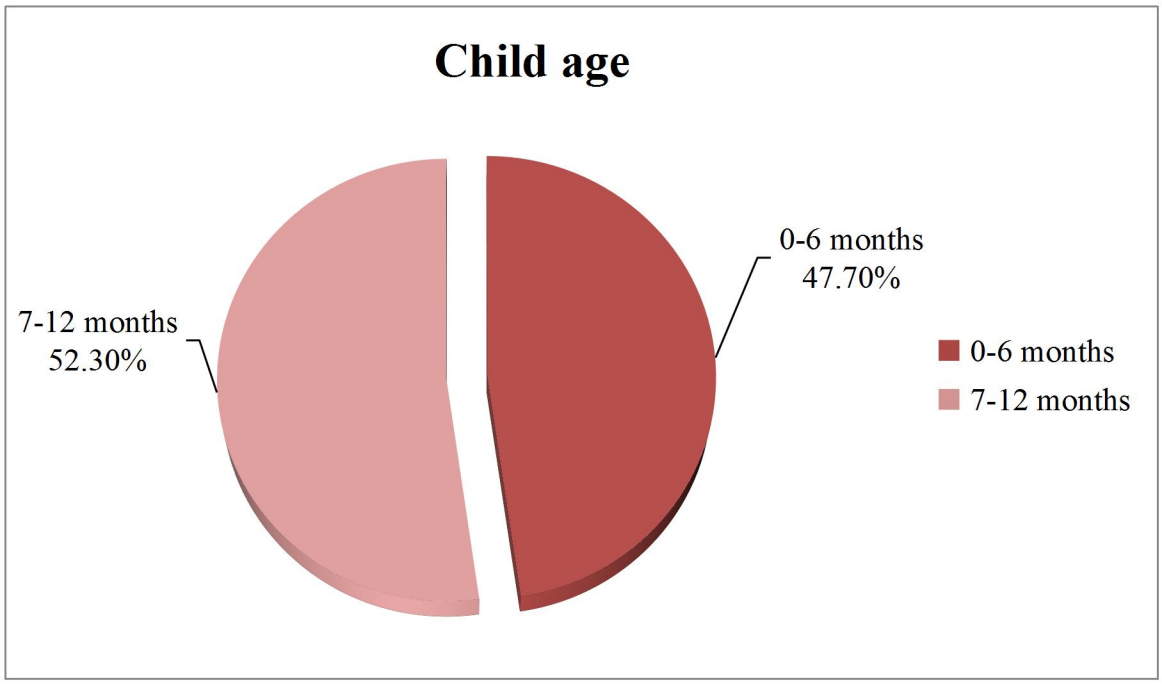


Fig. 5: Child age

4.1.6 Living area

Among 107 participants 42.1% lives in Urban area

57.9% lives in Rural area

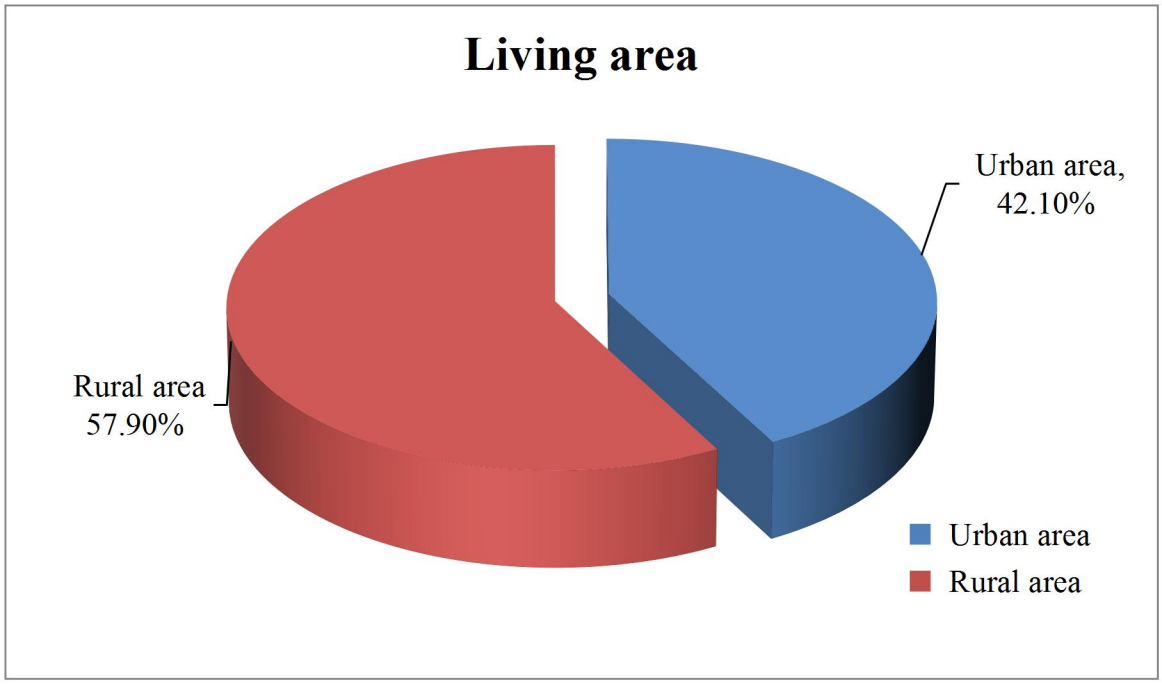


Fig. 6: Living area

4.1.7 Co-morbidities diagnosis before

Among 107 participants 44.1 % mothers have co-mobidities diagnosis before & 57.9 % mothers have no co-morbidities diagnosis before.

4.1.8 Type of delivery

Among 107 partcipants 44.1% mothers have normal vaginal delivery & 50.5% mothers have caesarean section.

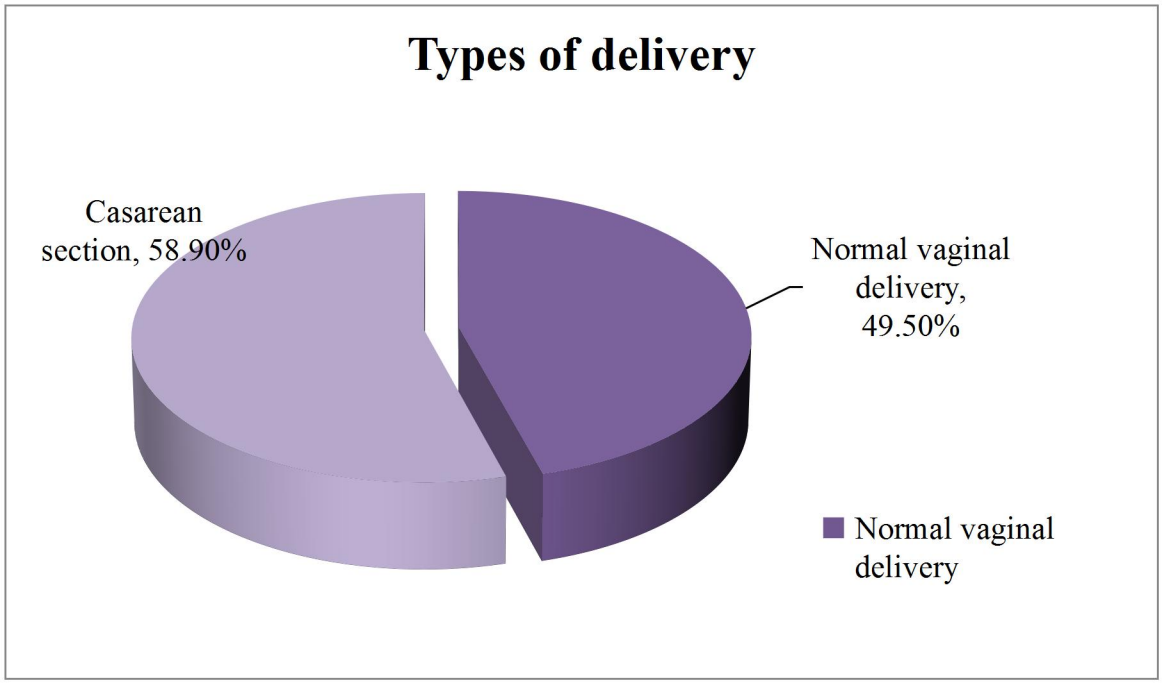


Fig .7: Type of delivery

4.1.9 Health condition of child

Among 107 participants, 75.7% health condition of child was good & 24.5 % health condition of child was poor.

4.1.10 Mother's health during pregnancy:

Among 107 participants 66.4% mother's health was good during pregnancy &33.6% mother's health was poor during pregnancy.

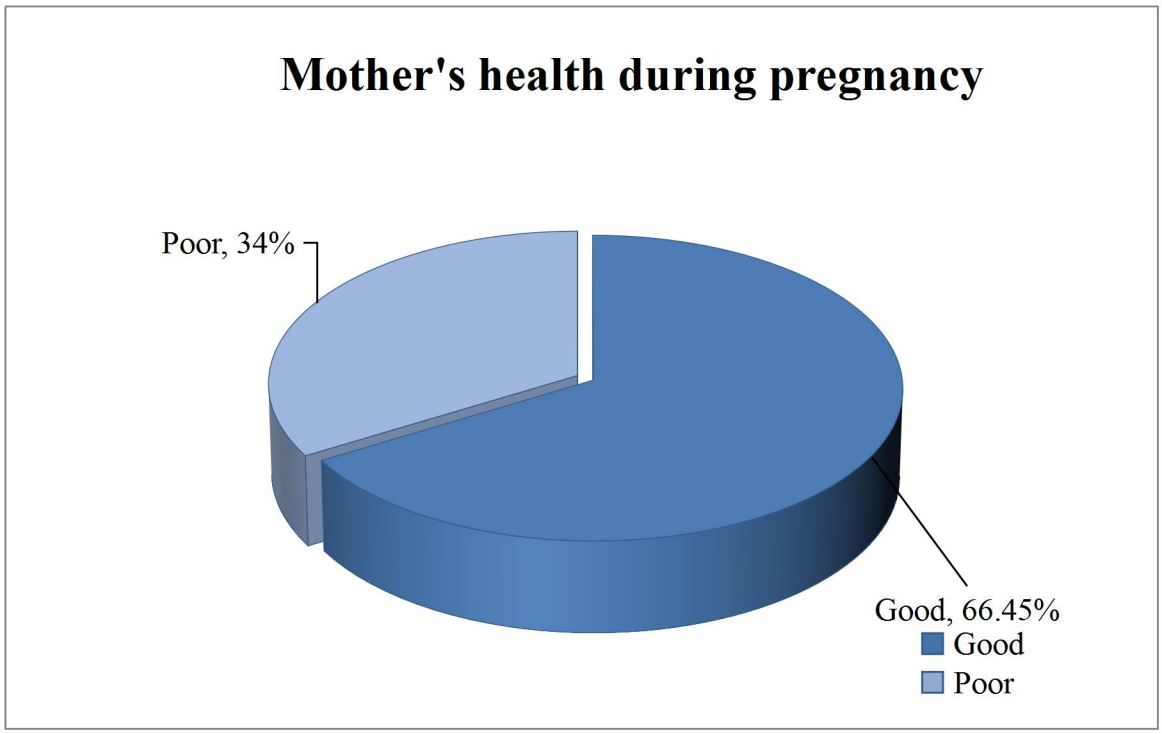


Fig .8: Mother's health during pregnancy.

4.1.11 Education level of mother

Among 107 participants 8.4% mothers were illiterate,11.2% mothers education level were upto Primary school 23.4% mothers education level were High school 22.4% were SSC passed, 19.6% were HSC passed, 11.2% participant were Hon's graduate and only 3.7%.

.

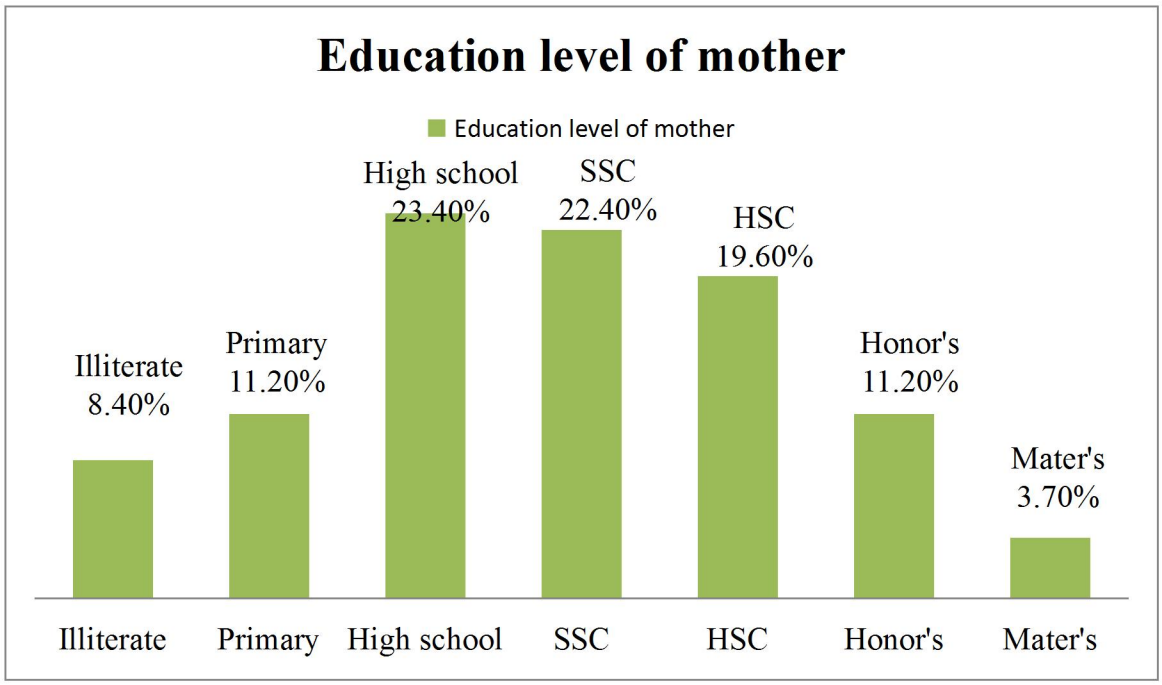


Fig .9: Education level of mother

4.1.12 Occupation of mother

Among 107 participants 73.85% mothers are housewife, 13,1% mothers are student & 13.15% mothers are service holder.

.

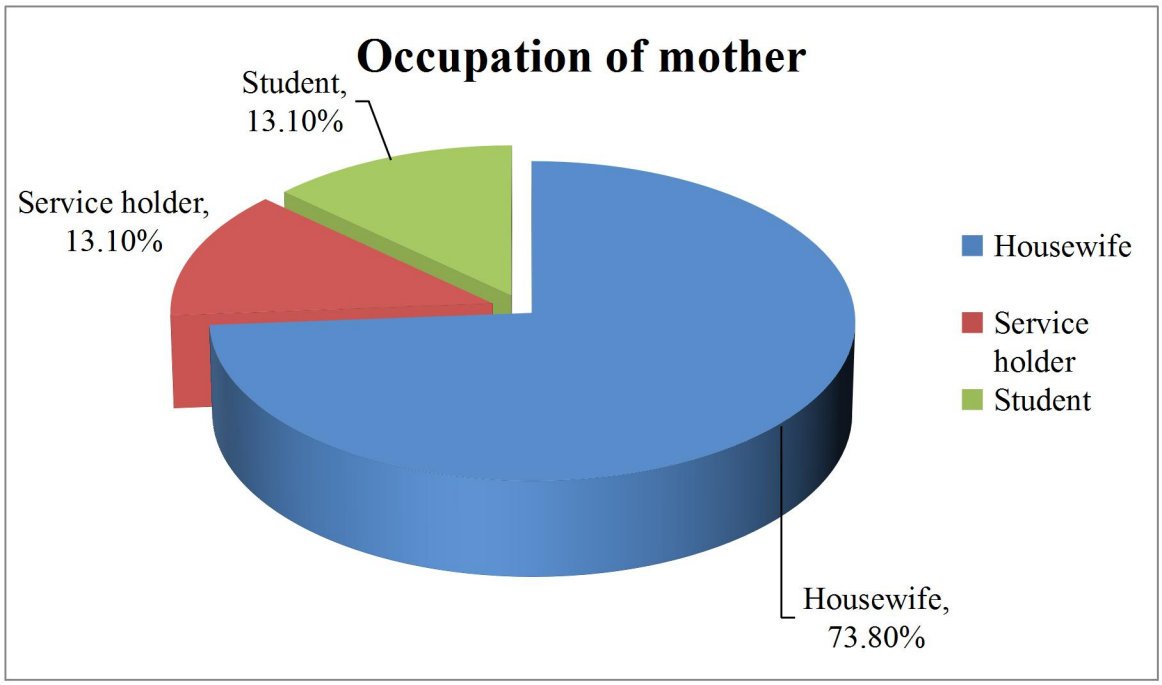


Fig .10: Occupation of mother

4.1.13 Duration of mother staying outside at home

Among 107 participants 73.8% mothers staying almost at home (housewife), 15.9% mothers staying 8 hours outside at home ,10.3% mother staying 3-4 hours outside at home.

4.1.14 Family income per month

Among 107 participants 13.1% family income is (<10,000) Tk per month, 60.7% family income is (25,000-50,000) Tk per month, 2.8% family income is (>50,000) Tk per month.

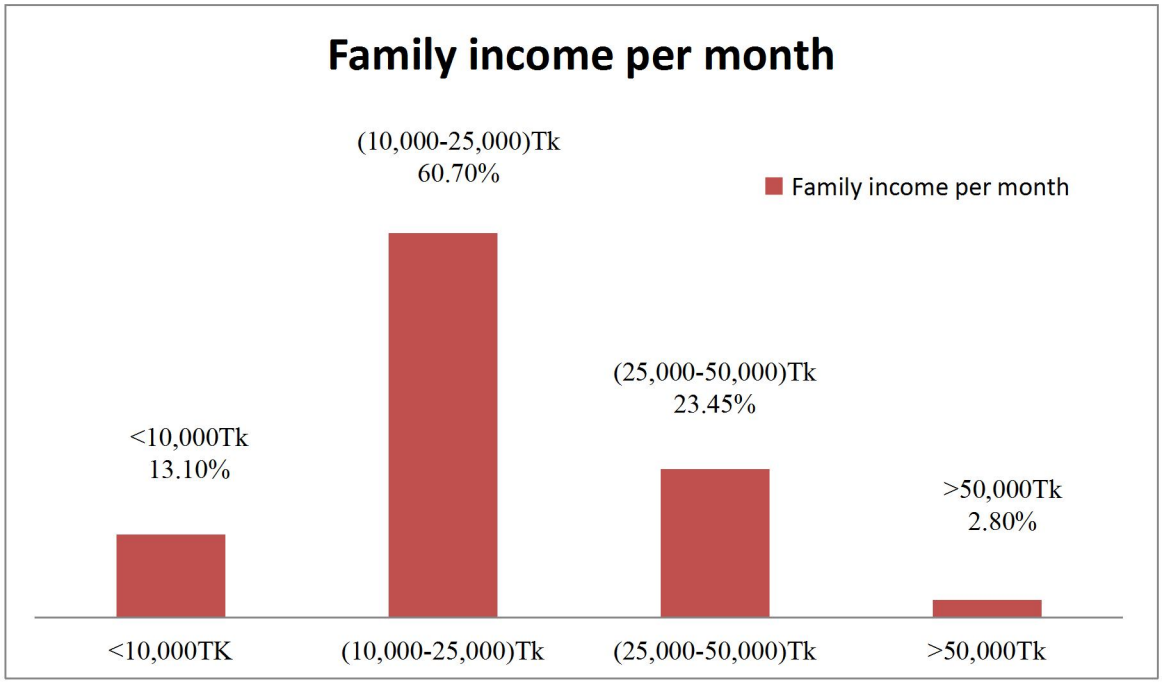


Fig. 11: Family income per month.

4.1.15 Family members with disability:

Among 107 participants 20.6% has disability in their family members &79.6% have no diability in their family members

4.1.16 Relationship with husband

Among 107 participants 80.4% have good relationship with their husband & 19.6% don't have good relationship with husband.

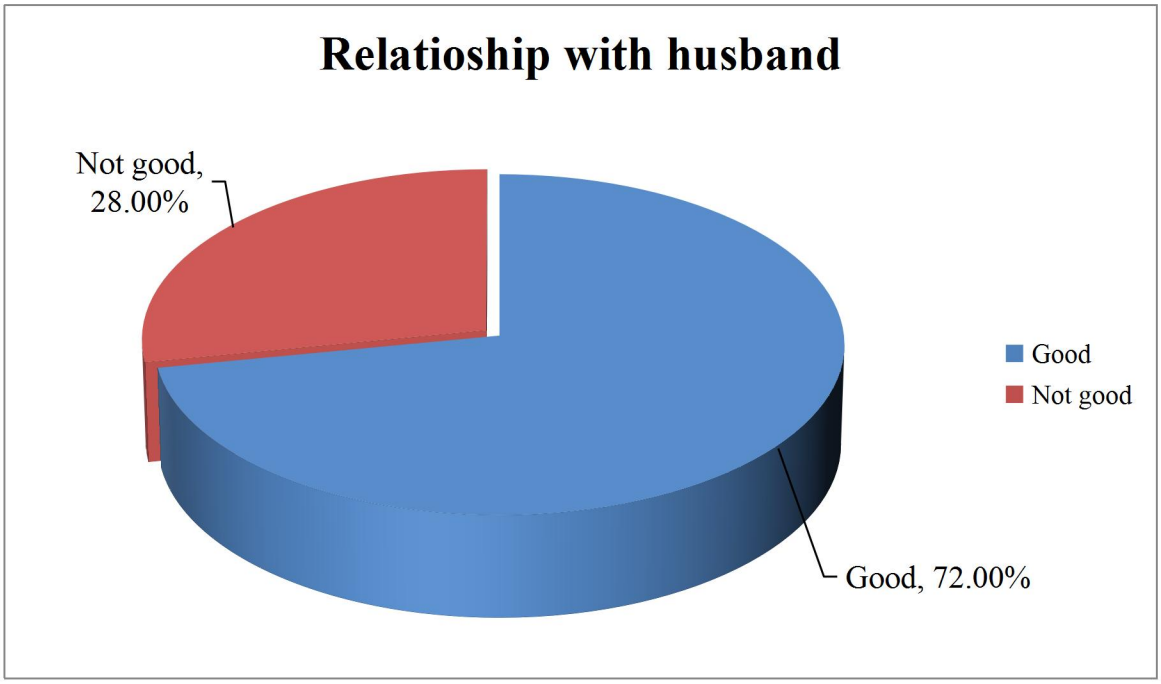


Fig .12: Relationship with husband

4.1.17 Level of motivation

Among 107 participants 46.7% motivation level is high & 53.3% motivation level is low.

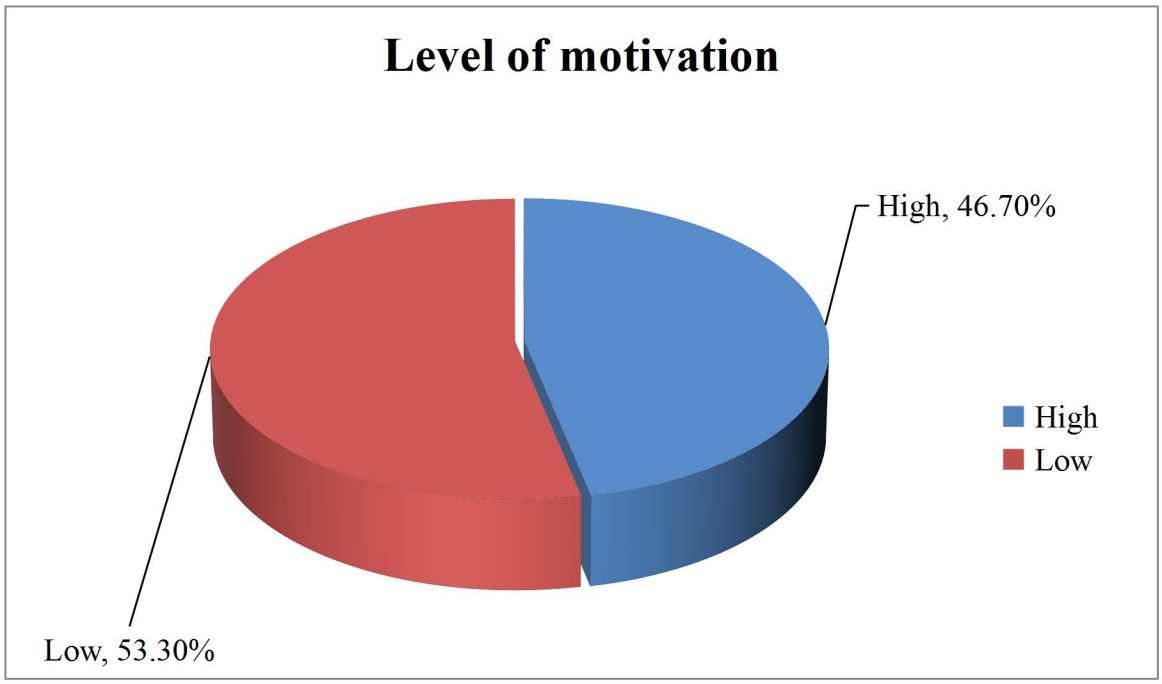


Fig .13: Level of motivation

4.1.18 EPDS scale score category

Among 107 participants 2.8% have none or minimal depression (0-6), 28% have mild depression (7-13), 46.7% have moderate depression(14-19) & 22.4% have severe depression (>19)

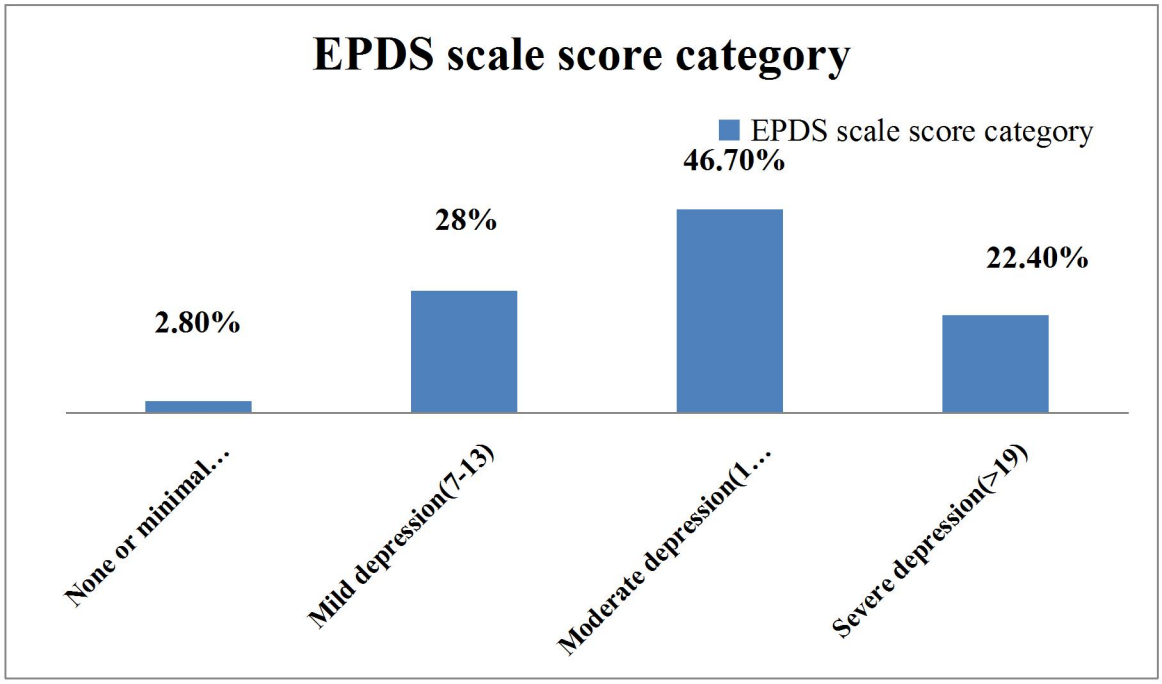


Fig 14: EPDS scale score category.

4.2: Association between sociodemographic information and Post Partum Depression category

Inferential statistical analysis:

Drawing conclusions about a population from data describing a sample is a typical task of inferential statistical analysis (Lix et al., 2006). In this study, relationships between EPDS Scale score category and mother's age, child age, living area, health condition of child, mother's health during pregnancy, co-morbidities diagnosis before, education level of mother, mother's occupation, duration of mother staying outside at home, family members with disability, relationship with husband, sexual life, level of motivation were examined.

Association between EPDS scale score category with mother's age, child age, living area, co-morbidities diagnosis before, type of delivery, health condition of child, mother's health during pregnancy, education level of mother, occupation of mother, duration of mother staying outside at home, family income per month, family member's with disability, relationship with husband, sexual life, family support, level of motivation.

Null hypothesis (H0): There is no association between EPDS scale score category with Mother's age, child age, living area, co-morbidities diagnosis before, type of delivery, health condition of child, mother's health during pregnancy, education level of mother, occupation of mother, duration of mother staying outside at home, family income per month, family member's with disability, relationship with husband, sexual life, family support, level of motivation.

Alternative hypothesis (HA): There is an association between EPDS scale score category with Mother's age, child age, living area, co-morbidities diagnosis before, type of delivery, health condition of child, mother's health during pregnancy, education level of mother, occupation of mother, duration of mother staying outside at home, family income per month, family member's with disability, relationship with husband, sexual life, family support, level of motivation.

Test assumption:

In case of Pearson chi square,

1. Two categorical variables including two or more subcategory 2.
2. 0%-20% cell have expected count less than 5.

In case of Fisher's exact test if

1. Expected frequency is <5 , cell count is > 20%

Level of significance (α value = .05)

Table 03:

Association between **Post Partum Depression category** with mother's age, child age, living area, co-morbidities diagnosis before, type of delivery, health condition of child, mother's health during pregnancy, education level of mother, occupation of mother, duration of mother staying outside at home, family income per month, family member's with disability, relationship with husband, sexual life, family support, level of motivation.

Variable 1	**Variable 2**	**Pearson Chi square co efficient value (χ2)**	**Fisher's exact co-efficient value**	**Significant level**	**Comment/ Discussion**
Post partum depression category	Family income Per month 1.<10000 tk 2.(10000-25000)Tk 3.(25000-	4.275		0.011	Significant association found/ Alternative hypothesis is

	50000)Tk 4.>50,000Tk				accepted
	Level of motivation 1.High 2.Low	5.969		0.012	Significant association found/ Alternative hypothesis is accepted
Post Partum Depression category	Occupation of mother 1.Housewife 2.Service holder 3.Student	4.980		0.531	Significant association found/ Alternative hypothesis is accepted
	Family members with disability 1.Yes 2.No	0.643		0.962	No significant association found/Null hypothesis is failed to be rejected.

Post Partum Depression category	Co-morbidities diagnosis before 1.Yes 2.No	6.360		0.051	No significant association found/Null hypothesis is failed to be rejected.
	Living area 1.Urban 2.Rural	2.960		0.424	Significant association found/ Alternative hypothesis is accepted
	Level of adaptation 1Good adaptation 2.Poor adaptation	2.233		0.526	No significant association found/Null hypothesis is failed to be rejected.

	Child age 1.0-6 months 2.7-12 months	2.291		0.51	No significant association found/ Null hypothesis is failed to be rejected
	Sexual life 1.Normal 2.Abnormal	2.080		0.556	No significant association found/Null hypothesis is failed to be rejected
	Family support 1.Yes 2.No	0.845		0.898	No significant association found/Null hypothesis is failed to be rejected
	Relationship with husband	2.365		0.5	No significant association found/Null hypothesis is failed to be rejected

	Mother's age in category	5.485		0.483	No significant association found/Null hypothesis is failed to be rejected
	Type of delivery 1.Normal vaginal delivery 2.Caeserean section	4.404		0.268	No significant association found/Null hypothesis is failed to be rejected

** α value is 0.05. P value is statistically significant if it is less than α value and alternative hypothesis is accepted. If P value is greater than α value then null hypothesis is accepted.

Association of sociodemographic information with Post partum depression: One of the objective of this study was to examine an association between sociodemographic information and Post partum depression. So in continuation of this, researcher have found out the p value (significant value) as well as test value by chi-square test.

The table above showing result of association of Post Partum Depression category with Mother's age, child age, health condition of child, living area,co-morbidities diagnosis before, occupation of mother, family income per month, duration of mother staying outside at home, relationship with husband, sexual life, family members with disability, level of adaptation , Level of motivation, Family support, family members with disability.

The findings of this study indicate that PPD is extremely common among women in the Savar region, among 107 participants 2.8% mothers have none or minimal depression, 28% have mild depression, 46.7% have moderate depression, 22.4% have severe depression.

Researcher found a strong association found between and family income per month & Post Partum Depression category (p value is 0.011). An association between level of motivation Post Partum Depression category also found (p value is 0.012).

There was no association found with PPD category with Mother's age, child age, health condition of child, living area, co-morbidities diagnosis before, occupation of mother, duration of mother staying outside at home, relationship with husband, sexual life, family members with disability, level of adaptation , family support, family members with disability.

4.2.1 Bar graph showing association between income per month & PPD score category-

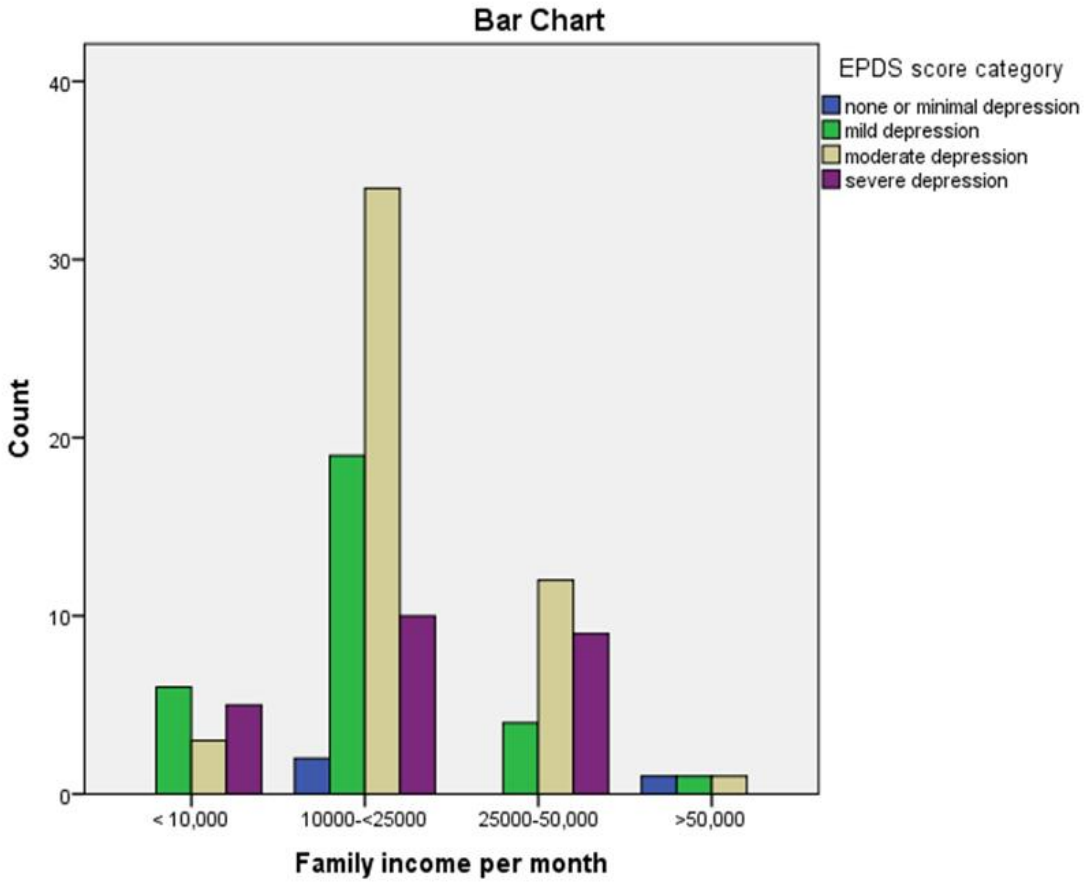


Fig.15: Association between family income per month & PPD category.

4.2.2 Bar graph showing association between level of motivation & EPDS score category-

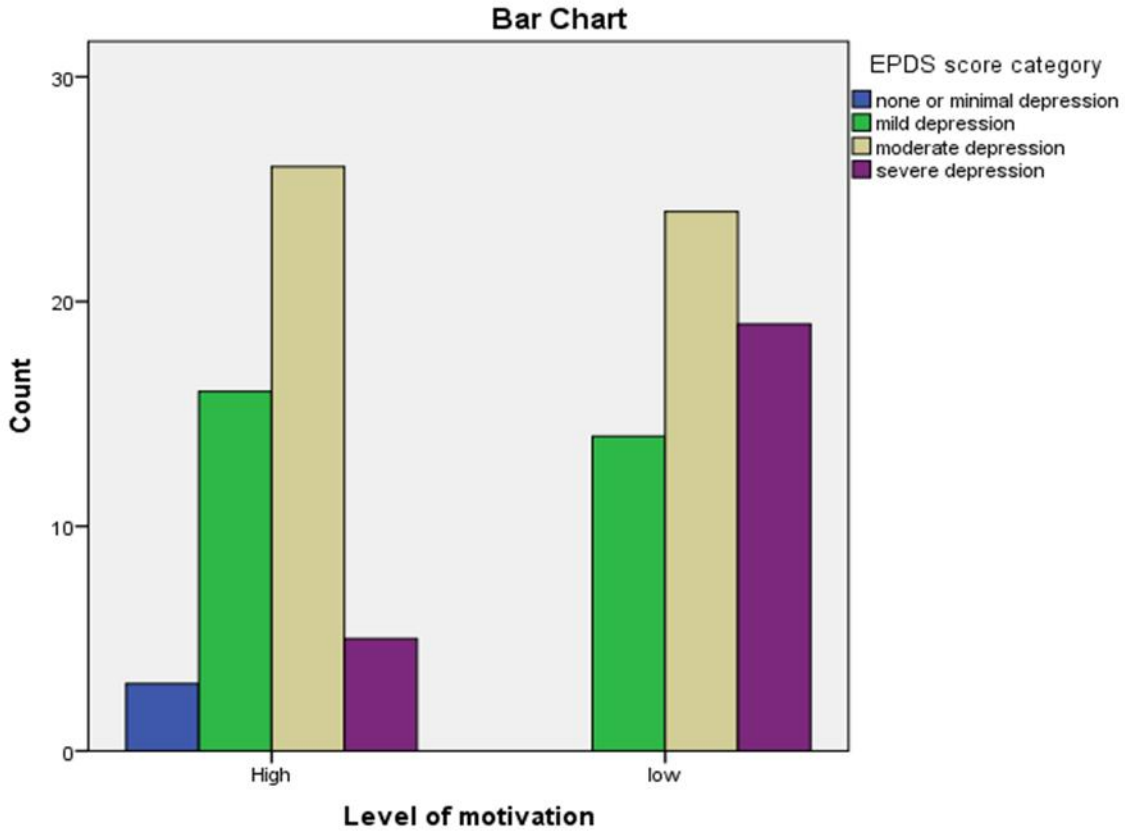


Fig.16: Association between level of depression & EPDS score category.

4.3 Level of depression in women at post partum period

Among 107 participants 3 women had no depression or minimal depression as their EPDS score ranged from (0-6) , 30 women had mild depression and their EPDS score ranged from (7-13), 50 women had mild depression and their EPDS score ranged from (14-19), 24 women had severe depression and their EPDS score was more than 19.

Table 4: Post partum depression level

Post partum depression level	Percentage
None or minimal depression	2.8%
Mild depression	28.0%
Moderate depression	46.7%
Severe depression	22.4%

CHAPTER-V DISCUSSION

The term "postpartum depression" refers to a depressive condition that develops within the first year after giving birth and is comparable to a major depressive episode at any point in a woman's life. The postpartum period is when symptoms like anxiety, anhedonia, aggressive obsessional thoughts, restlessness or attention issues, and problem making decisions are more prevalent or severe. Due to the disorder's direct connection to trouble with various parenting activities, including as nursing, sleeping, or attending to the requirements of the infant, postpartum depression has negative effects on the mother and, as a result, on the child.

To identify previously published studies and to evaluate its applicability to the obtained information, the analysis and discussion will perform this function. Discussion of the study's findings in connection to its goals and research topics is presented in this chapter. The discussion is focused on identifying the level of depression in women at post partum period. This study contributes to investigating the level of depression in women at post partum period (0-12 months after child delivery) and risk factors of PPD among women in Savar for the first time. The findings of this study indicate that PPD is extremely common among women in the Savar region, among 107 participants 2.8% mothers have none or minimal depression, 28% have mild depression, 46.7% have moderate depression, 22.4% have severe depression is nearly in accordance with these findings **3.5% to as high as 63.3%** across Asian countries (Islam et al. 2017).

A significant association found between the **Post Partum Depression and family income** in this study. P value is 0.011. This findings consistent with previous study (Hanach et al.2023). This research suggests that Post Partum Depression is more common among those with lower family income.In another words the economic well-being can reduce the severity of post partum depression. Within the study an association of **level of motivation** and PPD category observed**.** Researcher found an **strong association** between level of depression and Post Partum Depression**.** P value is 0.012**. So, this result suggests that** Women with high level of motivation are less likely to suffer from post partum depression.

But there is no association found between post partum depression with other socio-demographic information and such as type of delivery, mother's age, child age, education level, occupation of mother etc. Again using the EPDS tool, limited PPD studies in Bangladesh found association between with PPD and child age which is not compatible with the study (harris et et. 2023).

This result demonstrates that PPD is one of the most common psychological problems in Bangladesh. In addition, the prevalence of PPD in Bngladesh 39.4% is one of the highest worldwide, as it is higher than that in Morocco (18.7%), Lebanon (26%), Jordan (22%), Bahrain (37.1%), Qatar (17.6%), and Dammam, (Saudi Arabia) (17.8%) (Agoub et al.2016). According to the literature, only Kundapur, India, has a higher prevalence (81%) than Bangladesh (Upadhyay et al.2017). Therefore, the high frequency of PPD in our region is due to the fact that most people believe that experiencing symptoms of depression after childbirth is normal and are unaware of this condition and its severe implications, such as suicidal thoughts or injury to the infant.

According to earlier research, it is now time to examine distinct cultural customs and beliefs and their effects on PPD rather than only focusing on the prevalence, incidence, and descriptive studies of other cultures. Even though this study was not conducted in a religious setting, it was previously believed that higher levels of religiosity would be linked to a decreased incidence of postpartum depression symptoms. Estimates place the prevalence of PPD anywhere from 0.5 to 60.8% across the globe. It is estimated that 19.8% of the population lives with this condition in low- and middle-income countries When PPD is neglected, symptoms normally last for seven months, however, they can last into a woman's second year after giving birth (Alasoom et al. 2018).

In this study, 107 women participants were selected who were giving birth to a child & the age of child is in between 0-12 months. Among 107 participants in my study it was found that the mean age of mothers is 25.45. In this study, among 107 participants , most of the people lives in rural area and it is 57.9% and 42.1% people were in urban areas. Though most of the participants came from rural area, they are not so poor .Family

income per month has an association with post partum depression.60.7% participants have family income in between 10,000-25,000 Tk. 44.1% mothers has co-mobidities & 58.9% mothers have no co-morbidities diagnosis before.

The result of this study shows was 47.7% child age is in between 0-6 months & 52.3% child age is in between 7-12 months. The type of delivery 49.5% mothers is normal vaginal delivery & 50.5 % mothers have caesarean section, which was comparable with a recent study in, my result is nearly similar with the study .Caesarean section delivery in increasely day by day. But ,in this study the researcher don't find any association with type of delivery and post partum depression. An association found between family income per month and post partum depression(p value is 0.011).The researcher also found an association with level of motivation & post partum depression (p value is 0.012).

5.1 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 107 samples were taken in this study. Only 107 samples do not represent the condition of entire country's Post partum depression. It would be more effective if a large number of samples were taken. Time was one of the major limitation. The researcher 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 the residential area of Savar, Dhaka. If it was collected from other district of Bangladesh, the result would be more reliable and appropriate and also give a clear impression about level of depression in women at post partum period. 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

The researcher explored the level of depression in women at post partum period. The results of the study suggest that post partum depression should be screening for the health of both mother & child. Researcher didn't find any associations of age of mother & type of delivery with Post partum depression. PPD is a common mental health problem seen among the postnatal women within 6-12 months of their delivery. It has significant association with family income and level of motivation.

In the study it was found that there was an association between of level of motivation and Post Partum Depression ($P<0.05$).So highly motivated women have a positive impact on low Post Partum Depression. Researcher also found that family income per months has an impact on post partum depression. Depression levels are higher among women with low monthly income. Post partum depression can be influenced by a variety of factors, including Mother's age, number of child, relationship with husband, sexual life, family support, health condition of child, co-morbidities of mothers etc. But in this study the researcher did not found any association with these socio-demographic factors.

Recommendation

The objective of this study was to find out the level of depression in women in post partum depression and the association between socio demographic information and post partum depression in Savar area. After completing the research, the researcher found few recommendation. Some points to keep in mind that might be taken for the better accomplishment for further study. The main recommendations would be as follow: To improve the study's generalizability, it is advisable to employ a random sampling technique instead of convenience sampling, thus enhancing the power of generalization. Should collect more samples for generating the findings and make more valid and reliable. To generalize the findings, sample should collect from different districts of Bangladesh. Other measurement scales should be taken into consideration in order to provide an effective and efficient result in a generalized form. A larger sample size may

strengthen the statistical significance of some of the results. As a treatment of post partum depression in this population are greatly needed to provide evidence-based guidelines useful to health care providers. There were some limitations of this study mentioned at the relevant section and it is recommended to resolve those limitations during further research. Post partum depression can have an impact on day to day life and it is dangerous for child health. It may impair mothers child relationship. So that it is vital to pay attention following post partum depression. Mothers should be screening regularly. There have been a number of studies undertaken in relation to this topic, and furthermore, there should be studies conducted to recognize the dangers of post partum depression and the preventative actions that may be taken. If other authors want to pursue further similar research, the urge is to conduct their research from the perspective of the entire country and with a large number of sample size.

CHAPTER -6 REFFERENCES

- Nwana Dingana, T 2022, 'Prevalence and factors associated with post-partum depression in a rural area of Cameroon: A cross-sectional study', *Pan African Medical Journal*,vol. 42,no.(6),pp.505.
- Kołomańska-Bogucka, & Mazur-Bialy, AI 2019, 'Physical activity and the occurrence of postnatal depression-a systematic review', *Medicina*, vol.55,no.(9), pp.560.
- Abdollahi, F & Zarghami, M 2018 'Effect of postpartum depression on women's mental and physical health four years after childbirth', *Eastern Mediterranean Health Journal*,vol.24,no.(10), pp.704 .
- Myers, S & Johns, SE 2018 'Postnatal depression is associated with detrimental life-long and multi-generational impacts on relationship quality', *PeerJ*,vol. 19,no.(3),pp.302.
- Smith-Nielsen, J (2018) 'Validation of the Edinburgh Postnatal Depression Scale against both DSM-5 and ICD-10 diagnostic criteria for depression', *BMC Psychiatry*,vol. 18, no.(1).
- Ghogomu, G. (2016) 'Prevalence and predictors of depression among postpartum mothers in the Limbe Health District, Cameroon: A cross-sectional study', *British Journal of Medicine and Medical Research*, vol.12, no (3), pp. 1–11.
- Gelaye, B (2016) 'Epidemiology of maternal depression, risk factors, and child outcomes in low-income and middle-income countries', *The Lancet Psychiatry*, vol.3,no.(10), pp. 973–982.

- Halbreich, U & Karkun, S (2006) 'Cross-cultural and social diversity of prevalence of postpartum depression and depressive symptoms', *Journal of Affective Disorders*,vol. 91,no.(2–3), pp. 97–111.
- Affonso, DD 2000 'An international study exploring levels of postpartum depressive symptomatology', *Journal of Psychosomatic Research*,vol.49, no.(3), pp. 207–216
- Abou-Saleh, MT, Ghubash, R, Karim, L, Krymski, M & Anderson, DN 2009, 'The role of pterins and related factors in the biology of early postpartum depression', *European Neuro psychopharmacology: the Journal of the European College of Neuro psychopharmacology*, vol.9, no. (4), pp.295-300.
- Afshari, P, Tadayon, M, Abedi, P & Yazdizadeh, S 2020, 'Prevalence and related factors of postpartum depression among reproductive aged women in Ahvaz, Iran', *Health care for women international*,vol. *41,no.*(3), pp.255-265.
- Bener, A, Burgut, FT., Ghuloum, S & Sheikh, J 2012, 'A study of postpartum depression in a fast developing country: prevalence and related factors', *The international Journal of psychiatry in medicine*, vol.*43,no.*(4), pp.325-337
- Ekuklu, G, Tokuc, B, Eskiocak, M, Berberoglu, U & Saltik, A 2004, 'Prevalence of postpartum depression in Edirne, Turkey and related factors', *Journal of reproductive medicine,* vol.49,no.(11), pp.908-914.
- Gonidakis, F, Rabavilas, AD, Varsou, E, Kreatsas, G & Christodoulou, GN 2008, 'A 6-month study of postpartum depression and related factors in Athens Greece', *Comprehensivepsychiatry*, vol.*49, no.*(3), pp.275-282.
- Glavin, K, Smith, L, Sørum, R & Ellefsen, B 2010, 'Redesigned community postpartum care to prevent and treat postpartum depression in women–a one-year follow-up study' *Journal of clinical nursing*, vol.*19,no.*(21-22), pp.3051-3062.
- Hanach, N, Radwan, H, Fakhry, R, Dennis, CL, Issa, WB, Faris, ME, Obaid, RS, Al Marzooqi, S, Tabet, C & De Vries, N 2023, 'Prevalence and risk factors of postpartum depression among women living in the United Arab Emirates'. *Social psychiatry and psychiatric epidemiology*, vol.*58, no.*3, pp.395-407.
- Kobra, L, Noor Mohammad, B, Soheila, H, Seyyed Ali Reza, S & Ameneh Safarzadeh,S 2012, 'Postpartum depression and related factors: a 4.5 months'.

- Khorramirad, A, Lotfi, MM, & Bidgoli, AS 2010, 'Prevalence of postpartum depression and related factors in Qom', *Pajoohandeh Journal*, vol.*15, no.*(2), pp.62-66.
- Kim, MW, Yang, S & Kim, JR 2009, 'A study on agreements among screening tests and related factors with postpartum depression', *Korean Journal of Obstetrics and gynecology*, pp.1133-1143.
- Liu, X, Wang, S & Wang, G 2022, 'Prevalence and risk factors of postpartum depression in women: a systematic review and meta-analysis', *Journal of Clinical Nursing*, vol.*31, no* (19-20), pp.2665-2677.
- Miller, LJ 2002, 'Postpartum depression', *Jama*,vol. *287,no.*(6), pp.762-765.
- Nielsen, D, Videbech, P, Hedegaard, M, Dalby, J & Secher, NJ 2000, 'Postpartum depression: identification of women at risk' *BJOG: An International Journal of Obstetrics & Gynaecology*, vol.*107,no.*(10), pp.1210-1217.
- O'Hara, MW 2009, 'Postpartum depression: what we know' *Journal of clinical psychology*, vol. *65, no.* (12), pp.1258-1269.
- Stewart, DE, Robertson, E, Dennis, CL, Grace, SL & Wallington, T 2003, 'Postpartum depression: Literature review of risk factors and interventions', *Toronto: University Health Network Women's Health Program for Toronto Public Health*, pp.1-289.
- Vaezi, A, Soojoodi, F, Banihashemi, AT & Nojomi, M 2019, 'The association between social support and postpartum depression in women: A cross sectional study' *Women and Birth*, vol. *32,no.*(2), pp.e238-e242.
- Vigod, SN, Villegas, L, Dennis, CL & Ross, LE 2010, 'Prevalence and risk factors for postpartum depression among women with preterm and low-birth-weight infants: a systematic review', *BJOG: An International Journal of Obstetrics & Gynaecology*, vol. *117, no.*(5), pp.540-550.
- Zaidi, F, Nigam, A, Anjum, R & Agarwalla, R 2017, 'Postpartum depression in women: a risk factor analysis', *Journal of clinical and diagnostic research: JCDR*,vol. *11,no.*(8), ppQC13.

- Goodman, JH 2004, 'Postpartum depression beyond the early postpartum period', *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, vol.*33, no.*(4), pp.410-420.
- Philipps, LH, & O'Hara, MW 1991, 'Prospective study of postpartum depression: 4½-year follow-up of women and children', *Journal of Abnormal Psychology*, vol. *100,no.*(2), pp.151.
- Robertson, E, Celasun, N & Stewart, DE 2003, 'Risk factors for postpartum depression', *Postpartum depression: Literature review of risk factors and interventions*, pp.9-70.
- Çankaya, S 2020, 'The effect of psychosocial risk factors on postpartum depression in antenatal period: A prospective study', *Archives of psychiatric nursing*,vol. *34,no*(3), pp.176-183.
- Azad, R, Fahmi, R, Shrestha, S, Joshi, H, Hasan, M, Khan, ANS, Chowdhury, MAK, Arifeen, SE & Billah, SM 2019, 'Prevalence and risk factors of postpartum depression within one year after birth in urban slums of Dhaka, Bangladesh', *PloS one*,vol. *14,no.*(5), p.e0215735.
- Islam, MJ, Broidy, L, Baird, K & Mazerolle, P 2017, 'Intimate partner violence around the time of pregnancy and postpartum depression: the experience of women of Bangladesh', *PloS one*,vol. *12,no.*(5), pp.e0176211.
- Nasreen, HE, Edhborg, M, Petzold, M, Forsell, Y and Kabir, ZN 2015, 'Incidence and risk factor of postpartum depressive symptoms in women: a population based prospective cohort study in a rural district in Bangladesh. *J Depress Anxiety'*, vol.*4,no.*(1000180), pp.2167-1044.
- Saha, A and Das, M, 2017, 'Impact of social networking sites on post-partum depression in women: An analysis in the context of Bangladesh', In *2017 20th International Conference of Computer and Information Technology (ICCIT),* pp. 1-6.
- Khatun, F, Lee, TW, Rani, E, Biswash, G, Raha, P & Kim, S 2018, 'The relationships among postpartum fatigue, depressive mood, self-care agency, and self-care action of first-time mothers in Bangladesh', *Korean Journal of Women Health Nursing*,vol. *24,no.*(1), pp.49-57.

- Surkan, PJ, Strobino, D., Mehra, S, Shamim, AA, Rashid, M, Wu, LSF, Ali, H, Ullah, B, Labrique, AB, Klemm, RD & West, KP 2018, 'Unintended pregnancy is a risk factor for depressive symptoms among socio-economically disadvantaged women in rural Bangladesh', *BMC pregnancy and childbirth*,vol. *18*, pp.1-13.
- Hossain, SJ, Roy, BR, Hossain, AT, Mehrin, F, Tipu, SMU, Tofail, F, Arifeen, SE, Tran, T, Fisher, J & Hamadani, J 2020,'Prevalence of maternal postpartum depression, health-seeking behavior and out of pocket payment for physical illness and cost coping mechanism of the poor families in Bangladesh: a rural community-based study', *International journal of environmental research and public health*,vol. *1,no.7*(13), pp.4727.
- Tasnim, F, Abedin, S & Rahman, MM, 2023, 'Mediating role of perceived stress on the association between domestic violence and postpartum depression:cross-sectionalstudyin Bangladesh', *BJPsych open*, vol. *9,no.*(1), pp.e16.
- Nasreen, HE, Kabir, ZN, Forsell, Y & Edhborg, M 2013, ' Impact of maternal depressive symptoms and infant temperament on early infant growth and motor development: results from a population based study in Bangladesh', *Journal of affective disorders*,vol. *146,no.*(2), pp.254-261.
- Sit, DK& Wisner, KL 2009, 'The identification of postpartum depression', *Clinical obstetrics and gynecology*,vol. *52,no.*(3), pp.456.
- Bjertrup, AJ, Jensen, MB, Schjødt, MS, Parsons, CE., Kjærbye-Thygesen, A, Mikkelsen, RL, Moszkowicz, M, Frøkjær, VG, Vinberg, M, Kessing, LV & Væver, M.S 2021, 'Cognitive processing of infant stimuli in pregnant women with and without affective disorders and the association to postpartum depression', *European Neuro psychopharmacology*,vol. *42*, pp.97-109.
- Alshikh Ahmad, H, Alkhatib, A & Luo, J 2021, 'Prevalence and risk factors of postpartum depression in the Middle East: a systematic review and meta–analysis', *BMC pregnancy and childbirth*,vol. *21*, pp.1-12.

- Perry, A, Gordon-Smith, K, Webb, I, Fone, E, Di Florio, A, Craddock, N, Jones, I & Jones, L 2019, 'Postpartum psychosis in bipolar disorder: no evidence of association with personality traits, cognitive style or affective temperaments', *BMC psychiatry*, vol.*19,no.*(1), pp.1-10.
- Hasan, M, Sultana, S, Sohan, M, Parvin, S, Rahman, MA, Hossain, MJ, Rahman, MS & Islam, MR 2022. 'Prevalence and associated risk factors for mental health problems among patients with polycystic ovary syndrome in Bangladesh: A nationwide cross—Sectional study', *PloS one*, vol. *1,no.7*(6), pp.e0270102.
- Mikšić, Š, Uglešić, B, Jakab, J, Holik, D, Milostić Srb, A & Degmečić, D 2020, 'Positive effect of breastfeeding on child development, anxiety, and postpartum depression', *International journal of environmental research and public health*,vol. *17,no.*(8), pp.2725.
- Tolossa, T, Fetensa, G, Yilma, MT, Abadiga, Wakuma, B, Besho, M, Fekadu, G & Etafa, W 2020, 'Postpartum depression and associated factors among postpartum women in Ethiopia: a systematic review and meta-analysis, 2020', *Public health reviews*,vol. *41,no.*(1), pp.1-20.
- Stewart, DE. & Vigod, SN 2019, 'Postpartum depression: pathophysiology, treatment, and emerging therapeutics', *Annual review of medicine*,voi. *70*, pp.183-196.
- Míguez, MC & Vázquez, MB 2021, 'Risk factors for antenatal depression: A review', *World journal of psychiatry*,voi. *11,no.*(7), pp325.
- Horowitz, JA & Goodman, J 2004, 'A longitudinal study of maternal postpartum depression symptoms', *Research and theory for nursing practice*, vol.*18, no.*(2/3), pp149.
- Pinheiro, RT, Magalhães, PVS, Horta, BL, Pinheiro, KAT, Da Silva, RA & Pinto, RH 2006, 'Is paternal postpartum depression associated with maternal postpartum depression? Population-based study in Brazil', *Acta Psychiatrica Scandinavica*, vol.*113,no.*(3), pp.230-232.

APPENDIX

Verbal Consent Form

Assalamu Alaikum,

I am Shammy Akter Eti, the 4th year B.Sc. (Hon's) in Physiotherapy student of Bangladesh Health Professions Institute (BHPI) under Medicine faculty of University of Dhaka. To obtain my Bachelor degree, I shall have to conduct a research and it is a part of my study. The participants are requested to participate in the study after reading the following.

My research title is "**Level of depression in women at post partum period in Savar,Dhaka**." Through this study I will evaluate the level of depression and the factors associated with developing post partum depression in women during post partum period.

To implement my research project, I need to collect data from the women who have child aged 0-12 months. Therefore, you could be one of my valuable subjects for the study.and I would like to request you as a subject of my study. I am committed that the study will not pose or any harm or risk to you.

I would like to inform you that this is a purely academic study and will not be used for any other purpose. I assure that all data will be kept confidential. Your participation will be voluntary. You may have the right to withdraw consent and discontinue participation within 7 days of participation without any hesitation or risk.

If you have any query about the study or right as a participant, you may contact with me by telephone (01623403092) or my supervisor Mst. Fatema Akter , Assistant Professor , Department of Physiotherapy , BHPI.

Do you have any questions before I start?

So, may I have your consent to proceed with the interview?
Yes.....No.....
Signature of the participant & Date.....
Signature of the researcher & Date...

Questionnaire

Title : Level of Depression in Women at Post Partum Period in Savar, Dhaka.

A. Personal Information :		
Participant name:		
Mother's age:		
Contract no:		
Child age:	i) 0-6 months	ii) 7-12 months
Living area	i) Urban	ii) Rural
Number of Child:		
Co-morbidities diagnosis before :		
Have you ever received physiotherapy treatment?	i) Yes	ii) No
Type of delivery	i) Normal vaginal delivery	ii) Caesarean section
Health condition of child :	i) Good	ii) Poor
Child's level of adaptation in different environment	i) Good adaptation	ii) Poor adaptation
Mother's health condition during pregnancy :	i) Good	ii) Poor

B. Socio-demographic Characteristics :		
Educational level of mother	1) Illiterate	2) Primary
	3) High school	4) SSC
	5) HSC	6) Honors
	7) Masters	
Occupation of mother :		
Duration of mother staying outside of home:		
Number of years of work of mother:	i) <1year	ii) 1-5 year
	iii) 6-10 years	iv) >10 years
Family members :		
Occupation of father :	1, Govt. service	2. Non govt. service
	3. Business	4. Agricultural work
	5. Labourer	6. Unemployed
	7. Others:	
Family income per month :	1. Tk (<10,000)	2. Tk (10,000-<25,000)
	3. Tk (25,000-50,000)	4. Tk (>50,000)
Family member with disability :	i) Yes	ii) No

Relationship with husband:	i) Good	ii) Not good
Sexual life	i) Normal	ii) Abnormal
Family support	i) Yes	ii) No
Level of motivation	i) High	ii) Low

Edinburgh Post Partum Depression Scale

1. I have been able to laugh and see the funny side of things

a) As much as I always could

b) Not quite so much now

c) Definitely not so much now

d) Not at all

2.I have look forward with enjoyment to things

a)As much as I ever did

b)Rather less than I used to

c)Definitely less than I used to

d)Not at all

3.I have blamed myself unnecessarily when things went wrong

a)Yes, most of the time

b)Yes, some of the time

c)Not very often

d)Not at all

4.I have been anxious or worried for no good reason

a)Not at all

b)Hardly ever

c)Yes, sometimes

d)Yes, very often

5.I have felt scared or panicky for no good reason

a)Yes, quite a lot

b)Yes, sometimes

c)No, not much

d) No, not at all.

6. Things have been getting on top of me

a) Yes, most of the time I haven't been able to cope at all

b) Yes, sometimes I haven't been coping as well as usual

c) No, most of the time I have coped quite well

d) No, I have been coping as well as ever

7. I have been so unhappy that I have had difficulty sleeping

a) Yes, most of the time

b)Yes, sometimes

c) Not very often

d) No, not at all

8. I have felt sad or miserable

a) Yes, most of the time

b) Yes, quite often

c) Not very often

d) No, not at all

9. I have been so unhappy that I have been crying

a) Yes, most of the time

b) Yes, quite often

c) Only occasionally

d) No, never

10. The thought of harming myself has occurred to me

a)Yes, quite often

b) Sometimes

c) Hardly ever

d) Never

SCORING

QUESTIONS 1, 2, & 4

Are scored 0, 1, 2 or 3 with top box scored as 0 and the bottom box scored as 3.

QUESTIONS 3, 5-10

Are reverse scored, with the top box scored as a 3 and the bottom box scored as 0.

Maximum score: 30

None or minimal depression (0-6)

Mild Depression: 7-13

Moderate Depression: 14-19

Severe Depression: 19-30

Always look at item 10 (suicidal thoughts)

প্রশ্নপত্র

শিরোনাম: সাভার, ঢাকায় প্রসব পরবর্তী বিষন্নতায় নারীদের বিষণ্নতার মাত্রা।

ব্যক্তিগত তথ্য		
অংশগ্রহণকারীর নামঃ		
মায়ের বয়সঃ		
মোবাইল নাম্বারঃ		
শিশুর বয়সঃ	i) ০-৬ মাস	ii)৭-১২ মাস
বসবাসের জায়গাঃ	i) গ্রাম	ii) শহর
বাচ্চার সংখ্যাঃ		
অন্যান্য রোগ যা পূর্বে নির্ণয় হয়েছেঃ		
কখনো ফিজিওথেরাপি চিকিৎসা নিয়েছেনঃ	i) হ্যাঁ	ii) না
ডেলিভারির ধরনঃ	i) নরমাল	ii) সি সেকশন
বাচ্চা শারীরিক অবস্থাঃ	i) ভালো	ii)খারাপ
বিভিন্ন পরিবেশে বাচ্চার মানিয়ে নেয়ার দক্ষতাঃ	i) মানানসই	ii))মানানসই না
গর্ভকালীন সময় মায়ের স্বাস্থ্যের অবস্থাঃ	i)ভালো	ii)খারাপ

B. সামাজিক জনসংখ্যাগত বৈশিষ্ট্য		
মায়ের শিক্ষাগত যোগ্যতাঃ	১) অশিক্ষিত	২)প্রাথমিক
	৩)মাধ্যমিক	৪) এসএসসি
	৫) এইচএসসি	6) অনার্স
	৭) মাস্টার্স	
মায়ের পেশাঃ		
মায়ের ঘরের বাহিরে অবস্থানকালীন সময়কালঃ		
মায়ের কাজের বছরের সংখ্যাঃ	i) < ১ বছর	ii) ১-৫ বছর
	iii) ৬-১০ বছর	iv) >১০ বছর
পরিবারের সদস্য সংখ্যাঃ		
বাবার পেশাঃ	১)সরকারি সেবা	২)বেসরকারি সেবা
	৩) ব্যবসা	৪) কৃষিকাজ
	৫)শ্রমিক	৬) বেকার
	৭) অন্যান্যঃ	
পরিবারের মাসিক আয়ঃ	১)<১০,০০০ টাকা	২)(১০,০০০-২৫০০০) টাকা
	৩)(২৫,০০০-৫০,০০০) টাকা	৪)>৫০,০০০০ টাকা
স্বামীর সাথে সম্পর্কঃ	i) ভালো	ii) ভালো না
যৌন জীবনঃ	i) স্বাভাবিক	ii) স্বাভাবিক না
পরিবারের সহযোগিতা পানঃ	i) হ্যাঁ	ii)না

অনুপ্রেরনার স্থরঃ	i) নিম্নতর	ii) নিম্নতর

এডিনবার্গ পোস্টপার্টাম ডিপ্রেশন স্কেল

১)আমাকে আনন্দ দেয়া হয়েছে এবং মজার জিনিস গুলো উপভোগ করতে দেয়া হয়েছেঃ
ক)যতটা আমি সবসময় করতে পারতাম
খ)এখন খুব বেশি না
গ)এখন অবশ্য ততটা না
ঘ)একেবারেই না

২)আমি সবকিছু থেকে আনন্দ পাওয়ার আশায় থেকেছিঃ
ক) যতটা আমি বারবার থেকেছি যতটা
খ)আমি সাধারণত থাকি তারচেয়ে বরং কম
গ)যতটা থাকি অবশ্যই তার থেকে কম
ঘ)প্রায় একেবারেই না

৩)সবকিছু ঠিকমত না হলে আমি অযথা নিজেকে দোষারোপ করেছিঃ
ক) হ্যাঁ, বেশিরভাগ সময়ই হ্যাঁ
খ)কিছু কিছু সময়
গ)খুব একটা না
ঘ)না, কখনোই না

৪)কোন সঙ্গত কারণ ছাড়াই আমি উদ্বিগ্ন ও চিন্তিত হয়ে পড়েছিঃ
ক) না একেবারেই না
খ)প্রায় কখনোই না
গ)হ্যা কোনো কোন সময়ে
ঘ)হ্যাঁ খুব বেশি করে

৫)খুব সঙ্গত কারণ ছাড়াই আমি ভীত বা আতংকিত বোধ করেছিঃ
ক)হ্যাঁ বহুবার
খ)হ্যাঁ কোন কোন সময়
গ) হ্যা খুব বেশি নয় না
ঘ)একেবারেই নয়

৬)সবকিছু আমার উপর চেপে বসেছেঃ
ক)হ্যাঁ বেশিরভাগ সময়ই আমি একেবারে পেরে উঠছি না
খ)হ্যাঁ মাঝে মাঝে আমি ততটা পেরে উঠছি না যতটা সাধারণত পেয়ে থাকি
গ)না বেশিরভাগ সময়ে আমি খুব ভালোভাবে পেরে উঠেছি
ঘ)আমি বরাবরের মতই ভালোভাবে পেরে উঠেছি

৭)আমি এতটাই অসুখী ছিলাম যে আমার ঘুমোতে যেতে অসুবিধা হয়েছেঃ
ক)হ্যাঁ বেশিরভাগ সময়ই
খ)হ্যাঁ কোনো কোনো সময়
গ)না, খুব একটা না না
ঘ)একেবারেই না

৮)আমি দুঃখিত ও নিঃস্ব বোধ করেছিঃ
ক) হ্যাঁ বেশিরভাগ সময়ই
খ)হ্যাঁ প্রায়শই
গ)খুব একটা না
ঘ)না একেবারেই না

৯)আমি এতটাই অখুশি রয়েছি যে, আমি কেঁদেছিঃ
ক)হ্যাঁ বেশিরভাগ সময়ে
খ)হ্যাঁ প্রায়শই
গ)শুধু মাঝে মাঝে
ঘ)না কখনোই নয়

১০)নিজের ক্ষতি করার চিন্তা আমার মধ্যে এসেছেঃ
ক)হ্যাঁ প্রায়শই
খ)কোন কোন সময়ে
গ)প্রায় কখনোই না
ঘ)কখনোই না

স্কোর

প্রশ্ন ১,২, ও ৪
স্কোর 0, ১,২,৩ টপ বক্স 0 হিসাবে স্কোর করে এবং নীচের বক্স 3 হিসাবে স্কোর করে।
প্রশ্ন ৩, (৫-১০)
বিপরীত স্কোর করা হয়, শীর্ষ বক্সের স্কোর ৩ হিসাবে এবং নীচের বক্সটি 0 হিসাবে স্কোর করে।
সর্বোচ্চ স্কোর: 30
নাই বা ন্যূনতম বিষন্নতা (০-৬)
হালকা বিষন্নতা (৭-১৩),
মাঝারি বিষন্নতা (১৪-১৯),
গুরুতর বিষন্নতা (১৯-৩০)।
সর্বদা আইটেম 10 দেখুন (আত্মঘাতী চিন্তা)

মোট স্কোর

স্বাক্ষর দাতার স্বাক্ষর ও তারিখ

মৌখিক সম্মতি পত্র

আসসালামু আলাইকুম,

আমি শাম্মী আক্তার ইতি , বিএসসি ৪র্থ বর্ষের (অনার্স) ঢাকা বিশ্ববিদ্যালয়ের মেডিসিন অনুষদের অধীনে বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউটের (বিএইচপিআই) ফিজিওথেরাপির ছাত্রী। আমার ব্যাচেলর ডিগ্রী পেতে, আমাকে একটি গবেষণা পরিচালনা করতে হবে এবং এটি আমার অধ্যয়নের একটি অংশ। অংশগ্রহণকারীদের নিম্নলিখিত পড়ার পরে গবেষণায় অংশগ্রহণের জন্য অনুরোধ করা হচ্ছে।

আমার গবেষণার শিরোনাম হল "সাভার, ঢাকায় প্রসাব পরবর্তী বিষন্নতায় মহিলাদের মধ্যে বিষন্নতার মাত্রা"। এই গবেষণার মাধ্যমে আমি উক্ত সম্পর্কিত কারণগুলি অনুসন্ধান করব।

আমার গবেষণা প্রকল্প বাস্তবায়নের জন্য, আমাকে ০ থেকে ১২ মাস বয়সী শিশু আছে এমন মহিলাদের ডেটা সংগ্রহ করতে হবে। অতএব, আপনি অধ্যয়নের জন্য আমার মূল্যবান বিষয় হতে পারেন এবং আমি আপনাকে আমার অধ্যয়নের অংশগ্রহণকারী হিসাবে অনুরোধ করতে চাই। আমি প্রতিশ্রুতিবদ্ধ যে অধ্যয়ন আপনার অঙ্গ হানি বা কোন ক্ষতি করবে না।

আমি আপনাকে জানাতে চাই যে এটি একটি সম্পূর্ণরূপে একাডেমিক অধ্যয়ন এবং অন্য কোন উদ্দেশ্যে ব্যবহার করা হবে না আমি আশ্বাস দিচ্ছি যে সমস্ত তথ্য গোপন রাখা হবে। আপনার অংশগ্রহণ স্বেচ্ছায় হবে। আপনার কোনো দ্বিধা বা ঝুঁকি ছাড়াই অংশগ্রহণের 7 দিনের মধ্যে সম্মতি প্রত্যাহার এবং অংশগ্রহণ বন্ধ করার অধিকার আছে।

অধ্যয়ন সম্পর্কে আপনার যদি কোন প্রশ্ন থাকে অংশগ্রহণকারী হিসাবে, আপনি আমার সাথে টেলিফোনে যোগাযোগ করতে পারেন (০১৬২৩৪০৩০৯২)) অথবা আমার সুপারভাইজার ফাতেমা আক্তার, সহকারী অধ্যাপক, বিভাগ ফিজিওথেরাপি, বিএইচপিআই।

আমি শুরু করার আগে আপনার কোন প্রশ্ন আছে? তাহলে, ইন্টারভিউ নিয়ে এগিয়ে যেতে আমি কি আপনার সম্মতি পেতে পারি?

হ্যাঁ…….. না……

অংশগ্রহণকারীর স্বাক্ষর……. তারিখ.....

গবেষকের স্বাক্ষর ……..... তারিখ.....

BANGLADESH HEALTH PROFESSIONS INSTITUTE

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

Ref: CRP/BHPI/IRB/03/2023/684 Date: 13/03/2023

To
Shammy Akter Eti
B.Sc. in Physiotherapy,
Session: 2017-2018, DU Reg. No: 8622
BHPI, CRP, Savar, Dhaka- 1343, Bangladesh

Subject: Approval of the dissertation proposal **"Level of Depression in Women at Post-Partum Period in Savar, Dhaka"**- by ethics committee.

Dear
Shammy Akter Eti,
Congratulations
The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application to conduct the above-mentioned dissertation, with yourself, as the Principal Investigator Mst. Fatema Akter, Assistant Professor, Department of Physiotherapy, 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 version)
3	Information sheet & consent form

The purpose of the study is to evaluate the level of depression in women at post-partum period in Savar, Dhaka. Should there any interpretation, typo, spelling, grammatical mistakes in the title, it is the responsibilities of the investigator. Since the study involves questionnaire that takes maximum 20- 25 minutes and have 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 BHPI, 34th IRB Meeting.

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 accordance to Nuremberg Code 1947, World Medical Association Declaration of Helsinki, 1964 - 2013 and other applicable regulation.

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
CRP-Chapain, Savar, Dhaka-1343, Bangladesh. Tel: +88 02 224445464-5, +88 02 224441404, Mobile: +88 01730059647
E-mail : principal-bhpi@crp-bangladesh.org, Web: bhpi.edu.bd

Date: April 17, 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 Shammy Akter Eti, student of 4th year B.Sc. in Physiotherapy at Bangladesh Health Professions institute (BHPI). The Ethical committee has approved my research project entitled: **"Level of Depressionin Women at Post Partum Depression Period in Savar, Dhaka"** under the supervision of Mst.Fatema Akter, Associate Professor, Department of Physiotherapy, Bangladesh Health Professions Institute (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 community of Savar upazila.. So, I need your kind permission for data collection . 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
Shammy Akter Eti
Shammy Akter Eti
4th Year
B.Sc. in Physiotherapy
Class Roll: 03; Session: 2017-2018
Bangladesh Health Professions Institute (BHPI)
Chapain, CRP, Savar, Dhaka, 1343.

Forward
17.04.2023

Recommended
Shofiq
17.04.2023

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

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: 16.05.2023

To

President of Housing Committee,
Shahibag Housing,
96, Shahibag, Savar, 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 division will be the most appropriate place to collect data.

4th year students of BHPI Shammy Akter Eti would like to collect data in your Area in your convenient time.

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

With regards

Bangladesh Health Professions Institute (BHPI) ★ Date.....

Prof. Dr. Md. Omar Ali Sarker
Principal
BHPI, CRP, Savar, Dhaka.