

**COMMON PREGNANCY RELATED HEALTH PROBLEMS
EXPERIENCED BY PREGNANT WOMEN AT SELECTED
HOSPITAL IN DHAKA**

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EVALUATION OF RESEARCH

We the members of Research Defense Committee certify that we have carefully read and recommended to the University of Dhaka, Bangladesh for the approval of this research entitled

Common Pregnancy Related Health Problems Experienced by Pregnant Women at Selected Hospital in Dhaka

Submitted by, **Umme Salma** for partial fulfilment of the requirement for the degree of B. Sc. in Nursing.

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DEDICATION

Dedicated to

My Parents

Who accelerate me from behind.

DECLARATION

I declare that the work presented here is my own. All sources used have been cited appropriately. Any mistakes or inaccuracies are my own. I also declare that for any publication, presentation or dissemination of the study, I would be bound to take written consent from the supervisor and Principal of CRP Nursing College.

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List of abbreviation

BHPI: Bangladesh Health Professions Institute

BMRC: Bangladesh Medical and Research Council

BP: Back Pain

CRP: Centre for the Rehabilitation of the Paralysed

DMCH: Dhaka Medical College & Hospital

IRB: Institutional Review Board

LMP: Last Menstrual Period

MB: Maternal Bleeding

SD: Standard Deviation

SG: Striae Gravidarum

SOGC: Society of Obstetrics and Gynecologists

SPSS: Statistical Package for Social Science

WHO: World Health Organization

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Abstract

Background: The most common pregnancy-related health problems are postpartum haemorrhage, hypertensive disorders (including pre-eclampsia & eclampsia), sepsis, abortion. **Objectives:** To identify the common pregnancy related health problems in different body region of pregnant women. To find out the gestational age when pregnancy related health problems arises more frequently. To determine about the frequency of treatment received by pregnant women for health problems. **Methodology:** Method of the study was a quantitative research model in the form of a prospective type survey and cross sectional study design was carried out in this study. The researcher used descriptive statistics in this research. **Results:** The participants 20 were in first trimester, 33 were in second trimester, and 27 were in third trimester of their pregnancy. Almost 21% of the participants were primigravida and rest 79% of the participants were multigravida in this study. The study result shows that a large number of participants 26.3% (24) complained of nausea, vomiting, hyperemesis gravidrum, morning sickness 40% (32) complained of back pain, 14.4% (13) complained of maternal bleeding, 11.5% (10) complained of abortion and 39.9% (30) complained oedema and rest of others had no complain, 33.8% (20) participants complained of hypertension, 11.5% (10) complain gestational diabetes, 26.7% (19) complain of pre-eclampsia, 12.8% (11) complain eclampsia, 9.2% (8) participants complain maternal sepsis and rest of others participants did not have complain during their pregnancy. Cross tabulation showed that the participants were complained of nausea, vomiting, hyperemesis gravidrum, & morning sickness, Back Pain, Maternal Bleeding, Abortion, & Oedema, Hypertension, Gestational diabetes, Pre-eclampsia, Eclampsia, Maternal Sepsis did not differ with age range of the participants. So, it happens those problems experience age with by 19 years, between 20-30 years & 30 years of all pregnant women during of pregnancy. **Conclusion:** In this study none of the participants received nursing care for pregnancy related health problems during pregnancy, so need raise awareness program for gynaecological nursing treatment and recommended for further study on pregnancy related postnatal complaints.

Key words: *Pregnancy, health problems, gestational age, para, gravid, first trimester, second trimester, third trimester.*

1.1 Background

National Health Portal of India, describe pregnancy as period from conception to birth. Pregnancy usually lasts 40 weeks, beginning from the first day of the women's last menstrual period and is divided into three trimesters, each lasting into three months.

In the "Physiological changes in pregnancy", it has mentioned that during pregnancy the female body undergoes various changes anatomically and physiological changes to create a suitable environment for the fetus. The most obvious changes are the enlarged abdomen and increased body weight (Symonds, 2009).

Pregnancy may cause various complaints, predispose to injury, or alter the course of preexisting conditions Health problems such as headache, low back pain, anxiety, depression, urinary incontinence, and fecal incontinence may remain after childbirth.

During normal pregnancy, that can alter appreciably criteria for disease diagnosis and treatment. Thus, the understanding of these pregnancy adaptations remains a major goal of obstetrics, and without such knowledge, it is almost impossible to understand the disease processes that can threaten women during pregnancy.

The most common pregnancy-related health problems are postpartum haemorrhage, hypertensive disorders (including pre-eclampsia and eclampsia), sepsis, obstructive or prolonged labour, and spontaneous abortion. (Khan et al, 2009).

It is estimated that most of all women experiences some problem during pregnancy and at least 25% have temporarily disabling symptoms (Borg-Stein et al, 2009). 70% of all women suffer low back pain during pregnancy that, common health complaints during pregnancy include low back pain, pelvic pain, postpartum haemorrhage, hypertensive disorders (including pre-eclampsia and eclampsia), sepsis, obstructive or prolonged labour, and spontaneous abortion, incontinence etc.

Obstetrics nursing can play a vital role in obstetrics. Most of the health problems that arise during pregnancy can be prevented and treated with treatment (Apple, 2011).

The population is becoming aware to understanding the benefits of exercise and a healthy lifestyle. It is important for the physician to understand the effects of exercise on the mother and her unborn child, thus many women wants to continue their exercise regimens throughout their pregnancies (Ireland & Ott, 2010).

Pregnant women with uncomplicated pregnancies should be encouraged to continue healthy lifestyle, nutritional food and engage in physical activities because pregnancy is not a state of confinement. As pregnancy is associated with profound anatomical and physiological changes so, proper nutrition and exercise may help to prevent complications associated with pregnancy (Apple, 2011).

In Western countries, women are increasingly demanding for the better quality of pregnancy and delivery and obstetric nursing is quite well established (Polden & Mantle, 2014). However in Bangladesh, obstetric nursing is a very new concept and is not well established.

1.2 Justification of the study

In Bangladesh the promotion of proper maternity care is still remains a great challenge. Women experience some anatomical and physiological changes during pregnancy which causes many health problems during prenatal period and sometimes also in postnatal period. Obstetrics nursing can help a woman during pregnancy to adjust and cope with the health problems and also support a woman and her birth partner throughout the prenatal, labor and postnatal period. In developed countries, obstetrical nursing is an essential part of maternal health care. But in Bangladesh it is not well known yet. The study aimed to address common complaints arising among the women during prenatal period in Bangladesh. After completing this study the patients was benefited because they were aware about their maternal problems and nursing services for prevention and treatment of those problems. Maternal health care is an emerging area in perspective of Bangladesh and nurses can work by gather information about the prevalence of common pregnancy related complaints of women. So it is also helpful for nurses for working in maternal health care by delivering treatment service with nurses. This study is also helpful for different organizations working in this area by including nursing service in their program for delivering a comprehensive treatment service. Research makes the profession strongest and this study can show the need to establish the skills of nursing particularly in the gynecology and obstetrics area and a base for expanding the scope of practice and also create a future prospect of nursing profession in this country. However, researcher finds out the health problems and reduces the pregnancy related health problems.

1.3 Research Question:

What are the common pregnancy related health problems arising among the women during pregnancy period at selected hospitals in Dhaka?

1.4 Aim

- To identify common pregnancy related health problems arising among women during pregnancy period at selected hospitals in Dhaka.

1.5 Objectives

1.5.1 General Objective

- To find out common pregnancy related health problems arising among women during pregnancy period at selected hospitals in Dhaka.

1.5.2 Specific Objectives

- To identify the common pregnancy related health problems of pregnant women. .
- To find out the gestational age when pregnancy related health problems arises more frequently
- To determine about the frequency of treatment received by pregnant women for health problems.

1.6 Conceptual Framework

Independent variable

Socio-demographic factors (age, occupation)

Gestational age

Gravida

1st trimester health problems:

- Nausea
- Vomiting
- Morning sickness
- Fatigue
- Hyper emesis gravid arum

2nd trimester health problems:

- Maternal bleeding
- Abortion.
- Miscarriage
- Ectopic pregnancy
- Oedema

3rd trimester health problems:

- Pre-eclampsia
- Eclampsia
- Maternal sepsis
- Hypertensive disease of pregnancy.
- Obstructed labour.

Dependent variable

Pregnancy

1.7 Operational definition

Pregnancy: Pregnancy is the process of developing embryo or fetus in the female body after a successful conception. The process ends with the delivery of the neonate. Total pregnancy period is divided into 3 trimesters.

Miscarriage: Expulsion of product of conception before the 20 weeks of gestation.

Ectopic pregnancy: Ectopic pregnancy is implantation of the embryo outside the uterus.

Obstructed labor: Full dilatation of cervix, labor is extend over the 18 hours at the 1st stage of labor.

Pre-eclampsia: Develop of the hypertension in pregnancy together with severe proteinuria and generalized edema after 20 weeks of gestation.

Eclampsia: The occurrence of convulsions in a patient with pre-eclampsia with no coincident neurological disease.

Hyperemesis gravidarum: It is the presence of severe and persistent vomiting, causing dehydration and weight loss

According to Dorland illustrated medical dictionary (2008), pregnancy is the condition of having developing embryo or fetus in the body after successful conception. The average duration of pregnancy is about 280 days. Estimation of the date on which delivery may occur is calculated from the first day of the last menstrual period. Pregnancy is the state of carrying a developing embryo or fetus into the female body and indicated by positive results of urine test and confirmed through a blood test, ultrasound, and detection of fetal heartbeat or an X-ray. Pregnancy lasts for about nine months, measured from the date of the women's last menstrual period (LMP) and conveniently divided into three trimesters, each roughly three months long.

Prenatal development refers to the process in which a baby develops from a single cell after conception into an embryo and later a fetus. The average length of time to complete prenatal development is 38 weeks from the date of conception. During this time, a single-celled zygote develops in a series of stages into a full-term baby. The germinal, embryonic and fetal stages are the three primary stages of prenatal development (Children's health, 2012).

Postnatal means 'after birth' derived from Latin word 'post' means after and 'natal is' means birth. It is the period which starts immediately after the birth of a child and lasts for about six weeks. The postnatal period is also known as the postpartum period (Ask define, 2012).

Physiological changes during pregnancy facilitate the adaptation of the cardiovascular system to increased metabolic needs of the mother, so delivery of oxygenated blood to peripheral tissues and the fetus is enabled (Silversides & Colman, 2012). Amenorrhea is the first sign of pregnancy following the fertilization of the ovum. As the pregnancy progresses, muscle fiber lengthens and thickens with the growing of the uterus. Enlargement of uterus occurs within 12 weeks of pregnancy. Gestational ages can be determined with the levels of the uterus, which continues to rise until the later weeks of pregnancy. By 20 weeks uterine activity or contraction may be felt. The lower 8 uterine segments develop, soften and stretch, and then uterus becomes more elastic by

increasing of collagenous supportive tissue. Pregnancy is governed and controlled by various hormonal changes which affect various body systems. Progesterone decreases smooth muscle tone, initiates sensitivity to carbon dioxide in the respiratory center and causes an increase in internal temperature, breast development and strong fat deposit for milk production (Brook et al, 2008). Estrogen increases the growth of uterus and breast ducts and increases the level of prolactin to prepare breast for lactation. Estrogen also prepares prime receptor sites for relaxation of joints and capsule and also increases water retention (Polden & Mantle, 2014).

The prenatal period involves profound physiological changes together with the physical adjustments caused by the rapid biological changes of all bodily organs and systems which have considerable implications for the comfort of the woman during pregnancy (Bullock et al, 2007).

During pregnancy a female body undergoes many anatomical changes. All four cardiac chambers increase in size from the first trimester to the end of third trimester. The dimensions decrease to baseline levels in the postpartum period. Left ventricular remodeling also manifests as increases in left ventricular wall thickness and mass. Structural changes also occur at the level of the valve annulus, increase in mitral, tricuspid and pulmonic annular diameters lead to increasing degrees of mitral, tricuspid and pulmonic regurgitation. Small pericardial effusions are frequently found, which usually resolve after delivery. Increases in atrial size may contribute to atrial arrhythmias during pregnancy (Thomson et al, 2011). An alteration in collagen metabolism and increased connective tissue pliability and extensibility, result from altered levels of relaxin, estrogen and progesterone during pregnancy. These ligamentous tissues are predisposed to laxity with resultant reduced joint stability. To allow the birth of the baby the symphysis pubis and sacroiliac joints are particularly affected. This ligamentous laxity may continue for 6 months postpartum (Brook et al, 2008). At the end of the pregnancy, a woman has to make many adjustments to compensate for the increased weight due to enlarged pregnant uterus, baby, amniotic fluid, placenta and breasts, so two third or most women experience many health problems, most frequently low back pain. Weight gain during pregnancy can cause to gain as much as a quarter of the body weight, adding stress to the back and other weight bearing structures (Montgomery & Sawyer, 2011).

According to Sabino & Grauer (2008), it is normal to gain between 20 to 40 pounds during pregnancy. A “four way stretch” elastic support for the abdominal contents are formed by recti abdominis, the internal and external abdominal obliques and transverse abdominis. The recti run both side of the linia alba and extent from the pubis to the xiphoid process and lower ribs attach to the midline. The abdominal muscles are stretched by the growing uterus at the end of pregnancy. As the connective tissues, forming the linia alba become lax it can cause the recti to be separated from the midline by several finger width. To support the pelvic viscera the pelvic floor muscles need to act as a whole. However, pelvic floor muscles can also work separately to control the 10 sphincter. Due to trauma to the pelvic floor muscle and nerve supply, muscles weakness is not uncommon following pregnancy and child birth. This can results problem with incontinence (Brook et al, 2008).

The prenatal period is a time of great change for a woman. As the fetus grows, the overall body system is challenged by nausea, vomiting, leg pain, abdominal pain, morning sickness, weight gain, etc, may cause pain and dysfunction (Body changes during pregnancy, 2012).

Most women develop some risk sign in pregnancy. Some causes are unique to pregnancy, while others are conditions that occur in the general population but with greater frequency in pregnancy. In addition, pre-eclampsia, htpertension, ectopic pregnancy, abortion, back pain or rheumatoid arthritis, may be modified by pregnancy. The hormones progesterone and relaxin both cause the increased joint laxity necessary for parturition. Serum levels of these hormones return to normal by the third postpartum day. Mechanical factors such as postural changes (lumbar hyperextension) probably also contribute to the symptoms of pregnancy (Rheumatology, 2012).

Pregnancy is a time of joy and existing anticipation for a mother but it can tarnished by pain, discomfort and feeling of unwell. As the mother’s center of gravity shifts forward because of baby’s weight, she also arches her back to accommodate the extra weight and this causes stresses on the facet joints and spines and makes them sensitive to causing pain (Kausar et al, 2009).

Low back pain (LBP) is one of the more common health problems of pregnant women. An estimated 50–90% of women will experience some type of back pain during their pregnancies (1– 8), making this experience so ubiquitous that 11 “treatment” will often consist of counseling women to be patient and wait for postpartum recovery (Perkins et al,2008). Increasing levels of pregnancy hormones soften ligaments in preparation for childbirth, when the birth canal will need to expand in order for the baby to pass through. As the baby develops and grows, it puts increasing strain on the ligaments that hold the uterus in place causing back pain (Rheumatology, 2012). Low back pain rates have been found to increase with advancing maternal age, back pain during a previous pregnancy, and an increasing number of previous births (Borg-Stein et al, 2009).

Low back pain in prenatal period generally characterized as axial or para-segmental discomfort in the lower lumbar region due to a combination of mechanical, hormonal, circulatory and psychosocial factors. Discomfort in this region may causes changes in the posterior pelvic region, particularly in the sacroiliac joints which causes direct stretch in the intra-pelvic structures and manifests as pain and discomfort in the lumbar region with radiation in the buttock and posterior aspects of thighs (Sabino & Grauer, 2008). MacEvilly & Buggy (2007) cited that, younger age is a risk factor for gestational back pain due to higher sensitivity to hormonal changes induced by relaxin and estrogens and also due to pronounced collagen laxity. Low back pain is more common among the multigravida rather than primigravida due to general pregnancy related changes such as laxity of supporting soft tissues and pain with repetitive overloading of pre-weakened structures. It is also more common in third trimester of the pregnancy as the baby descends pressure into the pelvis thus causes pain (Kausar et al, 2009).

Pregnancy related low back pain can be resolved by proper care and therapeutic interventions include moist heat, soft tissue mobilization for para-spinal muscles, manual stretching of hip flexors, abdominal bracing and squatting exercise with wall support are really effective (Kausar et al, 2009). Maintaining or increasing flexibility and fitness with gradual introduction of back exercises such as pelvic tilting and rocking are often benefited. Back support during sitting, changing posture frequently,

avoiding prolonged sitting or standing posture and general exercises such as walking should be encouraged (Perkins et al, 2010).

The sacroiliac joints or the pubic symphysis pain is also common in pregnancy, especially in women with high levels of relaxin. This pain may occur in early pregnancy. Changes in pubic symphysis width probably occur in most pregnant women, with a gap of up to 1 cm being considered normal. Rupture of the pubic symphysis can occur especially in association with precipitate labour, cephalopelvic disproportion, pre-existing pelvic abnormality or excessive thigh abduction that can occur during delivery under epidural anaesthesia. The reported incidence of this condition is lessening as the number of forceps deliveries decreases. Pubic diastasis can be associated with severe supra pubic pain and takes from several months to several years to resolve (Rheumatology, 2012). Changes in the width of the pubis symphysis usually occur during pregnancy and maximum widening is 10 mm which is considered as non-pathologic (Ireland & Ott, 2010).

There is a spectrum of disorders affecting the pubic symphyseal region during prenatal and also in postnatal period. Pubic symphysis regional pain occurs as a result of increased motion related to the ligamentous laxity referred to above. In a recent European study, it is estimated that the prevalence of this condition is 1 in 36 women (Borg-Stein et al, 2009).

The miscarriage of pregnancy occurs during the 2nd trimester of gestation, it is the most important health problems during pregnancy, that are affect the mother physiological and psychological disturbance, the obstetrics nursing can play the vital role as a counselor to motivate the women thinking to prevent the psychological health problems, such as anxiety, depression, mood disturbance, suicidal tendency, etc. (Apple cart, 2011).

The miscarriage affect the woman's physical health day by day such as recurrent miscarriage can cause the poor nutritional status, anemia, vitamin deficiency diseases are most commonly. The obstetrics nursing can play the dietician role for the women better health condition and prevent the nutritional health problems of the pregnant women during pregnancy. Abortion is the most important health problem during

pregnancy. Miscarriage or abortion causes due to cervical incompetence, chromosomal abnormalities. Obstetrics nursing can prevent miscarriage due to cervical incompetence by band the cervical OS after conception within the 5 weeks. Advise the woman to maintain alertness, avoid lifting heavy weight.

Ankle swelling or edema is a common and normal physiological symptom of pregnancy resulting from weight of pregnant uterus which impedes venous return, prostaglandin induced vascular relaxation and reduced plasma colloid pressure in addition with sodium retention promoted by estrogen and increase mucopolysaccharide ground substances present in the skin and subcutaneous tissue which causes more fluid retention in the body tissues. It usually occurs in primigravidas in the last half of the pregnancy, more than 20 weeks of gestation (Mollart, 2012).

Ankle swelling does not affect the course of pregnancy but is essential for cure, thus it may describe as pain with local osteopenia of the ankle. Treatment includes 13 analgesics, protection against stress, non-weight bearing for prevention of complications (Karakoc et al, 2007).

Leg cramping is another common musculoskeletal complaint occurs during second half of the pregnancy in between 15 to 30% of the pregnant women, most often affecting the calf muscle (Ireland & Ott, 2010). This condition can be described as a painful spasm especially in the lower extremities occurs during pregnancy (Sohrabvand et al, 2006).

Leg cramping is involuntary, localized and painful calf muscle contractions typically occurs at night and usually lasts for seconds to minutes (Young, 2008). Leg cramping in pregnancy may occur due to poor circulation or overzealous exertion with fatigue calf muscle, nerve compression and buildup of lactic acid in the muscle tissues, also related to an imbalance of phosphorus, calcium or magnesium in the maternal body.

About 50-55% of women in the world are affected by lower limb varicose vein disease during pregnancy. The reversibility of this condition is a typical phenomenon and it usually decreased or vanished after delivery (Junior, 2010).

Clef (2011) cited that, vulvar varicose vein may occur in 10% of pregnant women most commonly in multigravida. There are communicating branches of vulvar vein which anastomoses between the internal and external iliac venous system and with the circulation of the medial aspect of the thigh via the perineal veins. The cause of varicose vein is not an increasing of circulatory volume but by increasing of estrogen and progesterone level during pregnancy as vulvar veins are the direct target of these hormones. In most of the cases, it disappears within a month after delivery. Lower limb compression therapy is very effective in treatment of varicose vein.

Striae gravidarum (SG) or stretch marks on the abdominal muscles is a very common complaint of pregnant women which causes cosmetic concern in many patients. Generally striae gravidarum tends to develop most commonly in the third trimester and fade post-partum to leave permanent silvery scars which commonly found on the abdomen or breasts (Durmazlar & Eskioglu, 2009). Striae gravidarum appears as pink purple, atrophic lines or bands on the abdomen, buttocks, breasts, thighs or arms which is more common in younger women, women with larger babies and women with higher body mass indice. There are multifactorial cause for the stretch marks including physical factors and hormonal factors such as effects of adrenocortical steroids, estrogen and relaxin on the skin's elastic fibres. Usually these marks do not disappear completely and there is fade to pale or flesh colored lines and shrink in postpartum period. The treatment actually non-specific and limited evidence based exists (Tunzi & Gray, 2007).

Pelvic floor muscle strengthening exercise or kegel exercise helps to strengthen the muscles especially levator ani that supports the bladder, uterus and bowels. Intensive training of the pelvic floor muscles facilitate during pregnancy rather than obstruct labour (Apple cart, 2011).

Many women experiences urinary incontinence during pregnancy as distressing and disabling symptom. The prevalence of urinary incontinence depends on terminologies and definitions. It may occur due to anatomical and physiological changes affecting the lower urinary tract and also due to hormonal changes during pregnancy. The increasing level of estrogen and progesterone make the bladder more squamous, the

detrusor muscles undergoes hypertrophy and hypotonia with an increasing bladder capacity. The bladder also undergoes anatomical changes such as upward and anterior displacement of bladder, making it to become abdominal, its base also enlarged and the trigone become more convex then concave. In radiological investigations, distortion of the bladder by the fundus of the uterus also occurs (Adaji et al, 2011).

Due to some adaptive modifications during pregnancy, female body undergoes increase the number of micturition and worsens urinary urgency and any preexisting stress urinary incontinence. The prevalence of urinary incontinence ranges from 23% to 67% during gestation and 6% to 29% after delivery (Gamerio et al, 2011). The increased potential for urinary incontinence in antepartum women needs early identification (Sampselle et al, 2008). It is a common condition among women and etiology is multi-factorial, but pregnancy and delivery's may the major risk factors, especially in young and middle-aged women (Wesnes et al, 2010).

Incontinence reported by pregnant women usually in the second and third trimester and the absence of incontinence in the first trimester suggests that the physiological and anatomical changes in pregnancy that predispose to incontinence occur later in the pregnancy (Adaji et al, 2011).

Evidence of scientific studies points to the essential role of obstetrics nursing and physical activities in the health promotion, improve the quality of life, prevention and control of various problems in pregnant women. Until a few decades ago, pregnant women were advised to reduce their activities and also interrupt their occupational work especially in the final stage of the pregnancy. But now a day, positive effects of regular exercise and physical activity during gestation are encouraged for the better quality of prenatal and postnatal life of pregnant women and this is explained by fact that physical activities causes a thermal response and circulatory redistribution, shifting the blood concentration from the uterus and placenta to other extremities thus helps to prevent low back pain, reduce cardiovascular stress, prevents thrombosis and varicose vein and many other health problems (Schlusel et al, 2008)

3.1 Study Design

The study was conducted by using cross sectional study design to meet the study objectives. Because the cross sectional study is the simplest variety of descriptive or observational epidemiological study that can be conducted on representative samples of a population. This design involved identifying group of people and then collecting the information that required when they use the particular service. Cross sectional studies gather information about the prevalence of health related states and conditions and measure the frequency of conditions and demonstrate associations.

The researcher chose the quantitative cross sectional design to carry out the research aim and objectives because this design is appropriate if the issue is known about, relatively simple and unambiguous.

3.2 Study Site

The site of study was selected hospitals in Dhaka – Dhaka Medical College & Hospital (DMCH), Dhaka.

3.3 Study Population

The population all the pregnant women of Bangladesh were considered as the study population.

3.4 Sample Size

It is very difficult to establishing the best size of sample since this decision depends very largely on the investigator which is being undertaken. Statistical studies are always better when they are carefully planned. In the study, sample must be adequate in size, relative to the goals of the study. Study sample must be “big enough” that an 18 effect of such magnitude as to be of scientific significance will also be statistically significant.

The actual sample size of this study was calculated as 288, using the calculation of following formula:

$$n = \frac{z^2 pq}{d^2}$$

Here,

$$z = 1.96$$

$$p = 0.25 \text{ (Here, P=Prevalence and P=25\%)}$$

$$q = 1 - p$$

$$= 1 - 0.25$$

$$= 0.75$$

$$d = 0.05$$

$$n = \frac{z^2 pq}{d^2}$$

$$= \frac{(1.96)^2 \times 0.25 \times 0.75}{(0.05)^2}$$

$$= 288$$

But as the study will be performed as a part of academic research project and there will not as time but academic timed & facilities needs of patients etc. So, 80 pregnant women were selected as the sample of this study.

3.5 Inclusion Criteria

- Pregnant women – Because the investigator wanted to explore the common health problems arising among the women during pregnancy period in this study.
- Multigravida or primigravida both were selected to identify the frequency of pregnancy related health problems in both gravida.
- Pregnant women with any age – because investigator wanted to find out the pregnancy related health problems of different age groups and to identify the most affected age group.
- Pregnant women with any trimester (1st, 2nd or 3rd) were selected – Investigator wanted to find out health problems arising in pregnancy period on

each trimester and explores the most vulnerable gestational age for those complaints.

- Subjects who will be participated willingly and had interest, otherwise they did not give exact information and that was not helpful for the study.

3.6 Exclusion Criteria

- Those who did not pregnant.
- Who is showed unwillingness to participate?
- Subjects who were medically unstable. Because medically unstable patient can confused with the question that can mislead the result of the study.
- Persistent or previous pathological and traumatic history of the body – because investigator wanted to find out the health problems which arise only during pregnancy due to maternal hormonal changes, if there was previous history of any medical complaints then it could mislead the study results.

3.7 Sample selection

Sample will be selected from pregnant women who came for clinical check-up at outdoor service of gynecology departments in selected hospitals.

3.8 Sampling Procedure

Finding the appropriate number and type of people to take part in the study is called sampling. Samples were selected conveniently from selected hospitals of Bangladesh. Sampling is an important concept in research. Basically it is about how to choose the people who will study or who will participate in research. Samples that were studied most easily, cheaply or quickly, selected for the study by using convenience sampling procedure. Because convenience sampling is usually used for exploring complex issues: for examples, in economic evaluation, in complex evaluations of health states etc.

3.9 Data Collection Instruments and Tools

To collect data, the consent form, questionnaire form, pen, papers, files, calculator and laptop used as data collection tools.

3.9.1 Questionnaire

Data was collected using a questionnaire form. Questionnaire is a method of collecting information whereby subjects answer a set of questions usually predefined by the researcher. In this questionnaire form structured questions were included for collecting data from the participants. So the investigator reviewed some relevant previous studies questionnaires that help to design the questionnaire in order to identify important part of questions that needed to include. Close ended of questions was selected to make the questionnaire. Questionnaire must be kept in short that the respondent would finish it. In this questionnaire researcher tried to keep the questions very easy, so that participants can understand to answered. Investigator collected data from questionnaire form and setup sequentially. The questions in the questionnaire are in two parts, one is about socio demographic information and another is directly related to pregnancy related health problems among the pregnant women.

3.9.2 Informed consent

Before conducting research with the respondents, it is necessary to gain consent form from the subject or participant. A participant has rights to know about their participatory effectiveness. In this study, participants were given an information sheet explaining the aims and purpose of the study and the methods of data collection they may be required to participate in. All were personally spoken to and given an opportunity to ask questions prior to signing a consent form. They were also informed that they were free to withdraw from the study at any time and in the event of this, any provide information would be destroyed at their request. It should be assured the participant that her name or address would not be used. The information of the subjects might be published in any normal presentation or seminar but they would not be identified. Subjects were also informed that all of the information given by her should be maintained confidentiality, the study might not have direct effect on her but the members of nursing profession and other clinical related profession may be benefited from the study in future.

3.10 Data management and analysis

The data was analyzed by 'Statistical Package for Social Science' (SPSS) version 20. The presentation was performed in SPSS and in Microsoft office Excel 2007. Every questionnaire was rechecked for missing information or unclear information. The raw data was ready for analysis in SPSS Descriptive Statistics & Chi Square test for association between age & trimester of pregnancy. Microsoft word excel was also used to present data using column and pie chart and data were coded and captured in Microsoft Excel, using an SPSS 20 version software program. The investigator collected the descriptive data and calculated as percentages and presented by using tables, bar and pie charts.

3.11 Ethical Consideration

It was ensured that it would maintain the ethical consideration at all aspects of the study. It is the crucial part of the all form of research. The study was approved by ethical committee of the research project before conducting the research project. Ethical issues were followed by World Health Organization (WHO) and Bangladesh Medical and Research Council (BMRC). At first to conduct Institutional Review Board (IRB) of BHPI this study, the research project was submitted to the Nursing Department, CRP Nursing College CRP, Savar and obtained approval. A written application was submitted to the authority of the Dhaka Medical College & Hospital (DMCH), Dhaka. for involvement of clients and other facilities to complete this study. When the investigator had received an approval letter from the ethical committee and obtained permission from authorities of the selected hospitals, then the data collection was started. Written consent was taken from the participants to ensure voluntary participation in the study and participants had the autonomy to leave the study at any time. Participants were informed about the aim, objectives and the procedures involved the study. Interviews were administered in the free time of the pregnant women, when they had no activities with the scheduled doctors of selected hospitals.

The aim of the study was to find out the common pregnancy related health problems experienced by pregnant women at selected hospitals in Dhaka. 80 participants were selected for the study

4.1 Socio-demographic characteristics

Socio-demographic characteristics of the respondents include their age range, religion, educational qualification and occupation

4.1.1 Age range

The mean age of the participants in the study was 23.58(\pm). The majority of the respondents n=80 (88.9%) were in 18 to 30 years of age, n=6 (7.6%) were in 19 years of age, and n=5 (6.4%) were in > 30 years of age in this study (Table- 1).

Age range	Number (percent)
19 years	6 (7.6)
20-30 years	69 (86)
> 30 years	5 (6.4)
Total	80 (100)

Table 1: Age range of the participants.

4.1.2 Religion

Among 80 participants, majority of the respondent were Muslim $n=57(71.3\%)$, were Hindu $n=15 (18.8\%)$, were Christian and $n=8 (10\%)$ were Buddhist participants has not found in this study.

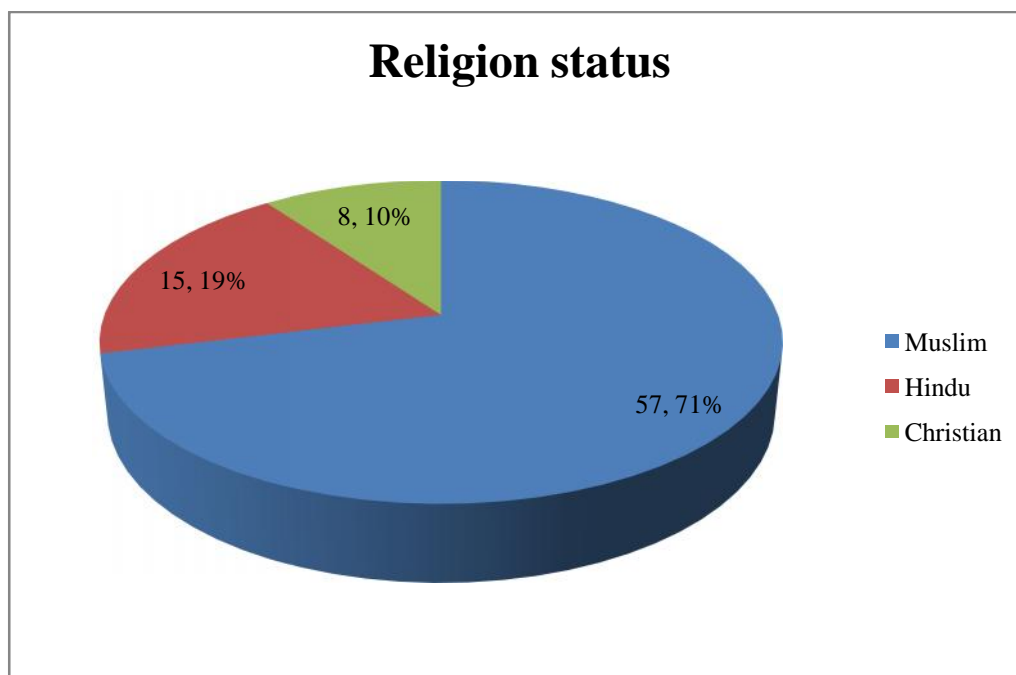


Figure 1: A chart showing percentage of religion status of the participants

4.1.3 Educational qualification

Majority of the respondent's ($n= 80; 88.9\%$) completed Primary level followed by $n=23 (28.8\%)$, were completed their Secondary school certificate level (S.S.C) $n=30 (37.5\%)$, were completed higher secondary certificate level (H.S.C) $n=21 (26.3\%)$ were completed Degree or above certificate level $n=6 (7.5\%)$ in this study.

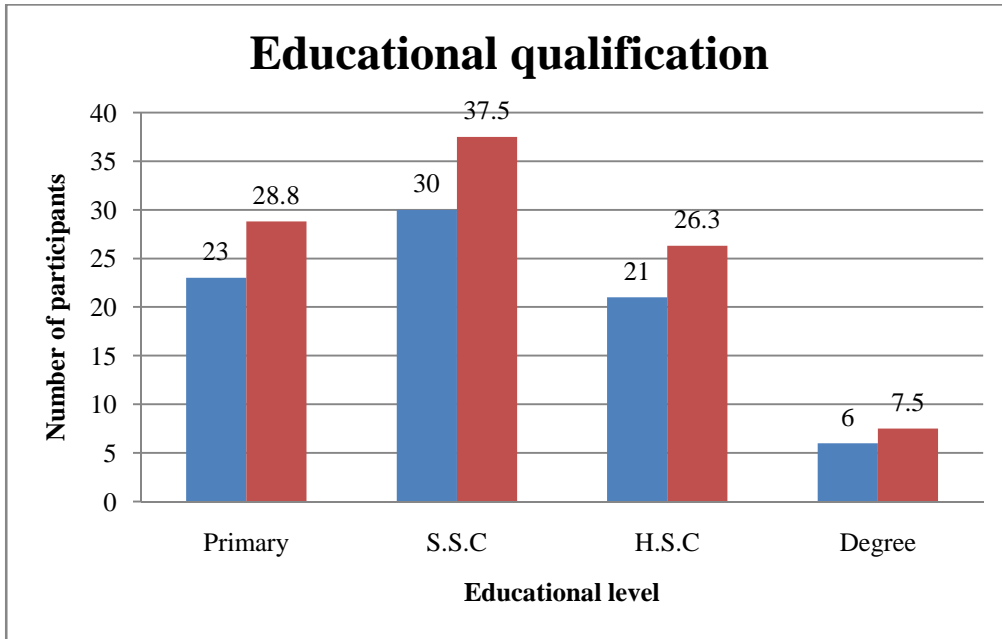


Figure 2: A chart showing number of educational qualification of the participants.

4.1.4 Occupation

Most of the respondents were housewife n=62 (77.5%) followed by service-holder n=18 (22.5%) in this study.

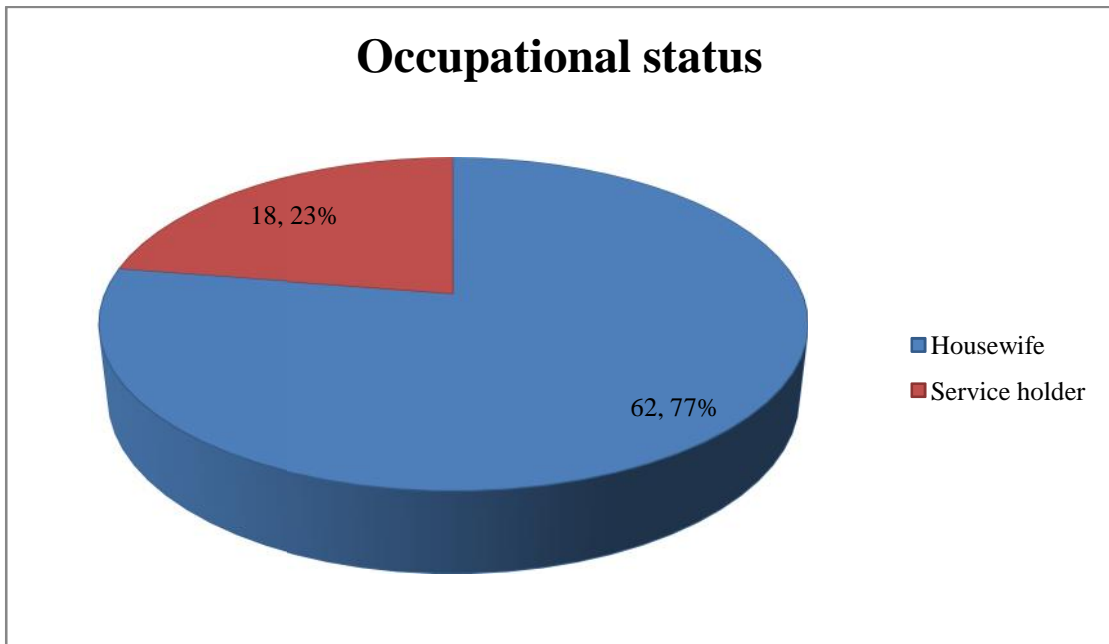


Figure 3: A chart showing percentage of occupational status of the participants

4.4.5 Living area.

Most of the respondents were rural $n=50$ (62%) and were urban $n=30$ (38%) in this study.

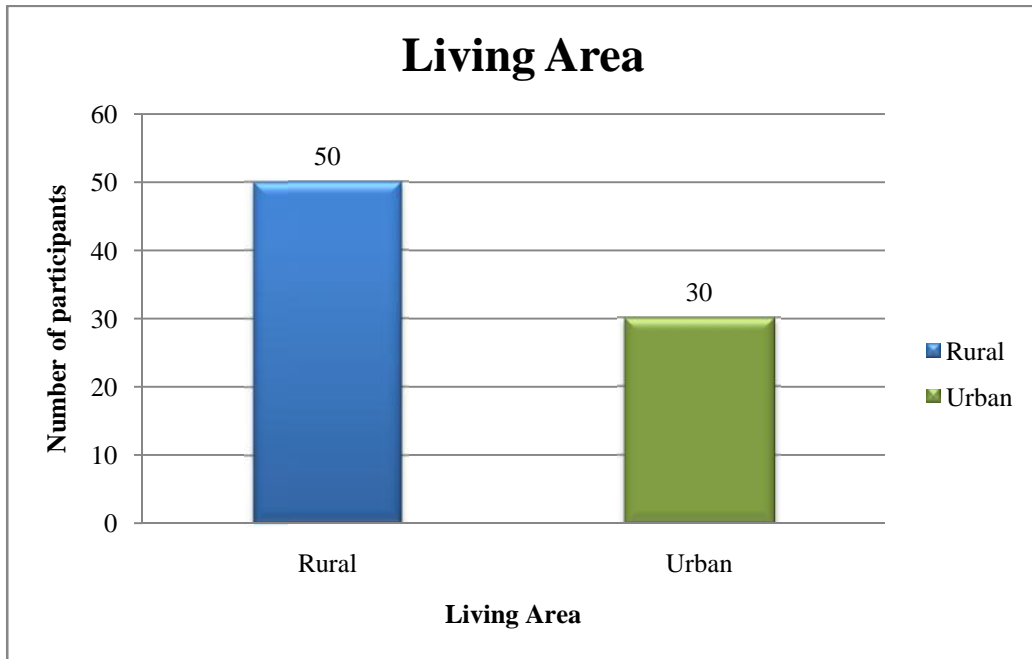


Figure 4: A chart showing percentage of living status of the participants.

4.4.6 Family Status

Most of the respondents were joint family $n=21$ (26%) and were nuclear family $n=59$ (74%) in this study.

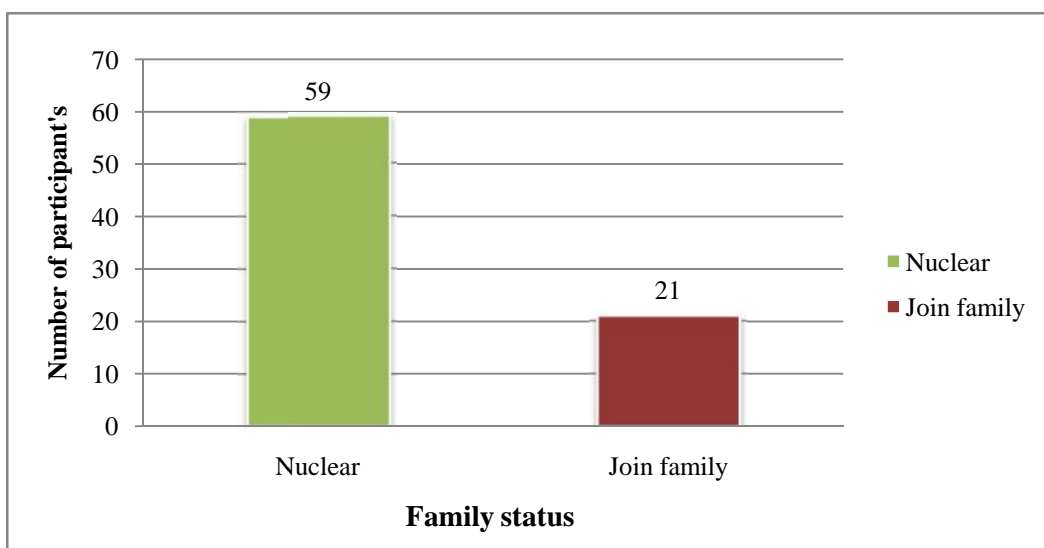


Figure 5: A chart showing percentage of family status of the participants.

4.2 Gestational age

Pregnant women of all trimester were selected for this study. Majority of the participants 25% (20) were in first trimester of their pregnancy, 41% (33) were in second trimester of their pregnancy, and 27% (34) were in third trimester of their pregnancy (Figure: 6).

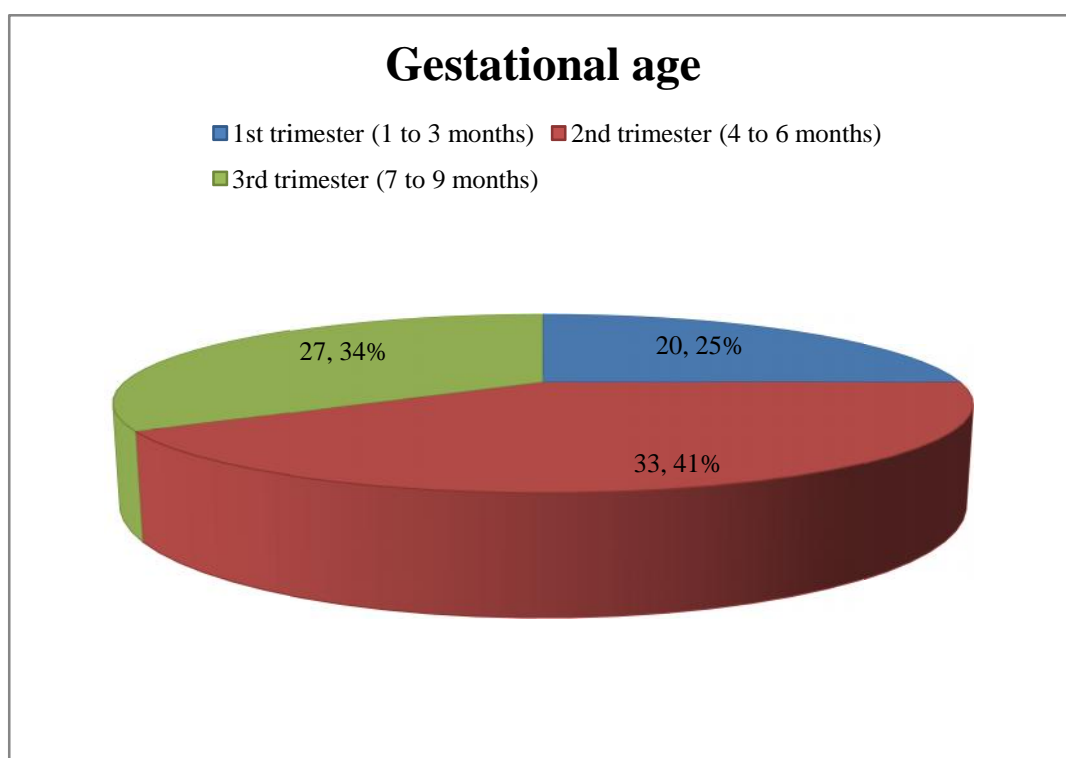


Figure 6: A pie chart showing percentage of gestational age of the participants.

4.3 Number of children

Sequential order of this child of the participants were first child in 21.3% (17) cases, second child in 51.3% (47) cases, third child in 20.0% (16) and more than three children in 7.5% (6) cases. That means almost 21.3% (17) participants were primigravida and rest of the 78.8% (63) participants were multigravida in this study (Figure: 7).

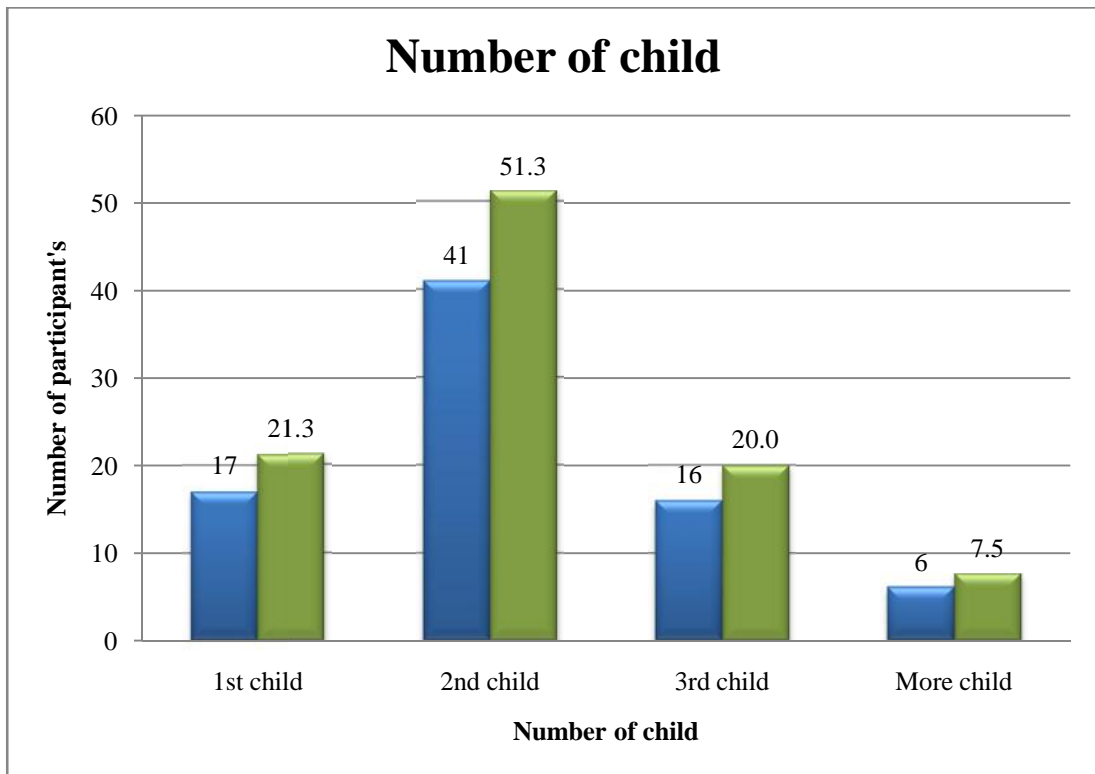


Figure 7: A column chart showing percentage of number of child of the participants.

4.4. Common health problems arising among the pregnant women during prenatal period or First trimester

The study result showed that the most common health problems of pregnant women almost in (20) 25% cases of the participants had nausea, vomiting, hyperemesis gravidrum, morning sickness during first trimester of pregnancy followed by nausea in 25% cases and rest 75% of the participants did not complained of it, vomiting was reported by 25% of the participants and 75% of the participants had not complained of it, hyperemesis gravidrum complained by 20% of the participants and rest 80% of the participants did not complained of it, morning sickness complained by 25% of the participants and rest 75% did not complained of it, found as less common health problems of pregnancy almost in 25% cases and rest 75% of the participants had no health problems during first trimester of pregnancy in this study (**Figure:8**).

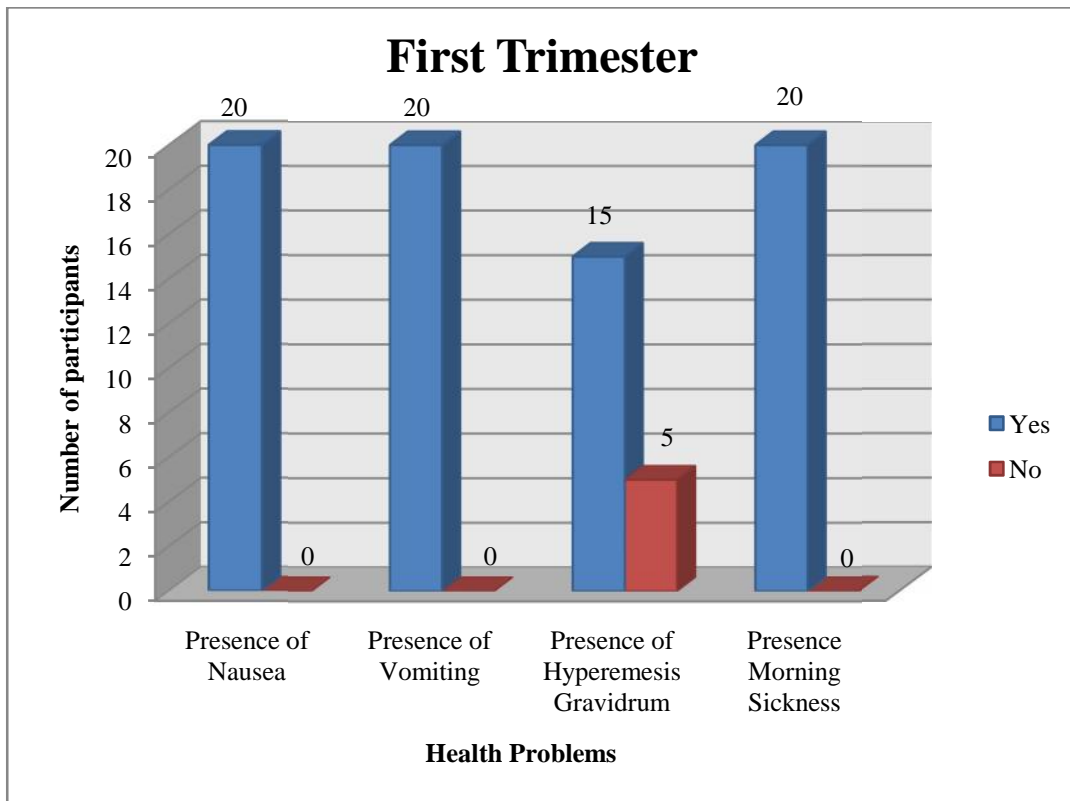


Figure 8: A column chart showing percentage of common health problems during first trimester of pregnancy of the participants.

Table 2: Cross-tabulation between First trimester & Age

Crosstab				Pearson Chi-Square Test	
Questionnaire	Age	Yes	No	Df	Asymp. Sig.
Nausea	19	3	0	1	.080
	20-30	17	0		
	30	0	0		
Vomiting	19	3	0	1	.112
	20-30	17	0		
	30	0	0		
Hyperemesis gravidrum	19	2	2	1	.172
	20-30	13	3		
	30	0	0		
Morning sickness	19	3	0	1	.101
	20-30	17	0		
	30	0	0		

Cross tabulation showed that the participants were complained of nausea, vomiting, hyperemesis gravidrum, & morning sickness did not differ with age range of the participants. So, it happens those problems experience age with by 19 years, between 20-30 years & 30 years of all pregnant women during first trimester of pregnancy.

4.5 Common health problems arising among the pregnant women during prenatal period or Second trimester

The study result showed that the most common health problems of pregnant women almost in (33) 41% cases of the participants had back pain, maternal bleeding, abortion, oedema during second trimester of pregnancy followed by back pain in 32% cases and rest 68% of the participants did not complained of it, maternal bleeding was reported by 13% of the participants and 87% of the participants had not complained of it, abortion complained by 10% of the participants and rest 90% of the participants did not complained of it, oedema complained by 30% of the participants and rest 70% did not complained of it, found as less common health problems of pregnancy almost in 40% cases and rest 60% of the participants had no health problems during second trimester of pregnancy in this study (**Figure:9**).

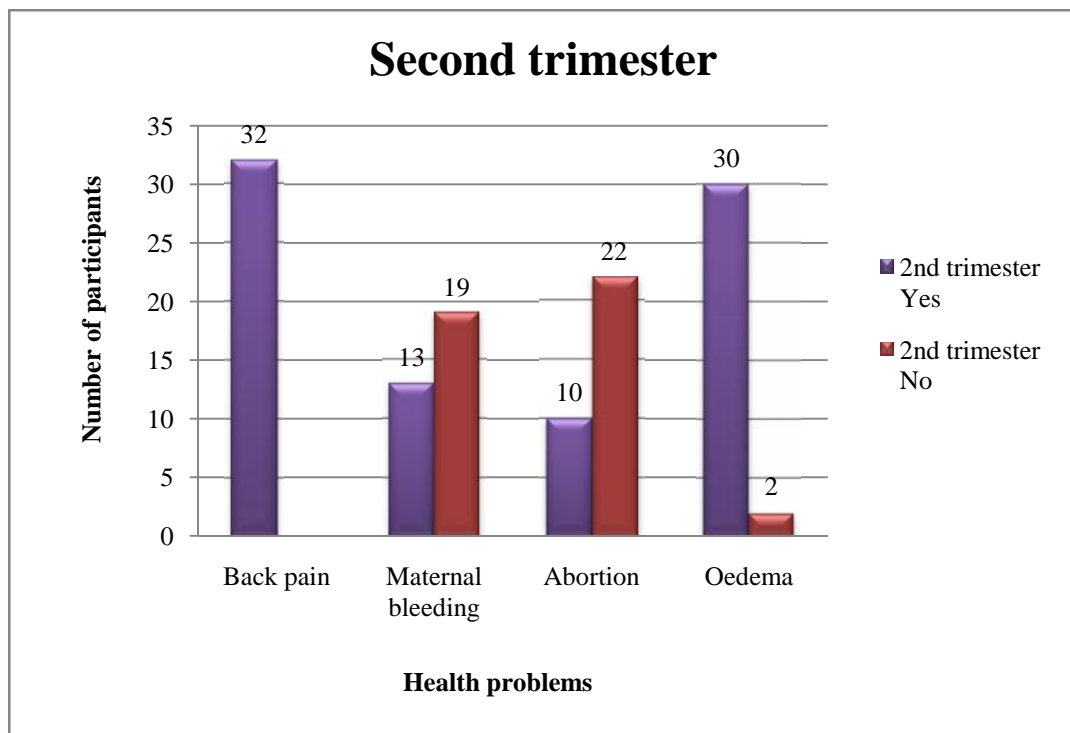


Figure 9: A column chart showing percentage of common health problems during second trimester of pregnancy of the participants.

Table 3: Cross-tabulation between Second trimester & Age

Crosstab				Pearson Chi-Square Test	
Questionnaire	Age	Yes	No	df	Asymp. Sig.
Back pain	19	2	0	1	.077
	20-30	27	0		
	30	3	0		
Maternal bleeding	19	1	1	2	.080
	20-30	9	18		
	30	3	0		
Abortion	19	1	1	2	.296
	20-30	7	20		
	30	2	1		
Oedema	19	2	0	2	.821
	20-30	25	2		
	30	3	0		

Cross tabulation showed that the participants were complained of Back Pain, Maternal Bleeding, Abortion, & Oedema did not differ with age range of the participants. So, it happens those problems experience age with by 19 years, between 20-30 years & 30 years of all pregnant women during second trimester of pregnancy.

4.6 Common health problems arising among the pregnant women during prenatal period or third trimester

The study result showed that the most common health problems of pregnant women almost in (27)33.8% cases of the participants had hypertension, gestational diabetes, pre-eclampsia, eclampsia, maternal sepsis during third trimester of pregnancy followed by hypertension in 20% cases and rest 80% of the participants did not complained of it, gestational diabetes was reported by 10% of the participants and 90% of the participants had not complained of it, pre-eclampsia complained by 19% of the participants and rest 81% of the participants did not complained of it, eclampsia complained by 11% of the participants and rest 89% did not complained of it, maternal sepsis complained by 8% of the participants and 92% of the participants did not complained of it, found as less common health problems of pregnancy almost in 33.8% cases and rest 66.2% of the participants had no health problems during third trimester of pregnancy in this study (**Figure:10**).

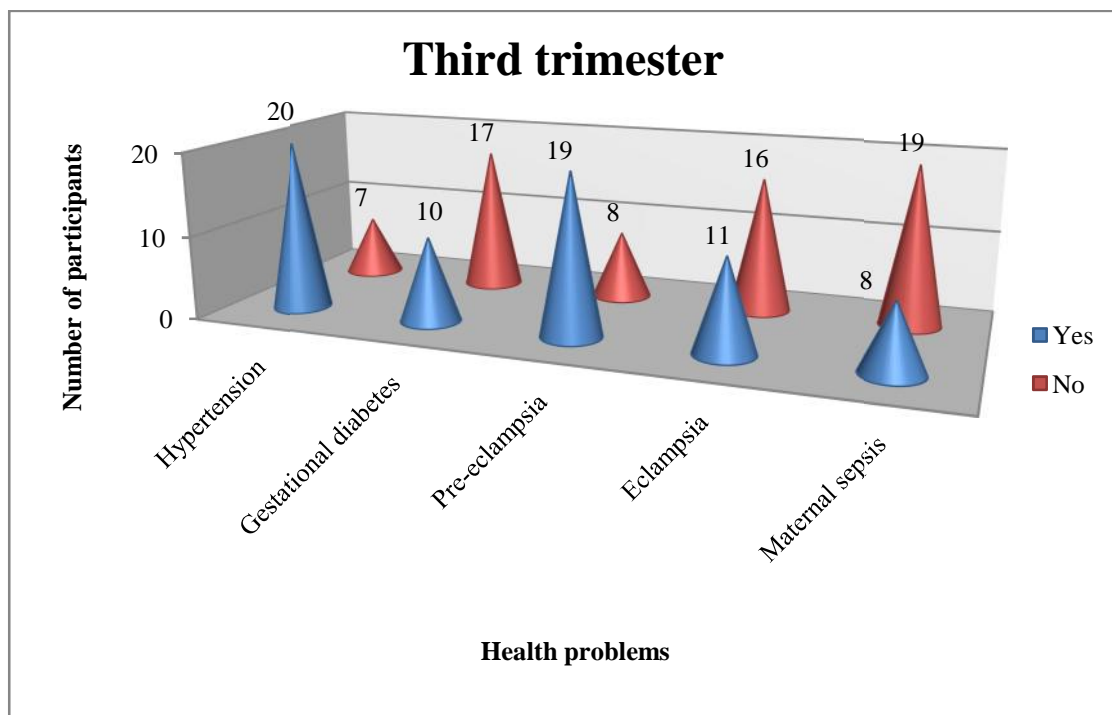


Figure 10: A column chart showing percentage of common health problems during first trimester of pregnancy of the participants.

Table 4: Cross-tabulation between Third trimester & Age

Crosstab				Pearson Chi-Square Test	
Questionnaire	Age	Yes	No	df	Asymp. Sig.
Hypertension	19	0	0	1	.963
	20-30	17	6		
	30	3	1		
Gestational diabetes	19	0	0	1	.561
	20-30	2	15		
	30	2	2		
Pre-eclampsia	19		0	1	.334
	20-30	17	6		
	30	2	2		
Eclampsia	19	0	0	1	.683
	20-30	9	14		
	30	2	2		
Maternal sepsis	19	0	0	1	.334
	20-30	6	17		
	30	2	2		

Cross tabulation showed that the participants were complained of Hypertension, Gestational diabetes, Pre-eclampsia, Eclampsia, Maternal Sepsis did not differ with age range of the participants. So, it happens those problems experience age with by 19 years, between 20-30 years & 30 years of all pregnant women during third trimester of pregnancy.

4.7 Common medical health problems arising among the pregnant women during prenatal period

The study result showed that the most common health problems of pregnant women almost in (80) 100% cases of the participants had diabetes before pregnancy, hypertension before pregnancy, bleeding disorder, diabetes after pregnancy, hypertension after pregnancy, followed by diabetes before pregnancy in 21%, hypertension before pregnancy in 21% , bleeding disorders 22%, diabetes was reported after pregnancy by 18%, hypertension reported after pregnancy 18%, found as less common health problems of pregnancy almost in 100% cases of the participants had medical related health problems during pregnancy in this study (Figure:11).

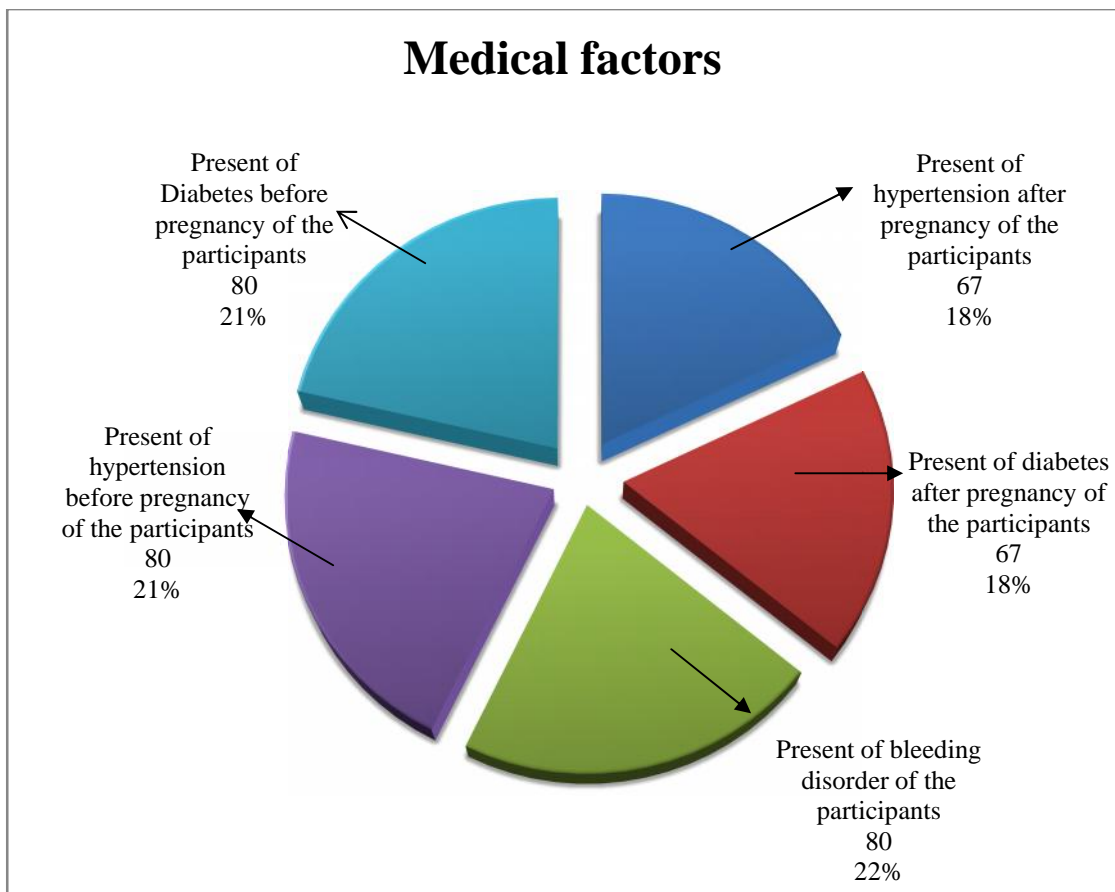


Figure 11: A pie chart showing percentage of common medical health problems of pregnant women during prenatal period of the participants.

Table 5: Association between variance of trimester & Diabetes before pregnancy

Variance	Chi. Square level	P. value	Comments
Nausea & Diabetes before pregnancy	.000	.000	Can not significant
Vomiting & Diabetes before pregnancy	.000	.000	Can not significant
Hyperemesis Gravidum & Diabetes before pregnancy	.328	1.000	Significant
Morning Sickness & Diabetes before pregnancy	.000	.000	Can not significant
Back pain & Diabetes before pregnancy	.000	.000	Can not significant
Maternal Bleeding & Diabetes before pregnancy	.217	.406	Can not significant
Abortion & Diabetes before pregnancy	2.271	.307	Significant
Oedema & Diabetes before pregnancy	.069	.793	Cannot significant
Hypertension & Diabetes before pregnancy	1.643	.200	Significant
Gestational diabetes & Diabetes before pregnancy	7.983	.012	Cannot significant
Pre-eclampsia & Diabetes before pregnancy	1.977	.0160	Significant
Eclampsia & Diabetes before pregnancy	6.830	.009	Cannot significant
Maternal Sepsis & Diabetes before pregnancy	11.152	.001	Cannot significant

Table no 5, Cross tabulation showed that the participants were complained of Nausea, Vomiting, Hyperemesis Gravidrum, Morning Sickness of First trimester of their pregnancy. Back Pain, Maternal Bleeding, Abortion, Oedema of their second trimester of pregnancy, and Hypertension, Gestational diabetes, Pre-eclampsia, Eclampsia, Maternal Sepsis of their third trimester of pregnancy did not differ with presence of diabetes before pregnancy of the participants. So, it happens those problems experience age with by 19 years, between 20-30 years & 30 years of all pregnant women during of pregnancy.

Table 6: Association between variance of trimester & Hypertension before pregnancy

Variance	Chi. Square level	P. Value	Comments
Nausea & Hypertension before pregnancy	.000	.000	Cannot significant
Vomiting & Hypertension before pregnancy	.000	.000	Cannot significant
Hyperemesis Gravidrum & Hypertension before pregnancy	.175	.676	Cannot significant
Morning Sickness & Hypertension before pregnancy	.000	.000	Cannot significant
Back pain & Hypertension before pregnancy	.000	.000	Cannot significant
Maternal Bleding & Hypertension before pregnancy	8.661	.003	Cannot significant
Abortion & Hypertension before pregnancy	2.280	.131	Significant
Oedema & Hypertension before pregnancy	.395	.530	Cannot significant
Hypertension & Hypertension before pregnancy	10.177	.001	Cannot significant
Gestational diabetes & Hypertension before pregnancy	2.095	.148	Significant
Pre-eclampsia & Hypertension before pregnancy	12.243	.000	Cannot significant
Eclampsia & Hypertension before pregnancy	3.240	.072	significant
Maternal Sepsis & Hypertension before pregnancy	5.787	.016	Significant

Table no 6, Cross tabulation showed that the participants were complained of Nausea, Vomiting, Hyperemesis Gravidrum, Morning Sickness of First trimester of their pregnancy. Back Pain, Maternal Bleeding, Abortion, Oedema of their second trimester of pregnancy, and Hypertension, Gestational diabetes, Pre-eclampsia, Eclampsia, Maternal Sepsis of their third trimester of pregnancy did not differ with presence of hypertension before pregnancy of the participants. So, it happens those problems experience age with by 19 years, between 20-30 years & 30 years of all pregnant women during of pregnancy

Table 7: Association between variance of trimester & Bleeding disorder before pregnancy

Variance	Chi. Square level	P. value	Comments
Nausea & bleeding disorder	.000	.000	Cannot significant
Vomiting & bleeding disorder	.000	.000	Cannot significant
Hyperemesis Gravidrum & bleeding disorder	.328	.567	Cannot significant
Morning Sickness & bleeding disorder	.000	.000	Cannot significant
Back pain & bleeding disorder	.000	.000	Cannot significant
Maternal Bleding & bleeding disorder	3.521	.061	Significant
Abortion & bleeding disorder	3.443	.064	Significant
Oedema & bleeding disorder	.835	.361	Cannot significant
Hypertension & bleeding disorder	5.559	.018	Significant
Gestational diabetes & bleeding disorder	7.400	.007	Significant
Pre-eclampsia & bleeding disorder	6.687	.010	Significant
Eclampsia & bleeding disorder	5.632	.018	Significant
Maternal Sepsis & bleeding disorder	12.414	.000	Cannot significant

Table no 7, Cross tabulation showed that the participants were complained of Nausea, Vomiting, Hyperemesis Gravidrum, Morning Sickness of First trimester of their pregnancy. Back Pain, Maternal Bleeding, Abortion, Oedema of their second trimester of pregnancy, and Hypertension, Gestational diabetes, Pre-eclampsia, Eclampsia, Maternal Sepsis of their third trimester of pregnancy did not differ with presence of diabetes before pregnancy of the participants. So, it happens those problems experience age with by 19 years, between 20-30 years & 30 years of all pregnant women during of pregnancy.

Table 8: Association between variance of trimester & Diabetes after pregnancy

Variance	Chi. Square level	P. value	Comments
Nausea & Diabetes after pregnancy	.000	.000	Cannot significant
Vomiting & Diabetes after pregnancy	.000	.000	Cannot significant
Hyperemesis Gravidum & Diabetes after pregnancy	.179	.672	Cannot significant
Morning Sickness & Diabetes after pregnancy	.000	.000	Cannot significant
Back pain & Diabetes after pregnancy	.000	.000	Cannot significant
Maternal Bleding & Diabetes after pregnancy	.000	.000	Cannot significant
Abortion & Diabetes after pregnancy	.000	.000	Cannot significant
Oedema & Diabetes after pregnancy	.000	.000	Cannot significant
Hypertension & Diabetes after pregnancy	.348	.555	Cannot significant
Gestational diabetes & Diabetes after pregnancy	1.739	.187	Significant
Pre-eclampsia & Diabetes after pregnancy	.430	.512	Cannot significant
Eclampsia & Diabetes after pregnancy	1.461	.227	Significant
Maternal Sepsis & Diabetes after pregnancy	2.087	.149	Significant

Table no 8, Cross tabulation showed that the participants were complained of Nausea, Vomiting, Hyperemesis Gravidrum, Morning Sickness of First trimester of their pregnancy. Back Pain, Maternal Bleeding, Abortion, Oedema of their second trimester of pregnancy, and Hypertension, Gestational diabetes, Pre-eclampsia, Eclampsia, Maternal Sepsis of their third trimester of pregnancy did not differ with presence of diabetes before pregnancy of the participants. So, it happens those problems experience age with by 19 years, between 20-30 years & 30 years of all pregnant women during of pregnancy

Table 9: Association between variance of trimester & Hypertension after pregnancy

Variance	Chi. Square level	P. value	Comments
Nausea & hypertension after pregnancy	.000	.000	Cannot significant
Vomiting & Hypertension after pregnancy	.000	.000	Cannot significant
Hyperemesis Gravidrum & Hypertension after pregnancy	.525	.469	Cannot significant
Morning Sickness & Hypertension after pregnancy	.000	.000	Cannot significant
Back pain & Hypertension after pregnancy	.000	.000	Cannot significant
Maternal Bleding & Hypertension after pregnancy	2.644	.104	Significant
Abortion & Hypertension after pregnancy	.229	.632	Cannot significant
Oedema & Hypertension after pregnancy	.159	.690	Cannot significant
Hypertension & Hypertension after pregnancy	2.667	.102	Significant
Gestational diabetes & Hypertension after pregnancy	2.904	.088	Significant
Pre-eclampsia & Hypertension after pregnancy	3.294	.070	Significant
Eclampsia & Hypertension after pregnancy	5.714	.017	Significant
Maternal Sepsis & Hypertension after pregnancy	4.000	.046	Significant

Table no 9, Cross tabulation showed that the participants were complained of Nausea, Vomiting, Hyperemesis Gravidrum, Morning Sickness of First trimester of their pregnancy. Back Pain, Maternal Bleeding, Abortion, Oedema of their second trimester of pregnancy, and Hypertension, Gestational diabetes, Pre-eclampsia, Eclampsia, Maternal Sepsis their third trimester of pregnancy did not differ with presence of diabetes before pregnancy of the participants. So, it happens those problems experience age with by 19 years, between 20-30 years & 30 years of all pregnant women during of pregnancy

The aim of the study was to identify common pregnancy related health problems experience by pregnant women in selected hospitals in Bangladesh. There were 80 samples in this study. The majority of the respondents almost 86% were between 19 to 30 years of age. Most of the participants 24% were in first trimester of their pregnancy, 40% were in second trimester of their pregnancy and 33.8% were in third trimester of their pregnancy. Almost 21.3% of the participants were primigravida and rest 78.8% of the participants were multigravida in this study.

The study result shows that a number of participants 26.3% (57) complained of nausea, vomiting, hyperemesis gravidum and morning sickness, during their pregnancy. The results of these studies support my study result health problems among the pregnant women during first trimester in Bangladesh.

In this study, result shows that 40% participants complained of back pain, maternal bleeding, abortion, and oedema during their second trimester pregnancy and 32 participants had back pain. Back pain can affect women of child bearing age whether pregnant or not. Approximately 70% of women will report back pain at some point in their lives (Svensson et al, 2010). However, during pregnancy alone, the incidence of back pain is reported by 50–80% of women (Mogren, et al, 2008). One-third of pregnant women claim that low back pain is a significant problem (Andersson et al, 2011).

In a study by Stapleton et al. 61.8% of women who reported low back pain during pregnancy claimed the pain was at least moderately severe, 9% claimed they were completely disabled by pain, women are suffering from back pain during their pregnancy but in Bangladesh the result prevalence of back pain in pregnant women is 40-50%, which is nearly similar with this study on Bangladeshi women (Stapleton, et al 2009).

The study result shows that 33.8% (34) participants complained of hyperyension, gestational diabetes, pre-eclampsia, eclampsia, maternal sepsis during there third trimester of pregnancy where complained of hypertension 20%, gestational diabetes 10%, pre-eclampsia 19%, eclampsia 11%, and maternal sepsis 8% during their third

trimester of pregnancy. In a study, showed that prevalence of hypertension during pregnancy is approximately 30%. In a study on Iranian women (Mollart, 2012) found that almost 20 % of women reported oedema during their pregnancy.

Sabino and Grauer (2008) stated that there are so many problems arising in pregnancy period including hypertension, sleeplessness, diabetes mellitus, tenosynovitis, general weakness and fatigue. During pregnancy the female body has so many hormonal and anatomical changes that affect the many systems. These changes may cause various complaints, predispose to injury or other physical and physiological problems (Irelands & Otts, 2011).

The researcher found in this study that among the pregnant women, none of them received any treatment and nursing care services for their health problems during pregnancy period. They were not aware about the role of nurse in gynecological area. Gosselink (2006) had shown in his research that antenatal care by nurse during pregnancy is effective in pregnant women to reduce the common health problems. In Bangladesh, obstetric nursing is a very new concept and is not well established, so it needs to organize awareness program of gynecological nursing and its effectiveness in Bangladesh.

LIMITATION:

There might be a number of limitations in this study. First of all, the result of the study cannot be generalized to the whole population of pregnant women in Bangladesh as the samples were collected only from three selected hospitals in Dhaka city. This study has attempted to provide a few data, which are very little to represent the wider population of pregnant women in Bangladesh.

Aim of the study was to find out the common pregnancy related health problems among the pregnant women at selected hospitals in Dhaka. For the fulfillment of this study the investigator used a quantitative research model in the form of a prospective type survey. Conveniently 80 participants who came in hospitals during their pregnancy for checkup were chosen. The investigator used a questionnaire. Each Participant was given a questionnaire to identify common pregnancy related health problems among the pregnant women during at selected hospital in Dhaka. And from the documents of the patients the researcher forms a data base for the total sample included in the study. From the data base, it was found that nausea, vomiting, morning sickness the most common complaint of pregnant women almost in 30% cases and rest 70% of the participants had no complained, followed by back pain in 46% cases and rest 54% of the participants did not complained of it, oedema was reported by 40% of the participants and 60% of the participants had not oedema, hypertension complained by 60% of the participants and rest 40% of the participants did not complained of it, gestational diabetes complained by 30% of the participants and rest 70% did not complained of it, approximately 32% of the participants complained of eclampsia and rest 68% of the participants did not complained of eclampsia.

The researcher identified some further step that might be taken into consideration for the better accomplishment of further research. For the ensuring of the generalized ability of the research it is recommended to investigate large sample. In this study researcher only took the pregnant women who came for checkup at selected hospitals in Dhaka. So for further study researcher strongly recommended to include other hospitals from all over Bangladesh. In this study, common health problems of pregnant women were focused only so need to further research to explore the frequency of common health problems in postnatal period. It is recommended for further study to generalized nursing services among the pregnant women to prevention and treatment of common health problems in women both in prenatal and postnatal period.

6.1. Recommendation:

On the basis of findings of the present study following recommendations are put forwards; Health care team members should be arranging some special training for newly mother and pregnant women's care. Awareness program regarding pregnant women should be arranged by health care agency & organization. National level survey can be conducted to know the prevalence of pregnancy related health problems experienced by the pregnant woman in Bangladesh. Health care and others facilities for the pregnant women need to be improved in Bangladesh. Health care team members can conduct more research on pregnancy related health problems experienced by pregnant women involving their more health care organization.

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Appendix-I: Informed Consent (Bengali)

সম্মতিপত্র

& /নমস্ক ,

উে প্রকল্পটি - নার্সিং :
র্থ বর্ষ নার্সিং কোর্সের অধিভূ

গর্ভধারণ সম্পর্কিত স্বাস্থ্য সমস্যা নির্বাচিত হাস গর্ভবতী
দ্বারা অভিজ্ঞত " গর্ভাবস্থ সম্পর্কিত স্বাস্থ্য সমস্যা সম্পর্কে
ব্যক্তিগত অন্যান্য সম্পর্কিত প্রশ্ন সম্পর্কে প্রায় -

উদ্দেশ্যে ব্যবহৃত . অধ্যয়নের অন. কোর্
প্রক প্রভা ফেলবে যেস: তথ প্রদা বর্তমান কর্মস্থলে কোর্
প্রতিবেদনের প্রবাহে নিশ্চিত . তথ্যে:
উৎস অপ্রকাশিত

অধ্যয়নে অংশগ্রহ স্বেচ্ছাপ্রণোদী যেকো
অধ্যয়ন থেবে কো নেতিবাচক প্রত্যাঃ
কো নির্দিষ্ট প্রশ্ন অপছ উত্ত দেয়া: সাক্ষাৎকারের কো
উত্ত

অধ্যয়নে অংশগ্রহণকারী কো প্রশ্ন
মোহা: , , , , -কে
অধ্যাপক, , , , ,
যোগাযোগ

স্বাক্ষর শুরু কো প্রশ্ন ?
সাক্ষাৎকার শুরু ?

হ

অংশগ্রহণকারী স্বাক্ষ

উপা সংগ্রহকারী স্বাক্ষ

স্বাক্ষ

Appendix-II: Informed Consent (English)

Assalamualaikum/Namasker,

I am Umme Salma, 4th year B.Sc. in Nursing, student at CRP Nursing College. I am conducting this study for a Bachelor project study titled “**Pregnancy Related Health Problems Experienced by Pregnant Women at Selected Hospital in Dhaka**” I would like to know about some personal and other related questions about your pregnancy related health problems. This will take approximately 15 - 20 minutes.

I would like to inform you that this is a purely an academic study and will not be used for any other purposes. Your participation in the research will have no impact on your present or future treatment. All informations provided by you will be treated as confidential and in the event of any report or publication it is ensured that the source of information remains anonymous. Your participation in this study is voluntary and you may withdraw yourself at any time during this study without any negative consequences. You also have the right not to answer a particular question that you don't like or do not want to answer during interview. I am conducting this study project under supervision of Mohammad Habibur Rahman, Assistant Professor of Physiotherapy, BHPI.

I anticipate your cordial co-operation in this study project. If you kindly permit I would like to start.

So may I have your consent to proceed with the interview?

YES

NO

Signature of Participant & Date.....

Signature of Data collector & Date.....

Signature of Researcher & Date.....

Appendix-III: Bangali Questionnaire

গবেষণার শিরোনাম হল-“গর্ভধারণ সম্পর্কিত স্বাস্থ্য সমস্যা নির্বাচিত

গর্ভবতী : দ্বারা অভিজ্ঞত ”

এই প্রশ্নাবলী গর্ভবতী মহিলার দ্বারা অনুভূত স্বাস্থ্য সমস্যা সনাক্ত করতে ¹²স্বীকৃত করা হয়। একটি কালো কলম ব্যবহার করে এই অংশটি DevE সংগ্রাহক দ্বারা পূরণ করা হবে। প্রতিটি বিভাগের উত্তর দিন এবং প্রতিটি বিভাগে আপনার জন প্রয়োগ করা একমা বা তৈরি করুন। এটা অনুধাবন করা হয় যে আপনি আপনার কোনও বিভাগের মধ্যে দুই বা ততোধিক বিবৃতি বিবেচনা করতে পারেন, তবে দয়া করে বক্স চিহ্নিত করুন যা আপনার সমস্যাটি সবচেয়ে পরিষ্কারভাবে বর্ণনা করে।

কোড নং :

রোগীর নাম:

ফোন নং:

তারিখ :

রেজি: নং:

ঠিকানা: (গ্রাম).....

(ডাকঘর).....

(থানা).....

(জেলা).....

পর্ব- ক. সামাজ্য কাঠামো ভিত্তিক তথ্য:

নির্দেশ : উপযুক্ত বক্সের ডান পার্শে টিক চিহ্ন (□) এবং ফাঁকা স্থানে

আপনার মতামত পেশ করুন।

প্রশ্ন	উত্তর
১. বয়স (বছর)
২. ধর্ম	<input type="checkbox"/> ইসলাম <input type="checkbox"/> হিন্দু <input type="checkbox"/> খ্রিস্টান <input type="checkbox"/> বৌদ্ধ
৩. পড়াশুনা	<input type="checkbox"/> প্রাথমিক <input type="checkbox"/> মাধ্যমিক <input type="checkbox"/> উচ্চমাধ্যমিক ডিগ্রি <input type="checkbox"/> মাস্টারস <input type="checkbox"/>
৪. পেশা	<input type="checkbox"/> গৃহিণী <input type="checkbox"/> চাকুরিজীবী <input type="checkbox"/> দিনমজুর <input type="checkbox"/> ব্যাবসায়িক
৫. এলাকা	<input type="checkbox"/> গ্রাম <input type="checkbox"/> কহর

৬. আপনার পরিবারের মাসিক আয় কত?
৭. আপনারা কোন ধরনের পরিবার?	<input type="checkbox"/> একক <input type="checkbox"/> যৌথ

পর্ব - খ. গর্ভাবস্থা সংক্রান্ত তথ্য:

প্রশ্ন	উত্তর
৮. আপনার গর্ভকালীন সময় কতদিন?	<input type="checkbox"/> ১ থেকে ৩ মাস <input type="checkbox"/> ৪ থেকে ৬ মাস <input type="checkbox"/> ৭ থেকে ৯ মাস
৯. এটা আপনার কত তম সন্তান?	<input type="checkbox"/> ১ম <input type="checkbox"/> ২য় <input type="checkbox"/> ৩য় <input type="checkbox"/> উপরের সব
১ম ট্রাইমেস্টার, যদি মা ২য় ও ৩য় ট্রাইমেস্টার গর্ভবতী হয়, তবে ১৪ থেকে ২২ নং প্রশ্ন বাদ দিতে হবে	
১০. আপনার কি বমি বমি ভাব হয়?	<input type="checkbox"/> হ্যাঁ না <input type="checkbox"/>
১১. আপনার কি বমি হয়?	<input type="checkbox"/> হ্যাঁ না <input type="checkbox"/>
১২. আপনার কি অতিরিক্ত বমি হয়?	<input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না
১৩. আপনার কি সকালের দিকে দুর্বল লাগে?	<input type="checkbox"/> হ্যাঁ না <input type="checkbox"/>
২য় ট্রাইমেস্টার, যদি মা ১ম ও ৩য় ট্রাইমেস্টার গর্ভবতী হয়, তবে ১০ থেকে ১৩ এবং ১৮-২২নং প্রশ্ন বাদ দিতে হবে	
১৪. আপনার কি কোমরে ব্যাথা হয়?	<input type="checkbox"/> হ্যাঁ না <input type="checkbox"/>
১৫. আপনার কি কখনও রক্ত ক্ষরণ হয়েছে?	<input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না
১৬. আপনার কি গর্ভকালীন সময়ে গর্ভপাত হয়েছিল?	<input type="checkbox"/> হ্যাঁ না <input type="checkbox"/> হ্যাঁ
১৭. আপনার কি হাত পায়ে পানি এসেছে?	<input type="checkbox"/> না <input type="checkbox"/>
৩য় ট্রাইমেস্টার, যদি মা ১ম ও ২য় ট্রাইমেস্টার গর্ভবতী হয়, তবে ১০ থেকে ১৭ নং প্রশ্ন বাদ দিতে হবে	
১৮. আপনার কি উচ্চ রক্ত চাপ আছে?	<input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না
১৯. আপনার কি গর্ভ জনিত ডায়াবেটিস আছে?	<input type="checkbox"/> হ্যাঁ না <input type="checkbox"/> হ্যাঁ
২০. আপনার কি প্রি-ইকলামসিয়া আছে?	<input type="checkbox"/> না <input type="checkbox"/>
২১. আপনার কি ইকলামসিয়া আছে?	<input type="checkbox"/> হ্যাঁ না <input type="checkbox"/>

২২. আপনার কি কোন ইনফেকশন হয়েছিল?	<input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না
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পর্ব - গ. মেডিকাল সংক্রান্ত তথ্য:

প্রশ্ন	উত্তর
মেডিকাল সংক্রান্ত কারন	
২৩. আপনার কি গর্ভ পূর্ববর্তী ডায়াবেটিস ছিল?	<input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না
২৪. আপনার কি গর্ভ পূর্ববর্তী উচ্চ রক্তচাপ ছিল?	<input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না
২৫. আপনার কি কোন রক্তের সমস্যা আছে?	<input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না
২৬. আপনার কি গর্ভ পরবর্তী ডায়াবেটিস ছিল?	<input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না
২৭. আপনার কি গর্ভ পরবর্তী উচ্চ রক্তচাপ ছিল?	<input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না

Appendix-IV: English Questionnaire

Title: Pregnancy Related Health Problems Experienced by Pregnant Women at
Selected Hospital in Dhaka.

This questionnaire is developed to identify the health problems felt by pregnant woman. This portion will be filled by data collector using a black pen. Please answer every section and make in each section only the one box that applied to you. It is realized that you may consider two or more statement in any of section to you, but please just mark the box that most clearly describes your problem.

Code no:

Date:

Patient name:

Patient ID:

Mobile no:

Address: Vill.....

P.O.....

P.S.....Dist.....

Part- A: Socio-Demographic information

Direction: Please give tick on the appropriate box and specify your answers in the space provided.

Questions	Response
1. Age (Year)
2. Religion:	<input type="checkbox"/> Muslim <input type="checkbox"/> Hindu <input type="checkbox"/> Buddhist <input type="checkbox"/> Christian <input type="checkbox"/> Others
3. Educational Status:	<input type="checkbox"/> Illiterate <input type="checkbox"/> Primary school pass <input type="checkbox"/> S.S.C pass <input type="checkbox"/> H.S.C pass <input type="checkbox"/> Degree <input type="checkbox"/> Masters or higher
4. Occupational Status:	<input type="checkbox"/> Housewife <input type="checkbox"/> Service holder <input type="checkbox"/> Day labour <input type="checkbox"/> Others
5. Residential Area	<input type="checkbox"/> Urban <input type="checkbox"/> Rural
6. Family income per monthlyTaka
7. Types of your family	<input type="checkbox"/> Nuclear <input type="checkbox"/> Join family

Part- B: Pregnancy related information

Questions	Response
8. Pregnancy duration (months)?	<input type="checkbox"/> 1 to 3 months <input type="checkbox"/> 4 to 6 months <input type="checkbox"/> 7 to 9 months
9. What is the serial number of your this child?	<input type="checkbox"/> 1 st <input type="checkbox"/> 2 nd <input type="checkbox"/> 3 rd <input type="checkbox"/> Above
1st trimester, Skip question no14 – 22 if mother is 2nd & 3rd trimester pregnant.	
10. Do you have nausea?	<input type="checkbox"/> Yes <input type="checkbox"/> No
11. Do you have vomiting?	<input type="checkbox"/> Yes <input type="checkbox"/> No

12. Do you have hyperemesis gravidarum?	<input type="checkbox"/> Yes <input type="checkbox"/> No
13. Do you have morning sickness?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2nd trimester, Skip question no 10 – 13 & 18-22 if mother is 1st & 3rd trimester pregnant.	
14. Do you have back pain?	<input type="checkbox"/> Yes <input type="checkbox"/> No
15. Do you have maternal bleeding?	<input type="checkbox"/> Yes <input type="checkbox"/> No
16. Do you have abortion in your pregnancy time?	<input type="checkbox"/> Yes <input type="checkbox"/> No
17. Do you have oedema?	<input type="checkbox"/> Yes <input type="checkbox"/> No
3rd trimester, Skip question no 10- 17 if mother is 1st & 2nd trimester pregnancy	
18. Do you have hypertension?	<input type="checkbox"/> Yes <input type="checkbox"/> No
19. Do you have gestational Diabetes?	<input type="checkbox"/> Yes <input type="checkbox"/> No
20. Do you have pre-eclampsia?	<input type="checkbox"/> Yes <input type="checkbox"/> No
21. Do you have eclampsia?	<input type="checkbox"/> Yes <input type="checkbox"/> No
22. Do you have maternal sepsis?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Part- C: Medical related information

Questions	Response
23. Do you have diabetes before pregnancy?	<input type="checkbox"/> Yes <input type="checkbox"/> No
24. Do you have hypertension before pregnancy	<input type="checkbox"/> Yes <input type="checkbox"/> No
25. Do you have bleeding disorder?	<input type="checkbox"/> Yes <input type="checkbox"/> No
26. Do you have diabetes after pregnancy?	<input type="checkbox"/> Yes <input type="checkbox"/> No
27. Do you have hypertension after pregnancy?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Appendix-IV: Permission Letters

October 28, 2017

The Nursing Superintendent

Dhaka Medical College & Hospital, Dhaka

Through: Principal, CRP Nursing College, CRP Savar, Dhaka -1343.

Subject: Seeking permission for data collection to conduct my study project.

Madam,

With due respectfully to state that, I am Umme Salma, a student of 4th year B.Sc. in Nursing, at CRP Nursing College, under Faculty of Medicine, University of Dhaka. I have to conduct a study project on **“Pregnancy Related Health Problems Experienced by Pregnant Women at Selected Hospital in Dhaka”** under honorable supervisor, Mohammad Habibur Rahman, Assistant Professor of Physiotherapy, BHPI. This study project is a partial fulfillment of the requirement for the degree of B.Sc. in Nursing. I want to collect research data for my study project at Gynae Antenatal Unit of Dhaka Medical College & Hospital (DMCH).

So I need your permission for data collection from Gynae Antenatal Unit. I would like to assure that anything of my study will not be harmful for the participants.

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

Sincerely yours

Umme Salma
28-10-2017

Umme Salma

4th year B.Sc. in Nursing

Session: 2013-2014

Roll: 18

CRP Nursing College

CRP- Chapain, Savar, Dhaka- 1343.

Forwarded
Habib 28-10-2017
MOHAMMAD HABIBUR RAHMAN
Assistant Professor
Department of Physiotherapy
Bangladesh Health Professions Institute (BHPI)
CRP-Chapain, Savar, Dhaka-1343

Recommended
1
Rahman
28/10/17
Ramu Chowdhury
Principal
CRP Nursing College

Appendix-V(a): Permission Letter of DMCH



সিআরপি নার্সিং কলেজ CRP NURSING COLLEGE

(An Academic Institute of CRP)

P.O: CRP-Chapain, Savar, Dhaka-1343, Tel: 7745464-5, Ext-260, Fax: 7745069, E-mail: contact@crp-bangladesh.org, Web: www.crp-bangladesh.org

Ref: ২৪৩ - মিআরপি - এর সি

Date: ০৯.১০.১৭

বরাবর,
পরিচালক
ঢাকা মেডিকেল কলেজ ও হাসপাতাল,
ঢাকা।

বিষয়ঃ বিএসসি ইন নার্সিং কোর্সের ৪র্থ (সেশনঃ ২০১৩-২০১৪) বর্ষের ছাত্র-ছাত্রীদের গবেষণা কাজে তথ্য সংগ্রহের অনুমতি প্রসঙ্গে।

মহোদয়,
আপনার সদয় জ্ঞাতার্থে অবগত করছি যে, সিআরপি নার্সিং কলেজ ঢাকা বিশ্ববিদ্যালয়ের অধীনে বিএসসি-ইন নার্সিং কোর্স পরিচালনা করে আসছে। কোর্স কারিকুলামের অংশ হিসাবে অত্র প্রতিষ্ঠানে অধ্যয়নরত ছাত্র-ছাত্রীদের গবেষণা কাজে বিভিন্ন হাসপাতাল ও স্বাস্থ্যসেবায় নিয়োজিত প্রতিষ্ঠানসমূহ থেকে তথ্য সংগ্রহ, গবেষণা ও প্রতিবেদন প্রস্তুত করা বাধ্যতামূলক। এজন্য তাদের যথাযথ গবেষণা ও প্রতিবেদন তৈরির সুবিধার্থে বিভিন্ন ধরনের জেনারেল হাসপাতাল থেকে তথ্য সংগ্রহ করা অত্যন্ত প্রয়োজন।

তাই আমরা অত্র প্রতিষ্ঠানের ৪র্থ বর্ষের মোট ৯ জন ছাত্র-ছাত্রীকে আগামী ১১.১১.২০১৭ থেকে ১৬.১১.২০১৭ তারিখ পর্যন্ত আপনার মেডিকেল কলেজ ও হাসপাতালে তথ্য সংগ্রহের জন্য পাঠাতে আগ্রহী।

অতএব, আপনাকে এ ব্যাপারে প্রয়োজনীয় অনুমতি প্রদানের জন্য সর্বিনয় অনুরোধ করছি।

দন্যবাদান্তে-

রুনা চৌধুরী
অধ্যক্ষ
সিআরপি নার্সিং কলেজ
CRP-Chapain, Savar, Dhaka-1343

Runa Chowdhury
Principal
CRP Nursing College
CRP-Chapain, Savar, Dhaka-1343

সংযুক্তিঃ

১. স্ব-স্ব ছাত্র-ছাত্রীর পক্ষ থেকে আবেদন।
২. গবেষণা বিষয় সহ নামের তালিকা।

অনুলিপিঃ

১. নার্সিং সুপারিনটেনডেন্ট, ঢাকা মেডিকেল কলেজ ও হাসপাতাল, ঢাকা।
২. নার্সিং সুপারভাইজার, ঢাকা মেডিকেল কলেজ ও হাসপাতাল, ঢাকা।
৩. অফিস সহকারী, ঢাকা মেডিকেল কলেজ ও হাসপাতাল, ঢাকা।



CRP-Mirpur, Dhaka, Plot: A/5, Block- A, Section- 14, Mirpur, Dhaka- 1206, Tel: 02 9025562-4, Fax: 02 9025561, Email: dgm-mirpur@crp-bangladesh.org. CRP-Ganakbari, P.O: Bolibadro, Sreepur, P.S: Ashulia, Savar, Dhaka, Tel: 02 7789227, Email: ganakbari@crp-bangladesh.org. AK Khan CRP- Chittagong, Kalurghat, Mohra, Chadgaon, Chittagong, Tel: 031- 2573412, Email: chittagong@crp-bangladesh.org. Afsar Hussain CRP- Rajshahi, House no: 11, Mohishbathan, Rajshahi Court Rajpara, Rajshahi, Tel: 0721 771709, Email: rajshahi@crp-bangladesh.org. CARSA Foundation- CRP, Barisal, 12 Gonopara, Barisal Sadar, Barisal, Phone: 0431 71556, Email: barisal@crp-bangladesh.org. CRP- Moulvibazar, 836 Sayed Muztaba Ali Road, Poschim Bazar, Tel: 0861 52469, E-mail: moulvibazar@crp-bangladesh.org. As a donor to CRP you qualify for a tax rebate as the Government of Bangladesh have approved CRP as a Philanthropic Institution from February 2008

Appendix-V(b): List of student with research title

Requesting for Research Permission from DMCH

List of Students

SL	Name	Research Title
1	Rubel Rana	Factors Associated With Maternal Anaemia among Pregnant Women in Selected Hospital at Dhaka.
2	Tonmoy Pasha	Assessment of Nutritional Knowledge of Pregnant Women in Selected Hospital in Dhaka City.
3	Kamrul Hasan	Prevalence of Low Back Pain and its Associated Factors among The Nurses of a Selected Hospital in Dhaka.
4	Mst. Ayesha Siddika	Psychological Status of Breast Cancer Patient at DMCH
5	Jinat Ara	Perception of Family Planning Methods among Lactating mothers at Postnatal Period at Selected Hospital.
6	Md. Abdur Rohit	Level of Awareness of Hospital Acquired Infection (HAIs) among Nurses Staff of Selected Hospital.
7	Habibur Rahman	Assessment of Knowledge about Exclusive Breast Feeding among Pregnant Women Attending at Gynecological Out Patient Department in Dhaka Medical College & Hospital
8	Mehedi Hasan Nazmul	Characteristics of Burn Injury among Patient Attended in Burn Unit of DMCH
9	Umme Salma	Common Pregnancy Related Health Problems Experienced by Pregnant Women at Selected Hospital in Dhaka.

Runu Chowdhury
01-11-17
Runu Chowdhury
Principal
CRP Nursing College
CRP, Chapain Saver, Dhaka-12.

Appendix-VI: IRB Form



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

Ref.

CRP-BHPI/IRB/12/17/ 179

Date: 18/12/2017

Umme Salma
4th year B.Sc. in Nursing
Session: 2013- 2014, DU Reg. No: 5385
CRP, Savar, Dhaka-1343, Bangladesh

Subject: Approval of the thesis proposal – “Pregnancy Related Health Problems Experienced by Pregnant Women at Selected Hospital in Dhaka.” by ethics committee.

Dear Umme Salma,

Congratulations.

The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application on 10/08/2017 to conduct the above mentioned thesis, with yourself, as the Principal investigator. The Following documents have been reviewed and approved:

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

Since the study involves answering a Close ended (questionnaire) that takes 10 to 15 minutes, have no likelihood of any harm to the participants, the members of the Ethics committee has approved the study to be conducted in the presented form at the meeting held at 08:30 AM on 20/08/2017 at BHPI.

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

Best regards,

Muhammad Millat Hossain
Assistant Professor, MRS
Member Secretary,
Institutional Review Board (IRB)
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

সিআরপি-চাপাইন, সাভার, ঢাকা-১৩৪৩, বাংলাদেশ, ফোন : ৭৭৪৫৪৬৪-৫, ৭৭৪১৪০৪ ফ্যাক্স : ৭৭৪৫০৬৯

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