A STUDY TO ASSESS THE CORRELATION BETWEEN THE PERCEPTION OF PREGNANCY AND MATERNAL FETAL BONDING AMONG PRIMIGRAVIDA AT SELECTED SETTINGS, CHENNAI

Dissertation submitted to

THE TAMILNADU DR.M.G.R. MEDICAL UNIVERSITY

CHENNAI-600 032

In partial fulfillment of the requirement for the degree of

MASTER OF SCIENCE IN NURSING

OCTOBER-2020

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SIGNATURE OF THE EXTERNAL EXAMINER

SIGNATURE OF THE INTERNAL EXAMINER

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CORRELATION BETWEEN THE PERCEPTION OF PREGNANCY AND MATERNAL FETAL BONDING AMONG PRIMIGRAVIDA AT SELECTED SETTINGS, CHENNAI.

ABSTRACT

INTRODUCTION

A wonderful and noble service that is bestowed on women is pregnancy. Some women enjoyed being pregnant, found pregnancy life-changing and exciting. Most of the women may not have much problem during pregnancy, but few of them face some problem related to pregnancy and childbirth. The third trimester begins from 25 weeks of pregnancy and ends at delivery, or 7^{th} month through 9^{th} month of pregnancy. Women have found the experience of pregnancy more challenging, whether for physical or emotional reasons or a combination of both. The baby's movements become prominent as the baby grows. Discomfort increases with these sensations and other symptoms/ signs like Broxton hicks contraction, shortness of breath, backaches, frequent urination, heartburn etc. Coping with minor disorders was more difficult.

Pregnancy being an emotional time, fears and worries is normal and expected during pregnancy. Anxiety is one of the many feelings that the women experience. It is believed that more than one in ten women struggle with symptoms of anxiety during pregnancy.

Maternal Fetal Bonding (MFB) is the term used to describe the relationship between the pregnant women and the fetus. The frequency and the intensity of Maternal

Fetal Bonding increases with advancing age particularly, after quickening at approximately 18 to 22 weeks of gestation.

STATEMENT OF THE PROBLEM

A study to assess the correlation between the perception of pregnancy and maternal-fetal bonding among primigravida at selected settings, Chennai.

OBJECTIVES OF THE STUDY

1. To assess the pregnancy experience, antenatal anxiety and maternal fetal bonding among primigravida
2. To correlate the pregnancy experience, antenatal anxiety and maternal fetal bonding among primigravida.
3. To compare the pregnancy experience, antenatal anxiety and maternal fetal bonding among trimesters.
4. To associate the pregnancy experience, antenatal anxiety and maternal fetal bonding with the selected demographic variables of primigravida

METHODOLOGY

The research approach was Quantitative-evaluative in nature. The study was conducted among 120 primigravida. The population for the study was all the primigravida who attended the antenatal OPD at selected hospitals in Chennai. Non probability convenient sampling technique was used to select the samples. The demographic variable was collected using structured questions. Modified Pregnancy Experience Scale was used to assess the pregnancy experience, Modified Perinatal

Anxiety Screening Scale was used to assess the antenatal anxiety and Rating scale was used to assess the maternal fetal bonding among primigravida across three trimesters. Mother was asked about the present experience of pregnancy and was asked to recollect the experience of her first and second trimester. Interview method was used to obtain data from the primigravida.

RESULTS

The pregnancy experience showed that 55%, 61.7% & 54.2% of the primigravidas had good experience in the first, second and third trimesters respectively and the overall score showed that 81.7% of the primigravidas had good experience.

The antenatal anxiety showed that 65%, 52.5% & 50.8% of the primigravidas had moderate anxiety in the first, second and third trimesters respectively and the overall score showed that 66.7% of the primigravidas had moderate anxiety.

Maternal fetal bonding showed that 74.2%, 96.7% & 75% of the primigravidas had high maternal fetal bonding in the first, second and third trimesters respectively and the overall score showed that 91.7% of the primigravidas had high maternal fetal bonding.

There was a weak positive correlation between pregnancy experience and maternal fetal bonding ($r=0.283$), antenatal anxiety and maternal fetal bonding ($r=-0.246$) and the pregnancy experience and antenatal anxiety ($r=0.259$) which were significant at $p<0.01$ level of significance. There was a weak positive correlation between pregnancy experience and antenatal anxiety (0.247) which was significant at $p<0.01$ level of significance.

Comparison among trimesters revealed that in the second trimester pregnancy events (mean pregnancy experience score was 4.68) were less leading to reduction in anxiety (mean antenatal anxiety score was 6.27) which was the least among all the trimesters and leading to increase in maternal fetal bonding (mean maternal fetal bonding score was 18.12) during the second trimester which was the highest among all the trimesters.

There was statistically significant association between antenatal anxiety with planned pregnancy at $p < 0.05$ level of significance and maternal fetal bonding with area of residence and planned pregnancy at $p < 0.05$ level of significance and the other demographic variables were not significant.

CONCLUSION

Maternal fetal bonding is the pillar of child's development. Pregnancy experience and anxiety will be the major determining factor of maternal fetal bonding. Ensuring positive pregnancy experience will reduce anxiety and improve bonding. The study concluded that since there was good pregnancy experience the reported anxiety levels were mild to moderate in nature which had led to better maternal fetal bonding. Providing positive pregnancy experience is a shared responsibility of the family and the health care personnel. Providing adequate information about pregnancy and measures to cope with the changes will help the mother to achieve positive experience. Also, regular antenatal care and education can still improve the pregnancy experience and reduce the anxiety and increase the bonding.

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CHAPTER I

INTRODUCTION

A wonderful and noble service that is bestowed on women is pregnancy. Some women enjoyed being pregnant, found pregnancy life-changing and exciting. Most of the women may not have much problem during pregnancy, but few of them face some problem related to pregnancy and childbirth. The third trimester begins from 25 weeks of pregnancy and ends at delivery, or 7^{th} month through 9^{th} month of pregnancy. Women have found the experience of pregnancy more challenging, whether for physical or emotional reasons or a combination of both. Often women struggle to accept that they were experiencing a 'normal' pregnancy because they felt so bad physically. The baby's movements become prominent as the baby grows. Discomfort increases with these sensations and other symptoms/ signs like Broxton hicks contraction, shortness of breath, backaches, frequent urination, heartburn etc. Coping with minor disorders was more difficult. A sense of vulnerability and responsibility for their unborn child was described by some women, while others remembered marveling at having a baby growing inside them (Currey.B, 2013). Pregnancy brings emotional ambivalence for women who had always wanted to become a mother, but find pregnancy challenging and feels 'miserable'. This leads to anxiety and stress during pregnancy.

Pregnancy being an emotional time, fears and worries is normal and expected during pregnancy. Anxiety is one of the many feelings that the women experience. Anxiety during pregnancy is common as antenatal and postnatal depression, but it is less well known. It is believed that more than one in ten women struggle with symptoms of anxiety during pregnancy. People often expect mothers experience their pregnancy as a

joyful time and they expect the mothers to feel “blooming” or if they try to talk about their worries or problems, people might say “Don’t worry; it’s just the hormones!” This type of response from others can make it more difficult for the mother to admit that there is a problem (NHS Fife Psychology Department, 2015).

Maternal Fetal Bonding is the term used to describe the relationship between the pregnant women and the fetus. A broad spectrum of Maternal Fetal Attachment (MFA) has been observed during pregnancy. The frequency and the intensity of MFA increases with advancing age particularly, after quickening at approximately 18 to 22 weeks of gestation.

BACKGROUND OF THE STUDY

There are limited studies focusing on women's experiences of pregnancy. Taking women's experiences seriously during early pregnancy may prevent future suffering during childbirth (Modh. C, 2014).

Pregnancy is the most sensitive and most enjoyable part of a woman's life. Sleep patterns and the ability to perform tasks of daily living, as well as quality of life in the pregnant woman are affected by systemic variations caused by hormonal, emotional, mental and physical factors. Around 950 pregnant women were surveyed about lower back pain during pregnancy and about its impact on day to day life. The study revealed that 645 respondents had back pain during their pregnancy and majority said that it caused sleep disturbance (Department of Anesthesiology, 2014).

Bautista. C et al. in 2018 found that expectant mothers may appear anxious even during healthy pregnancies. Antenatal anxiety symptoms appear to be common even in

normal pregnancy. The study indicated value in exploring the quantitative measures for antenatal anxiety.

Pregnancy is a time of increased vulnerability for the development of anxiety and mood disorders. Some women may experience their first depressive episode during pregnancy, while others are at risk of recurrence due to a previous history of depression and anxiety (Raisanen et al., 2014)

High levels of anxiety, during pregnancy, have adverse effect on mother and baby. Anxiety during first trimester results in abortion and during second and the third trimester may lead to low birth weight and increased activity of the Hypothalamus – Hypophysis–Adrenal axis (Ding XX et al., 2014, Shahhosseini. Z et al., 2015). Also, antenatal anxiety is accompanied by emotional problems, hyperactivity disorder, decentralization and disturbance in cognitive development of children (Glover.V, 2014). The prevalence of anxiety during pregnancy is 23.6% (Algahtani. H et al., 2018).

Seven out of eleven studies reviewed showed that anxiety during pregnancy significantly predicted gestational age and/or preterm birth. Women who are most anxious about the pregnancy seem to be more insecurely attached (Dunkel.S & Glynn.L, 2011).

Antenatal anxiety, a comparison across trimesters revealed a mean antenatal anxiety score as 10.74, 11.69 and 14.20 respectively. Independent t test revealed significantly higher anxiety score for third trimester when compared to first trimester. (Krishna.P, 2017).

Screening of 146 antenatal women found that 22.6% of women were screened positive for anxiety and it was significantly associated with primigravida (Thomas. C, 2015).

Anxiety during pregnancy was estimated to affect 15 to 23% of women and was associated with increased risk for negative maternal and child outcomes. A systematic review found that self reported anxiety symptoms during pregnancy had an increased prevalence of 22.9% across trimesters (Sinesi. A, 2019).

Bowlby. J (1960) has first introduced the attachment theory about the mother-child bond. There has been more acceptance over the past 20 years that the relationship between a mother and her child starts to develop while the fetus is in the womb. However, the significance of this phenomenon is not well studied as maternal-infant attachment (Cannella BL, 2005).

Inquiry into women's psychological reaction and adjustment during pregnancy began in the 1970s. Prior to that there are few scientific data available on women's thought or feeling about their pregnancy. Salisbury (2003) said that the concept of maternal fetal attachment is relatively new and has not been well studied or defined.

NEED FOR THE STUDY

Pregnancy is one of the most significant event during a woman's lifetime. It is considered a period with its own tasks, during which the pregnant woman has to adapt to deep physiological, psychological and social changes and development. The expectant mother and her fetus live in symbiosis; she thinks about, imagines and talks to her fetus,

communicating with him whatever she feels. The nature of this relationship is conceptualized by health professionals in term of Maternal-Fetal Attachment (MFA) where every thought, emotion and feeling that the pregnant women experience is shared and incorporated into the development of her fetus.

MFA has been found to have many benefits to the mother and her baby in uterus. It plays an important role in their current as well as postnatal well-being. Moreover, MFA is a key element of maternal identity and is necessary for adaptation to motherhood.

Turning to fetal benefits, literature suggests that low MFA affects the development of the fetus's brain and autonomic nervous system. It also influences the child's social development across the lifespan, beyond infancy. This is believed to occur through laying the foundations required for successfully accomplishing the developmental tasks in social and cognitive skills. Anxiety can have adverse effect on the fetus (Hassan. S, 2017).

High levels of anxiety, during pregnancy, have adverse effect on mother and baby. Anxiety in early pregnancy, results in the loss of fetus and in second and third trimesters lead to a decrease in birth weight. Also, anxiety during pregnancy is accompanied by emotional problems, hyperactivity disorder and disturbance in cognitive development of children. Mother’s anxiety has a gestational age-dependent temporally incremental negative effect on fetal growth and development (Sarkar. K, 2017).

There is an inter-linkage between the perception of pregnancy and maternal fetal bonding, which influences each other and the Maternal Fetal Bonding (MFB) ultimately, has an impact on the infant development. So, the investigator was interested in conducting a study to assess the correlation between pregnancy experience, antenatal anxiety and maternal fetal bonding among primigravida since this is their first experience. This study will assess the variables over the pregnancy to find the changes that are occurring in three trimesters.

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OPERATIONAL DEFINITIONS

ASSESS

It refers to the systematic collection and validation of data regarding the perception of pregnancy and maternal-fetal bonding among primigravida and analyzing the data using statistical method.

CORRELATION

It corresponds to have a mutual relationship, in which one parameter depends on other. The parameter includes perception of pregnancy and maternal fetal bonding among primigravida and the relationship is found using statistical method.

PERCEPTION OF PREGNANCY

It refers to the interpretation of experience and the feelings throughout the pregnancy by a primigravida. The major components are pregnancy experience and antenatal anxiety.

Pregnancy experience refers to the events that leave all possible impression either positive or negative which was assessed using Modified Pregnancy Experience Scale.

Antenatal anxiety refers to the mother's feeling of worry, nervousness or unease about the unborn baby or an uncertain outcome which was assessed using Modified Perinatal Anxiety Screening Scale.

MATERNAL-FETAL BONDING

It refers to the attachment/interaction that develops between a pregnant mother and her intrauterine fetus and is manifested in behaviors that demonstrate care and commitment to fetus and includes nurturance (eating well), comforting (stroking the

belly and touch of the baby), physical preparation (buying baby cloths and equipments), and interaction with the fetus-etc. which was assessed using rating scale.

PRIMIGRAVIDA

It refers to the woman who is pregnant for the first time and who is in the third trimester of pregnancy that is from 25 weeks of pregnancy until the delivery of the baby.

ASSUMPTIONS

1. Higher the age and education positive is the experience about pregnancy.
2. Higher the education lesser is the anxiety
3. Higher the age higher is the anxiety.
4. Primigravida will have high maternal-fetal bonding in second trimester compared to first and third trimester.
5. Positive the pregnancy experience less is the anxiety.
6. Negative the pregnancy experience poor is the maternal fetal bonding.
7. Higher the level of anxiety poor is the maternal fetal bonding.

DELIMITATIONS

1. This study is limited to primigravida in third trimester.
2. This study is limited to 4 weeks of data collection.

PROJECTED OUTCOME

1. The study will help to assess the pregnancy experience, antenatal anxiety and maternal fetal bonding.

2. The study will help the investigator to identify the relationship between pregnancy experience, antenatal anxiety and maternal-fetal bonding.
3. The study will help to find the influence of the demographic variables on pregnancy experience, antenatal anxiety and maternal fetal bonding.
4. The study will help to make recommendations to include anxiety screening as a part of antenatal assessment and include measures in antenatal education to improve maternal fetal bonding.

CONCEPTUAL FRAMEWORK

Conceptual framework is the theoretical approach to study the problems that are scientifically based, which emphasizes on the selection, arrangement and classification of its concept. A conceptual framework broadly explains phenomena of interest, expresses assumptions and a philosophical stance and it explains the relationship between the variables in the diagrammatic representation.

The conceptual framework for this study was derived from the General system theory given by Ludwig Von Bertalonffy, 2005. General system theory is a holistic theory that describes a complex system by examining the interaction between its components, rather than by analyzing the detailed structure of each component. It serves as a model for viewing people as a system and their intervention with their environment. A system is a complex interacting element; it can be open or close. Open system is open for exchange of matters, energy and information with their environment from which the system receives input and gives back output. Ludwig Von Bertalonffy described living organism as “open system” that interacts comprehensively with their environment. Next, he recognized that complex system had emergent properties that cannot be predicted by knowing the properties of its components. In addition, he observed that such a system can also exert control over its components, such as homeostasis, by using feeding loops.

Open system theory mainly consists of three elements such as,

- Input
- Throughput
- Output and feedback

The system creates, organizes and transforms input in the process known as throughput which results in a recognition of output. Output is any information that leaves the system and enters the environment through system boundaries; feedback is the result of output.

INPUT:

Input refers to the person as a system which has input within the system itself and acquired from the environment which refers to the stimuli and important materials from the external environment. In this study, the input is the demographic variables of the primigravida like age, education, occupation, type of family, marital life, type of marriage, area of residence, family income and pregnancy planned, weeks of gestation and the information acquired from the environment regarding pregnancy experience, antenatal anxiety and maternal fetal bonding

THROUGHPUT:

Throughput is an action needed to accomplish the desired task. It refers to the use of different operational procedures implemented within the process of system. In this study, the throughput refers to assessment of

- Pregnancy experience using Modified Pregnancy Experience Scale
- Antenatal anxiety using Modified Perinatal Anxiety Screening Scale
- Maternal fetal bonding using Rating scale.

OUTPUT:

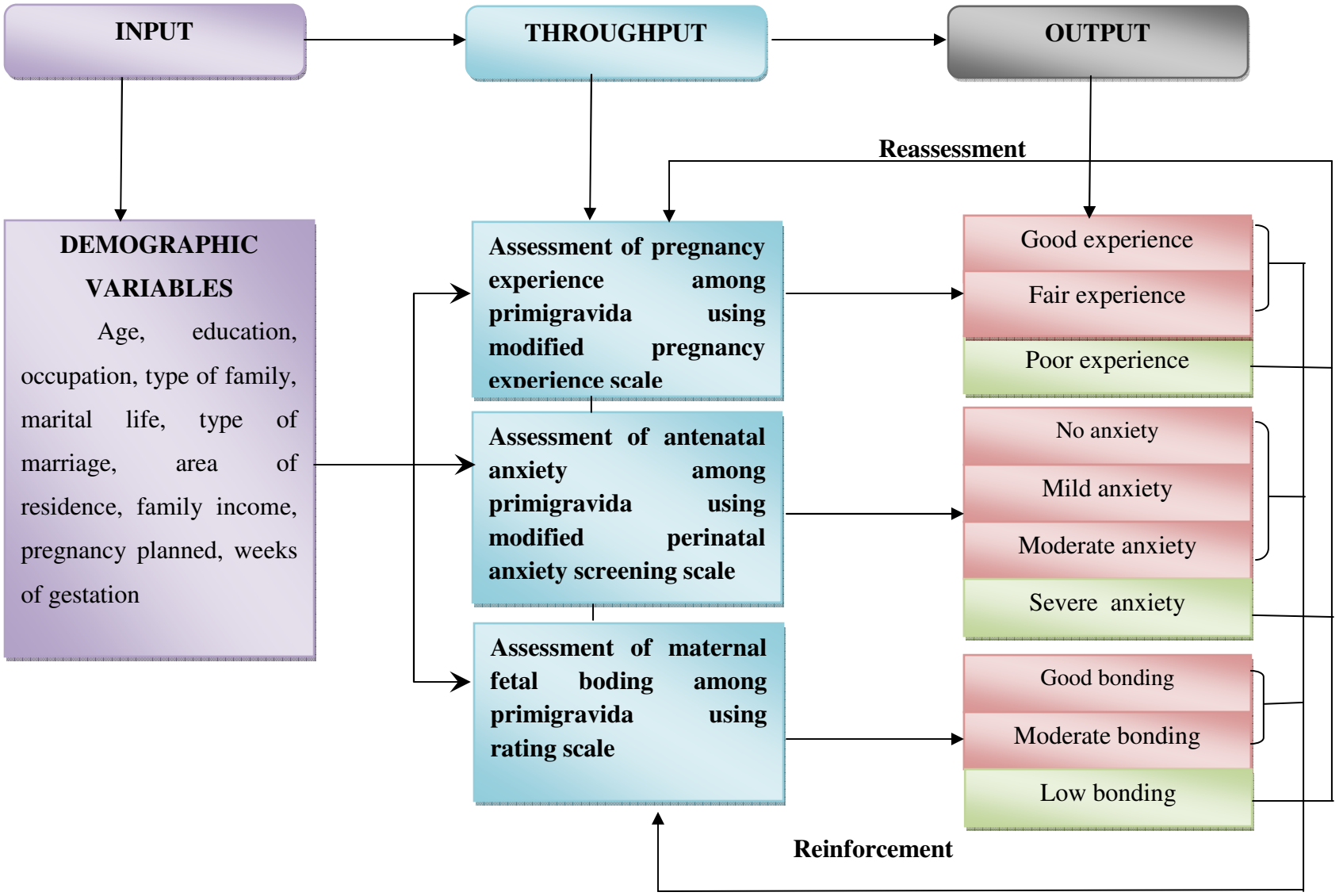
Output is any information that leaves the system and enters the environment. In this study, the output refers to the primigravida's experience in terms of good experience,

fair experience and poor experience, antenatal anxiety in terms of no anxiety, mild anxiety, moderate anxiety and severe anxiety and maternal fetal bonding in terms of low bonding, moderate bonding and high bonding.

FEEDBACK:

Feedback is the result of output. In this study, if the output was positive (good and fair experience, no, mild or moderate anxiety and moderate or good maternal fetal bonding) reinforcement was given. If the output was negative (poor experience, severe anxiety and low maternal fetal bonding) recommendation was given to include the self care management of minor discomforts and process of maternal fetal bonding.

MODIFIED LUDWIG VON BERTALONFFY MODEL



CHAPTER - 2
REVIEW OF LITERATURE

CHAPTER II

REVIEW OF LITERATURE

Review of literature is the systematic review of the important published scholarly literature on the particular topic. A literature is an organized written presentation of what had been published on a topic by scholars (Burns and Groove, 2004). For the present study, an extensive review of relevant literature and articles was undertaken which was organized and presented under the following headings,

1. Studies related to pregnancy experience.
2. Studies related to antenatal anxiety.
3. Studies related to maternal fetal bonding.

Studies related to pregnancy experience

Modh, C. (2014) conducted a qualitative study using a phenomenological hermeneutic approach to assess the women's experiences of early pregnancy and the data were collected using tape-recorded interview. Twelve primigravida between 10–14 weeks, aged between 17 and 37 years participated in the study. The study results showed that to be in early pregnancy means for the women a *life opening* both in terms of life affirming and suffering. The central themes of the study includes living in the present and thinking ahead, being in a change of new perspectives and values and being in change to becoming a mother. The study concluded that the results have implications for the midwife's encounter with the women during pregnancy. Questions of more existential nature, instead of only focusing the physical aspects, the psychological aspects of the pregnancy can be included that may lead to an improvement in health condition and a positive experience for the pregnant woman.

Adrienne, G. Raynes, H. (2013) conducted a cross- sectional study aimed to examine maternal perception of fetal movements using a qualitative framework. 156 pregnant women ≥ 28 weeks, carrying a single child, > 18 years old were selected and data was collected. Women perceived and described qualitative changes to fetal movements that changed throughout gestation. The study results revealed that 83% of the samples reported that they were asked to assess fetal movements in an implicit qualitative method during their antenatal visit. In contrast, only 16% of the mothers counted the fetal movements regularly and many described counting as confusing and reported that the advice they had received on counting differed.

According to National Sleep Foundation, 78% of pregnant women reported more sleep disturbance than at other times. Many women also reported feeling extreme fatigue during pregnancy, especially during the first and third trimesters. The physical and emotional demands of pregnancy was analysed and the prevalence of sleep disorders among pregnant women was common and that the expectant mothers become so tired.

Studies related to antenatal anxiety

Antoinette, M. et al., (2017) conducted a longitudinal study to estimate the prevalence, course and risk factors for antenatal anxiety and depression across different stages of pregnancy. Consecutive samples of 357 pregnant women were selected. Hospital Anxiety and Depression Scale was used to assess anxiety and depression and demographic and psychosocial risk factors. The study findings revealed that 54% and 37.1% of the women had antenatal anxiety and depressive symptoms in atleast one antenatal assessment. Anxiety was more prevalent than depression at all stages and anxiety was more prevalent and severe in the first and third trimesters. The study

concluded that continuous assessment over the course of pregnancy is warranted. Identifying and treating this problem is important in preventing postpartum depression.

Biaggi, A., et al. (2016) conducted a systematic review with the aim to identify the women at risk and the risk factors involved in the onset of antenatal anxiety and depression. An analysis was done using PubMed, PsychINFO and the Cochrane Library between 1st January 2003 and 31st August 2015 and a final number of 97 papers were selected. The study results showed that the factors which were most relevant and associated with antenatal anxiety were lack of partner or social support, unplanned or unwanted pregnancy, present/past pregnancy complications and pregnancy loss. The study concluded that the administration of a screening tool used to identify women at risk of antenatal anxiety and depression should be followed universally in order to promote the long term wellbeing of mothers and babies.

Balbuena1, C. et al., (2018) conducted a study to estimate the incidence, prevalence and risk factors related to anxiety symptoms throughout the three trimesters of pregnancy. A sample of 385 pregnant women participated in a longitudinal study in which the Generalized Anxiety Disorder (GAD) 7 questionnaire was used. The study results showed that the anxiety prevalence was 19.5% in the first trimester, 16.8% in the second trimester, and 17.2% in the third trimester. The study concluded that, high incidence and prevalence of anxiety symptoms occur during pregnancy; consequently, applicable preventive policies should be developed.

Silva, M. et al., (2017) conducted a descriptive cross sectional study to evaluate the occurrence of anxiety in pregnancy and the factors associated with its occurrence;

comparing the presence of anxiety in each trimester. A total of 209 pregnant women participated in the study and data was collected using the hospital anxiety subscale. The result showed that, 26.8% of pregnant women had anxiety and being more frequent in the third trimester. The study concluded that understanding the factors associated with its occurrence allows for elaborating preventive measures in prenatal care.

Binita, et al., (2019) conducted a descriptive cross-sectional study to assess the level of prenatal anxiety among 337 pregnant women visiting antenatal care outpatient department. Prenatal Anxiety Screening Scale was used to collect data. Interview technique was used. The findings revealed that 39.5% of the respondents were primi gravida and 42.1% had mild to moderate level of anxiety. The study concluded that the prenatal anxiety had relation with the gravid status of pregnant women.

Krishna, P., et al., (2017) conducted a cross sectional study to investigate the antenatal anxiety across all three trimesters of pregnancy among 169 samples. The results showed that the mean anxiety score for the first, second and third trimester was 10.74, 11.69 and 14.20 respectively. The study concluded that, significantly higher anxiety score during third trimester when compared to first trimester.

Kaushik, S. et al., (2017) conducted a cross sectional study with the aim to determine the effects of maternal anxiety on fetal growth. 410 pregnant mothers, between 14 to 40 weeks of gestation were selected as samples and interview method was used to collect data. GAD-7 questionnaire was used. The study results showed mild to moderate anxiety which was significantly associated with Small for Gestational Age (SGA) fetus. Anxiety increased with progression of gestation and had a negative effect on fetal

growth. The study concluded that mother's anxiety had a negative effect on fetal growth and brain development.

Sinesi, A. et al., (2019) conducted a systematic review of anxiety scales used in pregnancy. The aim of the study was to examine and synthesize the evidence in relation to the psychometric properties and content of self report scales used to detect anxiety symptoms in pregnant women. A systematic search was carried out and the methodological quality of all included studies was assessed. The study results revealed that several anxiety symptoms and domains were identified as promising for screening the general antenatal anxiety and pregnancy related anxiety including the fear of childbirth and lots of worries about the baby's health.

Studies related to Maternal Fetal Bonding

Maria, F. et al., (2016) conducted a correlational, cross-sectional descriptive study to understand the relation between maternal fetal attachment and gestational age and parental memories. 179 pregnant women at 20 or more weeks of gestation were selected as sample. The Maternal-Fetal Attachment Scale and the Inventory for Assessing Memories of Parental rearing behavior were used to collect information. The study results revealed that the maternal-fetal attachment increased with gestational age and it was correlated with practices of parental memories.

Salehi, K. et al. (2017) conducted a randomized controlled trial to evaluate the effect of early education of fetal movement counting in second trimester on maternal fetal attachment in antenatal women. 52 samples were selected through simple random sampling and then randomly allotted into control and experimental group. Cranely's

Maternal Fetal Attachment Scale (MFAS) was used to collect data. Face to face training was provided to the intervention group from 24th to 28th weeks of pregnancy about counting and recording the daily fetal movement. The study result showed that there was a statistically significant difference between two groups after education. The study concluded that education of fetal movements counting significantly increased maternal fetal attachment and the training of this method is inexpensive.

Tyseer, M. et al. (2015) conducted a quasi experimental study to assess the effect of training program about maternal fetal attachment skill on prenatal attachment among primigravida. 80 primigravida were selected at 30 weeks of gestation and Cranely's MFAS was used to collect data. The results showed that MFAS score had significantly increased in the intervention group from 61.6%. at the baseline to 68.5% and 69.6% at 32nd and 34th week of gestation. The study concluded that MFAS total score was increased significantly in the intervention group at 32nd and 34th week of gestation. The study recommended that promoting the training programme improves the maternal fetal attachment skill.

Gobel, A. et al., (2018) conducted an explanatory analysis and systematic review to find association between maternal-fetal bonding and prenatal anxiety. The prenatal period can be associated with an increase in distress and anxiety. A systematic search was carried out based on four electronic databases and a targeted reference search. Of the 3845 identified publications, $K = 31$ studies fit the eligibility criteria. The result showed that the components of maternal fetal bonding centering on pregnancy or maternal role were not affected, the quality of perceived emotional proximity to the child, as assessed by the Maternal Antenatal Attachment Scale, was impaired by anxieties across studies.

The study concluded that the quality of perceived emotional proximity to the fetus was impaired consistently by anxiety and multivariate analyses are needed to improve the understanding of the interacting factors that influence maternal fetal bonding.

Neethu, T. et al., (2018) conducted a study to assess the effect of fetal movement counting on prenatal attachment and maternal worries among primigravida. True experimental design was selected and 60 primigravida attending OPD were selected as samples. Modified Prenatal Attachment Inventory and modified Cambridge Worry Scale were used. The study results revealed that 55% of primigravida were in the age group of 26-30 years, 35% were daily wagers had monthly income of 10001-15000, 30% were between 32-34 weeks of gestation and 34 % were in 1-3 years of their marital life. The correlation coefficient between prenatal attachment and maternal worries was -0.25. The study concluded that fetal movement counting was effective in increasing the prenatal attachment and reducing the maternal worries among primigravida.

Chien-ming, T. et al., (2019) conducted a study that aimed to investigate the factors of stress, symptoms during pregnancy and mindfulness systematically related to maternal fetal attachment. Data was collected from 339 pregnant women using mindfulness scale, the pregnancy stress scale and the maternal fetal attachment scale. The results showed that pregnancy stress is the most robust factor of maternal fetal attachment. The study concluded that mindfulness and stress during pregnancy had significantly direct effects on maternal fetal attachment and screening of the relational elements should be incorporated into prenatal education programs.

Jamshidimanesh, M. et al., (2013) conducted a cross sectional study to assess the maternal fetal attachment behaviour and some related factors. The study was carried out in 12 health and medical centres and 400 pregnant mothers were selected as samples. Semi structured questionnaire and maternal fetal attachment scale was used to collect data. The study findings showed that the mothers had good attachment toward their fetus. The race, higher maternal age, planned pregnancy, sex of the fetus and assessing heath of the fetus had positive effects on prenatal attachment. The study concluded that understanding maternal fetal attachment behaviour could play an important role in quality of prenatal care. Midwives can assess and promote attachment behaviour as well as recognize factors influencing maternal fetal attachment.

CHAPTER – 3
RESEARCH METHODOLOGY

CHAPTER III

METHODOLOGY

A study was undertaken to assess the correlation between the perception of pregnancy and maternal fetal bonding among primigravida in selected hospital in Chennai.

This chapter on methodology deals with the description of research approach, design, study setting, population, sample, criteria for sample selection, sample size, sampling technique, data collection tool, validity of the tool, reliability of the tool, pilot study, data collection procedure and plan for data analysis.

SCHEMATIC PRESENTATION

RESEARCH APPROCH
Quantitative- evaluative

RESEARCH DESIGN
Descriptive design

SETTING OF THE STUDY
St. Isabel's Hospital, Voluntary Health Services Multispeciality hospital and Sri Ranga Hospital, Chennai.

TARGET POPULATION
Primigravida who attended the antenatal OPD at St. Isabel's Hospital, Voluntary Health Services Multispeciality Hospital and Sri Ranga Hospital, Chennai.

SAMPLES AND SAMPLE SIZE
60 Primigravida who fulfilled the inclusion criteria

SAMPLING TECHNIQUE
Non probability convenient sampling technique

DATA COLLECTION METHOD AND TOOL
Methods: Interview method
Tools: Structured questionnaire, Modified Pregnancy Experience Scale, Modified Perinatal Anxiety Screening Scale and Rating scale

DATA ANALYSIS

Descriptive statistics	**Inferential statistics**
Frequency and percentage distribution	t test
Mean	Correlation coefficient
Standard deviation	Chi-square test

Schematic representation of the methodology

RESEARCH APPROACH

The research approach was Quantitative-evaluative in nature.

RESEARCH DESIGN

A descriptive design was chosen for the study.

MAJOR VARIABLES OF THE STUDY

The major variables of the study were perception of pregnancy (like pregnany experience, antenatal anxiety) and maternal fetal bonding.

RESEARCH SETTING

The main study was conducted in the following selected hospitals:

- Voluntary Health Services Multispeciality Hospital Taramani, Chennai.
- St. Isabel's Multispeciality Hospital Mylapore, Chennai.
- Sri Ranga Hospital Mandaveli, Chennai.

POPULATION OF THE STUDY

The population for the study was all the primigravida who attended the antenatal OPD at selected hospitals in Chennai.

SAMPLES OF THE STUDY

Primigravida who fulfilled the inclusion criteria were selected as a sample for this study.

CRITERIA FOR THE SELECTION OF SAMPLES

INCLUSION CRITERIA

1. Primigravida who were willing to participate
2. Primigravida in third trimester of pregnancy
3. Primigravida who were available during data collection

EXCLUSION CRITERIA

1) Primigravida with high risk condition.
2) Primigravida who conceived following treatment for conception
3) Samples of pilot study were excluded.

SAMPLE SIZE

From the population, a sample of 120 primigravida was selected.

SAMPLING TECHNIQUE

Non probability convenient sampling technique was used to select the samples. A total of 40 samples from each setting were included in the study.

Hospital	Number of sample
Voluntary Health Services Multispeciality Hospital	40
St. Isabels Multispeciality Hospital	40
Sri Ranga Hospital	40
Total	**120**

DESCRIPTION OF DATA COLLECTION TOOL, SCORING AND INTERPRETATION:

The tool was prepared based on the information gathered from the review of literature and objectives of the study. It consists of three parts.

PART-A: Demographic data.

PART-B: Perception of pregnancy.

PART-C: Maternal fetal bonding.

PART A: DEMOGRAHIC DATA OF THE PRIMIGRAVIDA

It consisted of structured questions to elicit the demographic variables of primigravida like age, education, occupation, type of family, marital life, area of residence, family income, planning for pregnancy and gestational weeks.

PART B: PERCEPTION OF PREGNANCY

Tool to assess the perception of pregnancy comprised of two sections.

SECTION I: PREGNANCY EXPERIENCE

It consisted of a checklist with 20 items divided into three trimesters.

First trimester checklist included feelings about being pregnant at this time, physical intimacy, limitations in doing physical task/chores, experience of visiting obstetrician /midwife, restriction imposed by the family members due to being pregnant, normal discomforts of pregnancy (heart burn, incontinence) and help or assistance received from others because one is pregnant.

Second trimester checklist included weight gain and body changes due to pregnancy, concern about getting complication in pregnancy (pain, bleeding, headache, decreased fetal movements, increased blood pressure), comments from others about the

pregnancy /appearance, movement of the baby, rituals performed related to pregnancy and thoughts about whether the baby is normal.

Third trimester checklist included ability to wearing the clothes and shoes which was used before pregnancy, pain in labour and type of delivery, disturbance while sleeping, thinking about the baby appearance, thinking about care of baby, discussing with spouse about baby names and discussing with spouse about pregnancy or childbirth issues.

Each item was with the options such as 'Yes' or 'No'.

SCORING AND INTERPRETATION:

Maximum score - 20 and Minimum score - 0. The scoring was done as follows.

Scale legend	Section- I
Yes	1
No	0

Based on the score, pregnancy experience was arbitrarily classified as.

S.No	Score	Interpretation
1	< 07	Poor experience
2	07-13	Fair experience
3	>13	Good experience

SECTION II: ANTENATAL ANXIETY

Modified Perinatal Anxiety Screening Scale was used to assess the antenatal anxiety among primigravida. It consisted of an likert scale with 20 items related to antenatal anxiety like emotional aspects, physical aspects, labour and baby; each item was with four options such as 'Never, Sometimes, Often or Almost always.

SCORING AND INTERPRETATION:

Maximum score - 60 and Minimum score - 0. The scoring was done as follows.

Scale legend	Scores
Never	0
Sometimes	1
Often	2
Almost always	3

Based on the score antenatal anxiety was classified as

Scores	Category
0	No anxiety
1-20	Mild anxiety
21-40	Moderate anxiety
41-60	Severe anxiety
60	**Total score**

PART C: MATERNAL FETAL BONDING

Rating scale was used to assess the maternal fetal bonding among primigravida across three trimesters. Each trimester has 10 items.

First trimester included items related to acceptance of the pregnancy, concentration in her own needs and the fetus, avoiding food, fruit and activities thinking it may harm the baby etc.

Second trimester included items related to acceptance of the baby, movement of the baby, massaging the abdomen, wanted to hear the fetal heart sounds etc.

Third trimester included items related to preparing baby's cloth, cots or bed, eager to give birth, feeling upset to let the fetus go, enjoys watching tummy jiggle as the baby kicks inside etc.

It consisted of 30 items; each item was with three options such as 'No, Uncertain or Yes'.

SCORING AND INTERPRETATION:

The scoring was done as follows.

Question number	Type of question	Scoring
2,3,5,6,7,11,12,13,14,15,16,17, 18,19,21,22,24,25,26,27,28,29.	Positive questions	No- 0 Uncertain- 1 Yes- 2
1,4,8,9,10,20,23	Negative questions	Yes- 0 Uncertain-1 No- 2

The scores were arbitrarily classified in three trimesters as

Bonding	Score
Low bonding	1-20
Moderate bonding	21-40
High bonding	41-60
Total score	**60**

VALIDITY OF THE TOOL

The tool was validated by five experts, two Obstetricians and three Obstetrics and Gynecology Nursing experts. The suggestions given by the experts were incorporated in the tool.

RELIABILITY OF THE TOOL

The reliability of the tool was calculated by test retest method using Karl Pearson's correlation coefficient formula. The scores were 0.76 for pregnancy experience scale, and 0.9 for both antenatal anxiety and maternal fetal bonding scales which indicated an acceptable level of reliability of a tool.

HUMAN RIGHTS AND ETHICAL CONSIDERATION

The study was approved by the ethical committee constituted by the college. Permission was obtained from concerned authority of selected hospital in Chennai. Informed consent was obtained from the samples for their willingness to participate in the study.

PILOT STUDY

The study was conducted from 01.07.2019 to 06.07.2019 at Voluntary Health Services Multispeciality Hospital, Chennai**.** After obtaining approval from the research committee in the college**,** permission was obtained from the concerned authorities to conduct the study. Informed written consent was obtained from the samples. Samples who fulfilled the inclusion criteria were selected using non probability convenient sampling technique. Structured questionnaire was used to collect the demographic data, Modified Pregnancy Experience Scale was used to assess the pregnancy experience and Modified Perinatal Anxiety Screening Scale was used to assess the anxiety. Maternal fetal bonding was assessed using Rating scale. The mother was asked about the present experience of pregnancy and to recollect the experience of her first and second trimester. Interview method used to obtain data from the primigravida. It took 30 to 40 minutes for collecting information from each sample.

PILOT STUDY RECOMMENDATION

There were no practical difficulties experienced in the sample selection. The tool was feasible and the main study was carried out without any modification of pilot study.

DATA COLLECTION METHOD

The data for the main study was collected from 02.12.2019 to 28.12.2019 at St. Isabel's Hospital, Voluntary Health Services Multispeciality Hospital and Sri Ranga Hospital, Chennai. After obtaining approval from the research committee in the college**,** permission was obtained from the concerned authorities to conduct the study. Mothers were explained about the purpose of the study and willingness to participate in the study was obtained in writing. Samples were selected using non probability convenient sampling techniques. Structured questionnaire was used to collect the demographic data, Modified Pregnancy Experience Scale was used to assess the pregnancy experience and Modified Perinatal Anxiety Screening Scale was used to assess the anxiety. Maternal Fetal Bonding was assessed using Rating scale. Mother was asked about the present experience of pregnancy and was asked to recollect the experience of her first and second trimester. Interview method was used to obtain data from the primigravida. It took 30 to 40 minutes for collecting information from each sample.

PLAN FOR DATA ANALYSIS

Data was analyzed using descriptive and inferential statistics.

Descriptive statistics

- Frequency and percentage distribution was used to describe the demographic variables, pregnancy experience, antenatal anxiety and maternal fetal bonding.

- Mean and standard deviation was used to compare the maternal fetal bonding in three trimesters.

Inferential statistics

- Correlation Coefficient was used to correlate the pregnancy experience, antenatal anxiety and maternal fetal bonding.
- t -test was used to compare the maternal fetal bonding in three trimesters.
- Chi-square was used to associate the pregnancy experience, antenatal anxiety and maternal fetal bonding with the selected demographic variables.

CHAPTER - 4
DATA ANALYSIS & INTERPRETATION

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

Data analysis and interpretation is the core step in research process. The importance of analysis and interpretation of collected data is to systematically organize, classify and summarize it, so that the results can be interpreted and comprehended to give all the answers that triggered the research. In this chapter detailed analysis of the collected data has been done as per the objectives stated earlier.

The data obtained were classified and is presented under the following sections.

SECTION-I: Frequency and percentage distribution of the primigravida based on the demographic variables.

SECTION-B: Assessment of pregnancy experience, antenatal anxiety and maternal fetal bonding among primigravida.

SECTION-C: Correlation of pregnancy experience, antenatal anxiety and maternal fetal bonding among primigravida.

SECTION-D: Comparison of the pregnancy experience, antenatal anxiety and maternal fetal bonding among the trimesters among primigravida**.**

SECTION-E: Association of pregnancy experience, antenatal anxiety and maternal fetal bonding with demographic variables of the primigravida.

SECTION I

TABLE 1: FREQUENCY AND PERCENTAGE DISTRIBUTION OF PRIMIGRAVIDA BASED ON THE DEMOGRAPHIC VARIABLES.

Table 1.1 Frequency and percentage distribution of primigravida based on age in years, educational status, occupational status during pregnancy and type of family.

N=120

S.No.	DEMOGRAPHIC VARIABLES	FREQUENCY (F)	PERCENTAGE (%)
1.	**Age in years**		
	a. 21yrs - 25 years	50	41.7
	b. 26 yrs - 30 years	60	50.0
	c. 31 yrs -35 years	10	08.3
2.	**Educational status**		
	a. No formal education	0	00.0
	b. Literate	120	100.0
	If literate,		
	i. Primary	1	00.8
	ii. Secondary	5	04.2
	iii. Higher secondary	5	04.2
	iv. Graduate	99	82.5
	v. Post Graduate	10	08.3
3.	**Occupational Status during pregnancy**		
	a. Unemployed	73	60.8
	b. Employed	47	39.2
	if employed,		
	i. Government	4	08.5
	ii. Private	39	83.0
	iii. Daily wages	1	02.1
	iv. Business	3	06.4
4.	**Type of family**		
	a. Nuclear family	60	50.0
	b. Joint family	58	48.3
	c. Extended family	02	01.7

Table 1.1 shows that, majority (50%) of the primigravidas were in the age group of 26-30 years and all the primigravidas were literate in that 4.2% had secondary education, 4.2% had higher secondary and 82.5% were degree holders. Majority (60.8%) of the primigravidas were unemployed and 50% of the primigravidas were from nuclear family.

Fig.No: 3. Percentage distribution of the primigravida based on age in years.

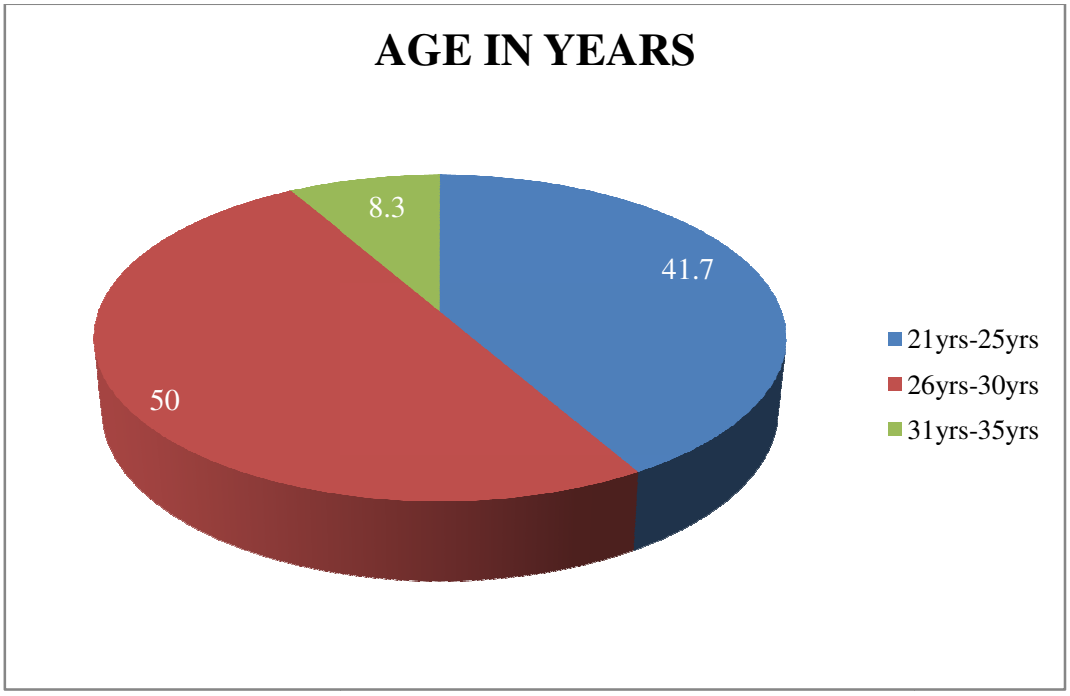


Fig. No: 4. Percentage distribution of the primigravida based on education.

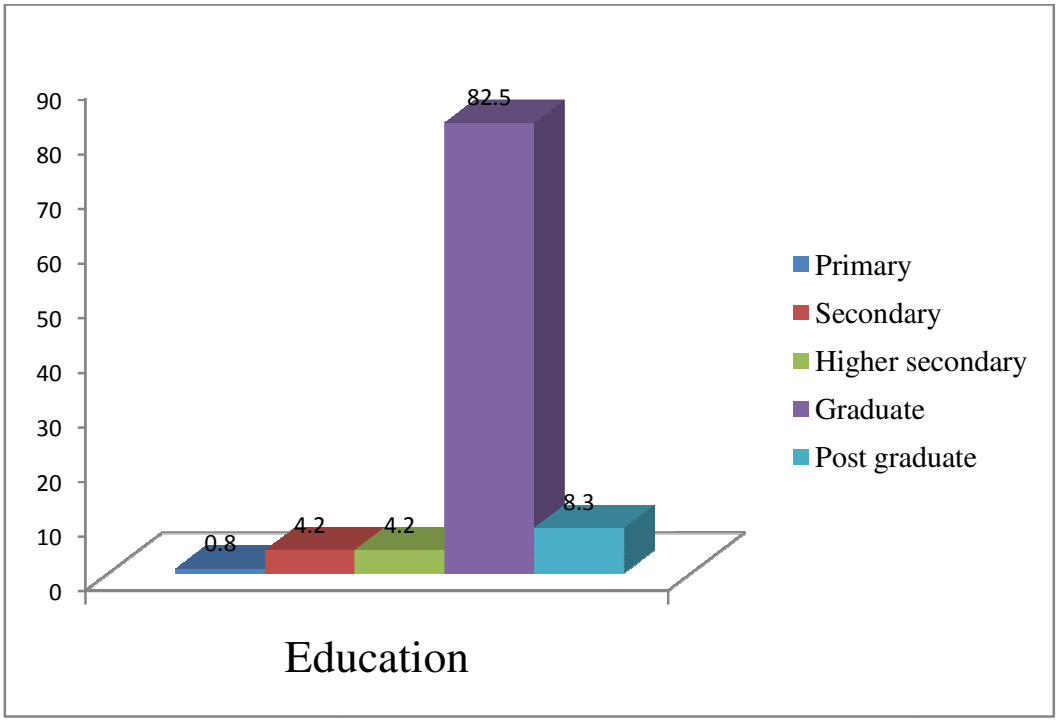


Fig.No: 5. Percentage distribution of the primigravida based on occupational status during pregnancy.

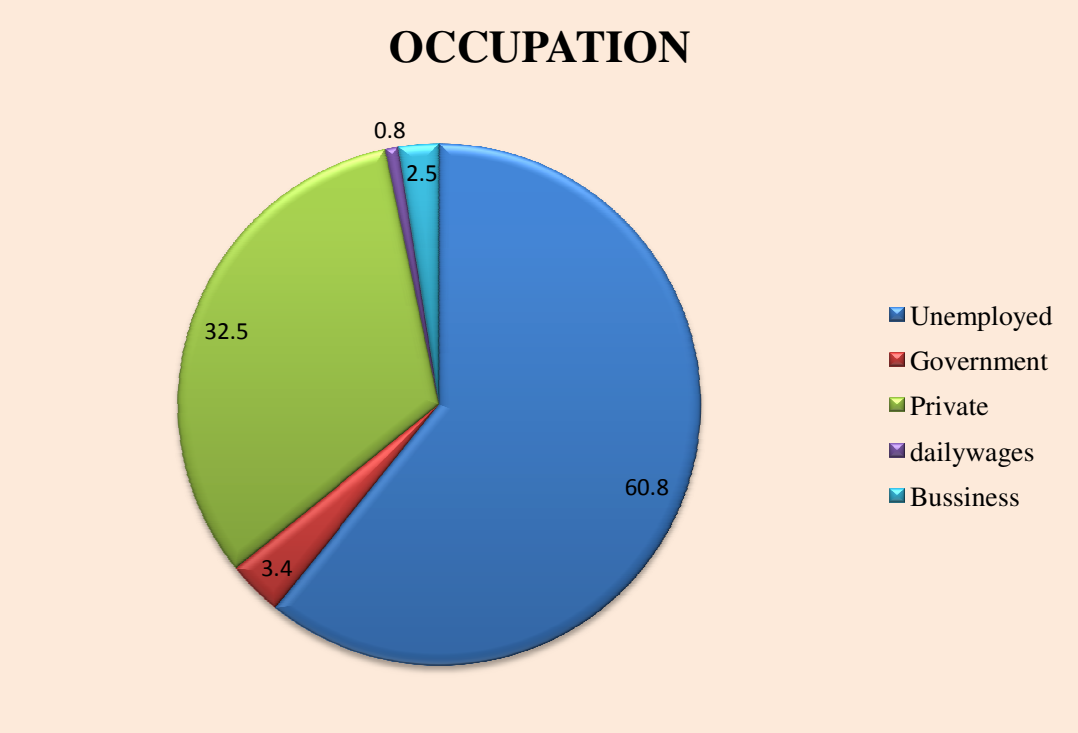


Fig. No: 6. Percentage distribution of the primigravida based on type of family.

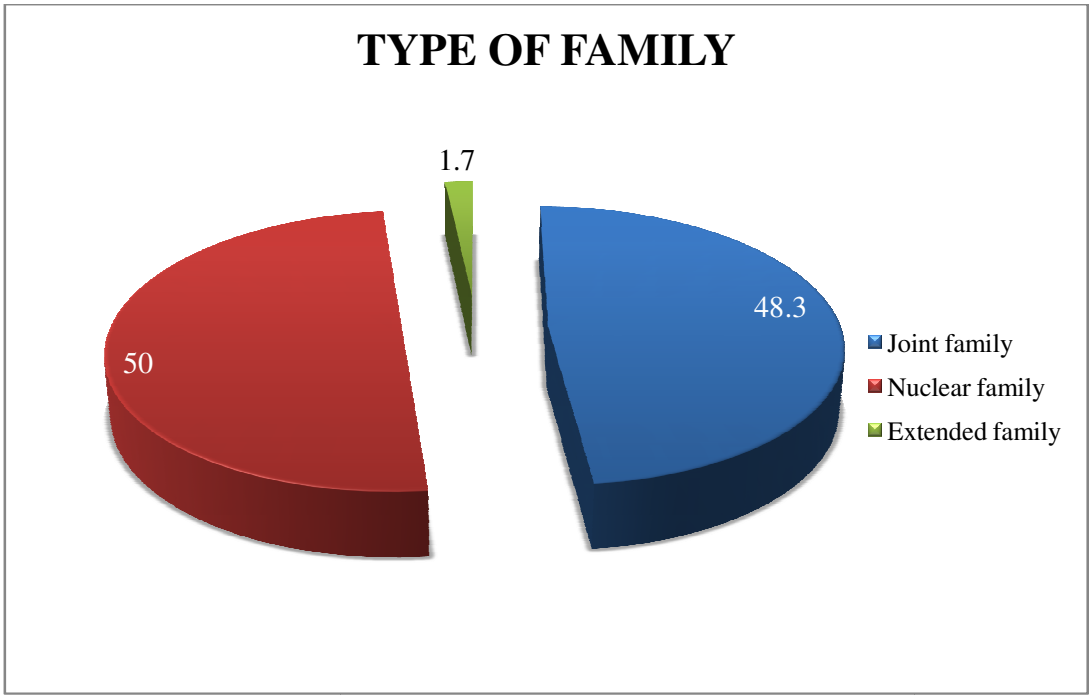


Table 1.2: Frequency and percentage distribution of the primigravida based on the marital life, type of marriage, area of residence, income per month, planned pregnancy and gestational weeks.

N=120

S.No.	DEMOGRAPHIC VARIABLES	FREQUENCY (F)	PERCENTAGE (%)
5.	**Marital life**		
	a. Less than 1 year	42	35.0
	b. 1-3 years	60	50.0
	c. More than 3 years	18	15.0
6.	**Type of marriage**		
	a. Consanguineous marriage	23	19.2
	b. Non consanguineous marriage	97	80.8
7.	**Area of residence**		
	a. Urban	108	90.0
	b. Rural	12	10.0
8.	**Family monthly income**		
	a. Less than Rs.15000	23	19.2
	b. Rs. 15000- Rs. 25000	50	41.6
	c. More than Rs. 25000	47	39.2
9.	**Was this pregnancy planned**		
	a. Yes	92	76.7
	b. No	28	23.3
10.	**Weeks of gestation**		
	a. 25 to 28 weeks	17	14.2
	b. 29 to 32 weeks	27	22.5
	c. 33 to 36 weeks	55	45.8
	d. > 36weeks	21	17.5

Table 1.2 shows that majority 50% of the primigravidas were married since 1 to 3 years and 80.8% of the primigravidas had non consanguineous marriage. Majority (90%) of the primigravidas were from the urban area and 41.6% of the primigravidas had monthly income of Rs 15000-25000. Majority (76.7%) of the primigravidas had planned pregnancy. Majority (45.8%) of the primigravidas were between 33 to 36 weeks of gestation.

Fig.No.7: Percentage distribution of the primigravida based on marital life.

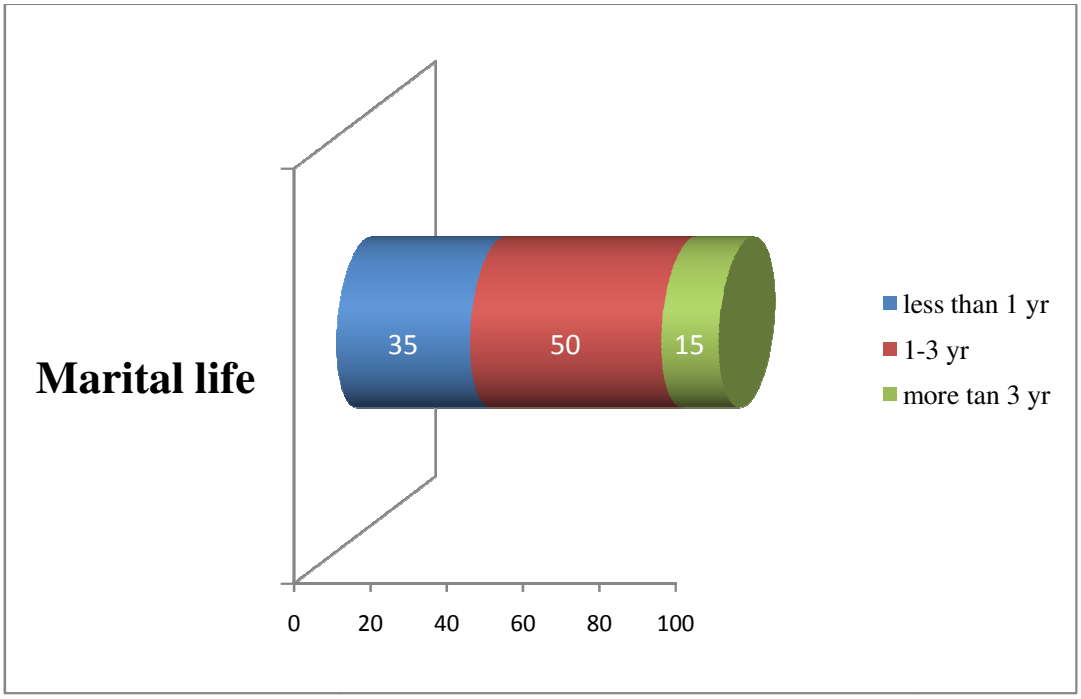
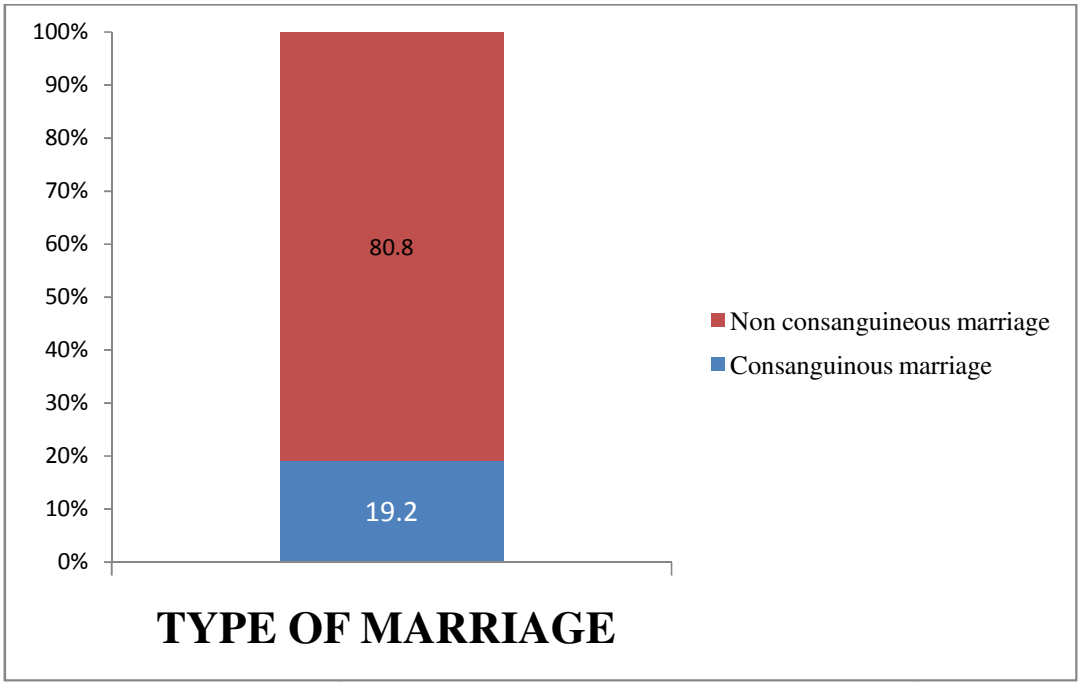


Fig.No: 8: Percentage distribution of the primigravida based on type of marriage.



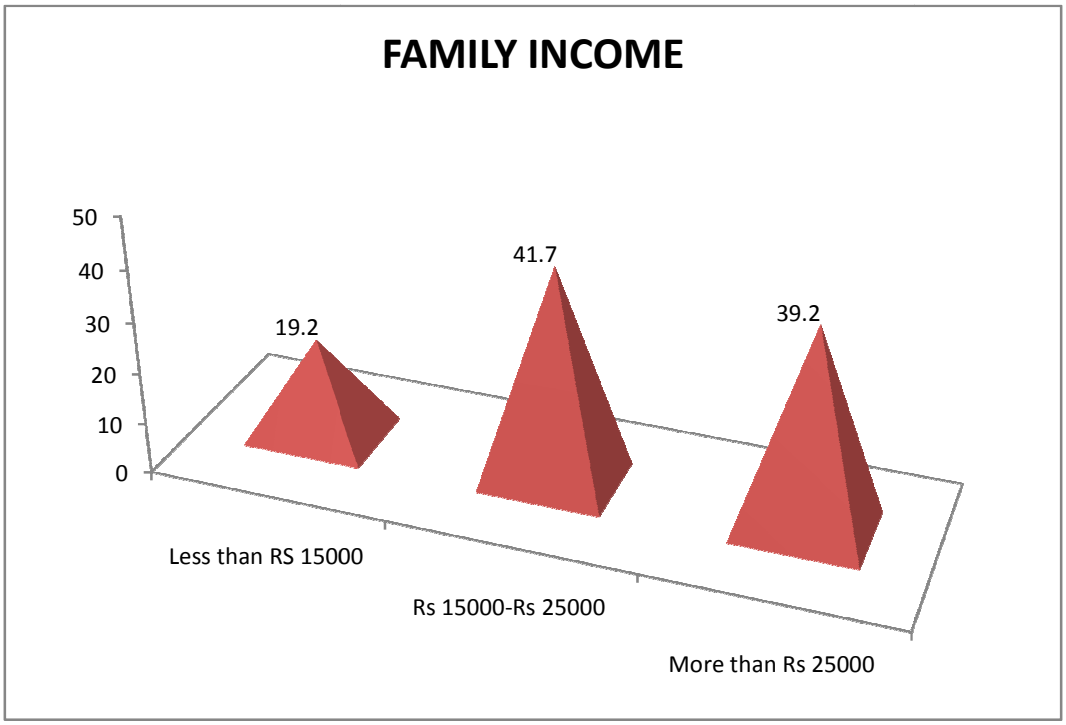


Fig.No: 9: Percentage distribution of the primigravida based on family income

Fig.No.10: Percentage distribution of area of residence

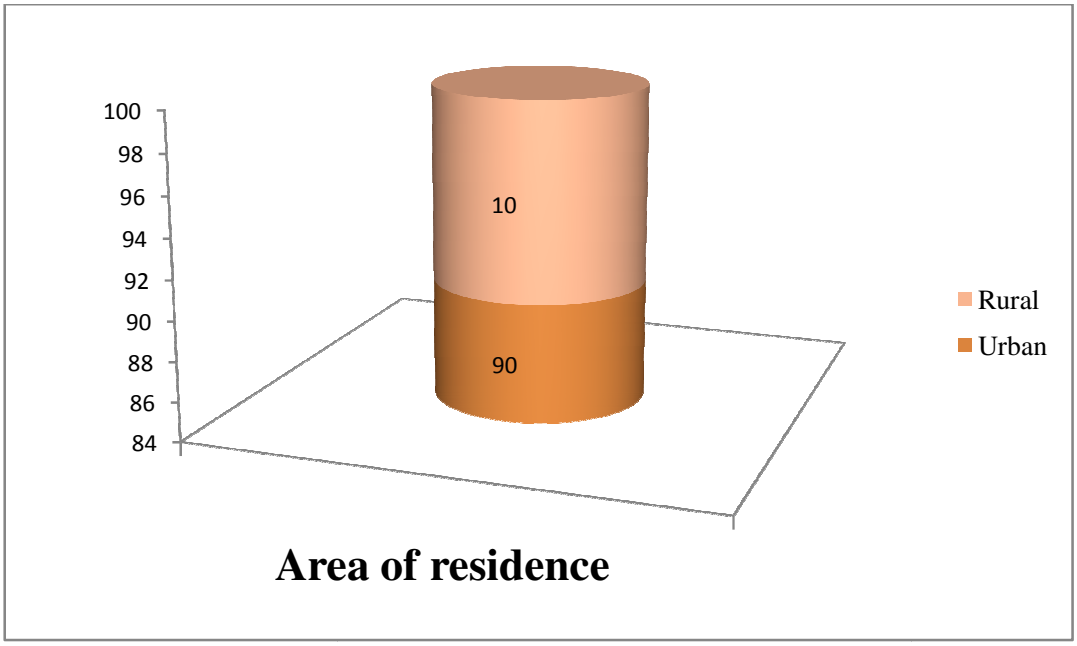


Fig.No. 11: Percentage distribution of planned pregnancy

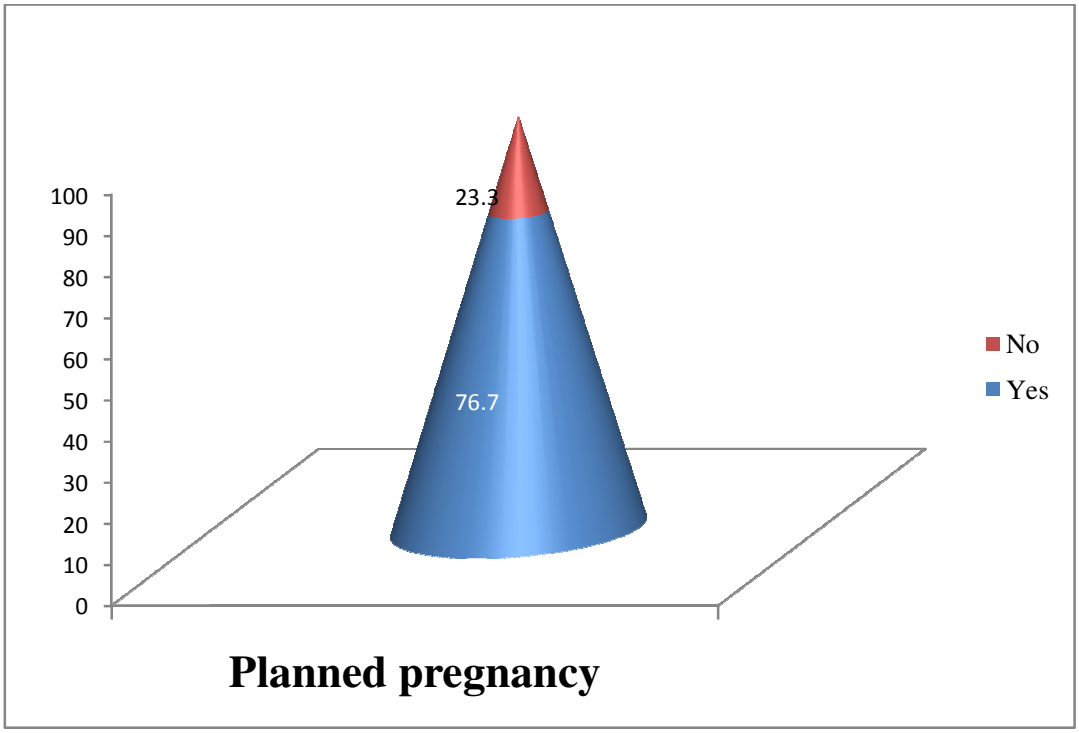
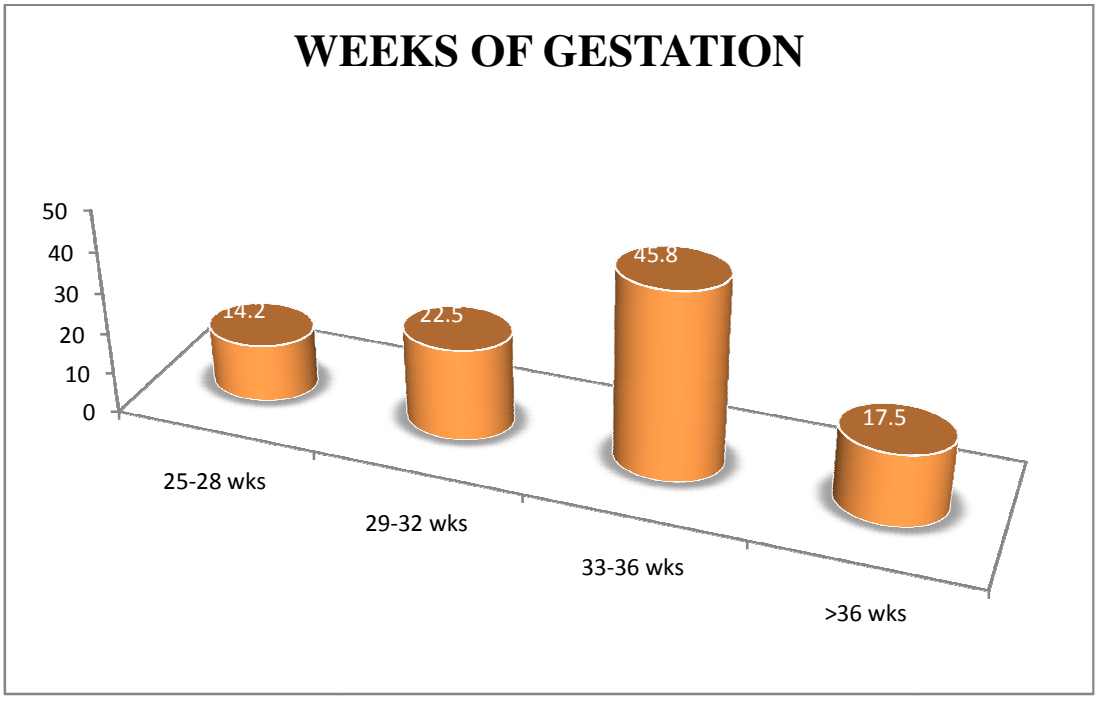


Fig. No. 12: Percentage distribution of weeks of gestation



SECTION II

TABLE 2: ASSESSMENT OF PREGNANCY EXPERIENCE, ANTENATAL ANXIETY AND MATERNAL FETAL BONDING AMONG PRIMIGRAVIDA

Table 2.1 Frequency and percentage distribution of primigravida based on pregnancy experience

N=120

S. No.	PREGNANCY EXPERIENCE	POOR EXPERIENCE		FAIR EXPERIENCE		GOOD EXPERIENCE	
		F	%	F	%	F	%
1	First trimester	2	1.7	52	43.3	66	55.0
2	Second trimester	1	0.8	45	37.5	74	61.7
3	Third trimester	4	3.3	51	42.5	65	54.2
4	Overall Score	1	0.8	21	17.5	98	81.7

Table 2.1 shows that in the first trimester, majority (55%) of the primigravidas had good experience. In the second trimester, majority (61.7%) of the primigravidas had good experience. In the third trimester, majority (54.2%) of the primigravidas had good experience. The overall score showed that majority (81.7%) of the primigravidas had good experience, 17.5% of primigravidas had fair experience and only 0.8% of the primigravidas had poor experience.

Fig.No.13. Percentage distribution of primigravida based on pregnancy experience

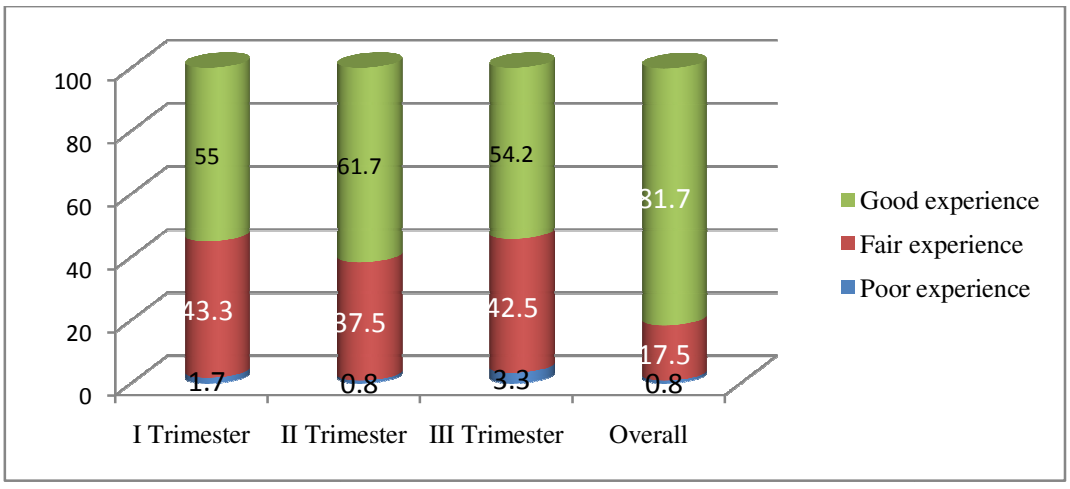


Table 2.2 Frequency and percentage distribution of the primigravida based on antenatal anxiety **N=120**

S. No.	ANTENATAL ANXIETY	MILD ANXIETY		MODERATE ANXIETY		SEVERE ANXIETY	
		F	%	F	%	F	%
1	First trimester	40	33.3	78	65.0	2	1.7
2	Second trimester	55	45.8	63	52.5	2	1.7
3	Third trimester	58	48.3	61	50.8	1	0.8
4	Overall Score	40	33.3	80	66.7	00	0.0

Table 2.2 shows that in the first trimester, majority (65%) of the primigravidas had moderate anxiety. In the second trimester, majority (52.5%) of the primigravidas had moderate anxiety. In the third trimester, majority (50.8%) of the primigravidas had moderate anxiety. The overall score showed that majority (66.7%) of the primigravidas had moderate anxiety and 33.3% of primigravidas had mild anxiety.

Fig.No. 14. Percentage distribution of primigravida based on antenatal anxiety

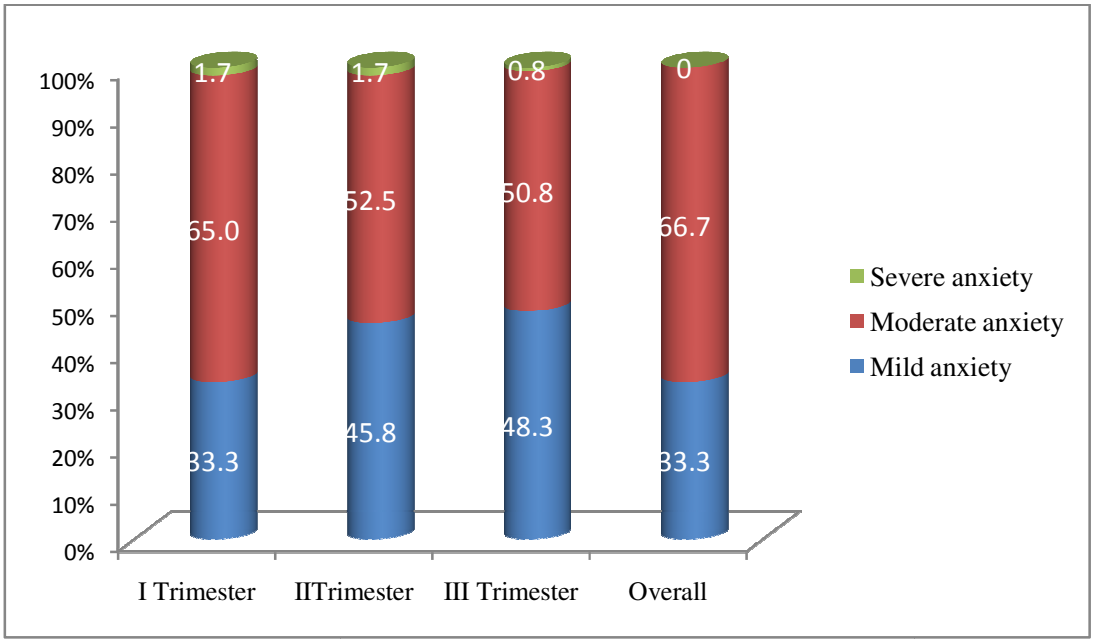


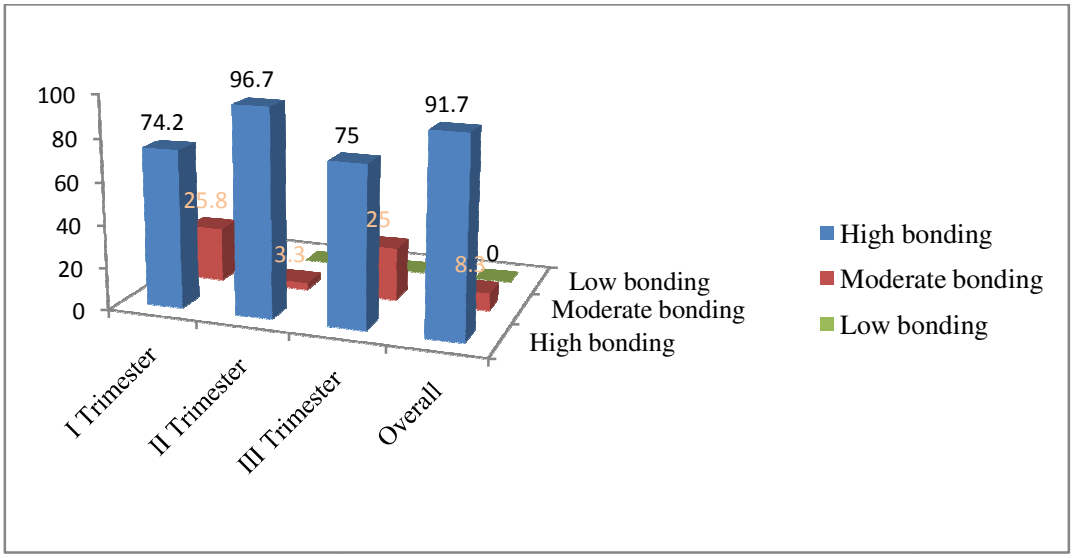
Table 2.3 Frequency and percentage distribution of the primigravida based on the maternal fetal bonding over trimesters

N=120

S. No.	MATERNAL FETAL BONDING	HIGH BONDING		MODERATE BONDING		LOW BONDING	
		F	%	F	%	F	%
1	First trimester	89	74.2	31	25.8	00	0.0
2	Second trimester	116	96.7	04	03.3	00	0.0
3	Third trimester	90	75.0	30	25.0	00	0.0
4	Overall Score	110	91.7	10	08.3	00	0.0

Table 2.3 shows that in the first trimester, majority (74.2%) of the primigravidas had high maternal fetal bonding. In the second trimester, majority (96.7%) of the primigravidas had high maternal fetal bonding. In the third trimester, majority (75%) of the primigravidas had high maternal fetal bonding. The overall score showed that majority (91.7%) of the primigravidas had high maternal fetal bonding and only 8.3% of primigravidas had moderate bonding.

Fig. No. 15. Percentage distribution of primigravida based on maternal fetal bonding



SECTION III

TABLE 3: CORRELATION OF PREGNANCY EXPERIENCE, ANTENATAL ANXIETY AND MATERNAL FETAL BONDING AMONG THE TRIMESTERS AMONG PRIMIGRAVIDA.

N = 120

S.No.	VARIABLES	CORRELATION COEFFICIENT VALUE			
		I trimester	II trimester	III trimester	Overall
1.	Pregnancy experience & Antenatal anxiety	r = 0.259 p = 0.004 **S	r = 0.165 p = 0.0717 NS	r = 0.137 p = 0.135 NS	r = 0.247 p = 0.007 **S
2.	Antenatal anxiety & Maternal Fetal bonding	r = 0.246 p = 0.0067 **S	r = -0.119 p = 0.195 NS	r = 0.062 p = 0.501 NS	r = 0.147 p = 0.109 NS
3.	Pregnancy experience & Maternal Fetal bonding	r = 0.283 p = 0.0017 **S	r = -0.12 p= 0.19 NS	r = 0.007 p = 0.939 NS	r = 0.041 p = 0.655 NS

***p<0.05, **p<0.01, ***p<0.001 S – significant NS – not significant**

Table 3 shows that there was a weak positive correlation between pregnancy experience and antenatal anxiety (r= 0.259), antenatal anxiety and MFB (r=0.246), pregnancy experience and MFB (r=0.283) in the first trimester and overall pregnancy experience and antenatal anxiety (r=0.247) which were significant at p<0.01 level of significance.

There was no correlation between pregnancy experience antenatal anxiety and MFB in the second & third trimesters.

SECTION IV

TABLE 4: COMPARISON OF THE PREGNANCY EXPERIENCE, ANTENTAL ANXIETY AND MATENAL FETAL BONDING AMONG THE TRIMESTERS AMONG PRIMIGRAVIDA.

N = 120

S.No.	Variables	Mean	Standard deviation	Mean difference	Paired 't' test
Pregnancy experience					
1	First trimester Second trimester	5.33 4.68	1.225 0.927	2.11	t = 5.245 p =<0.00001 ***S
2	Second trimester Third trimester	4.68 5.50	0.927 1.283	1.84	t = -6.914 p =<0.00001 ***S
3	First trimester Third trimester	5.33 5.50	1.225 1.283	0.27	t = 1.168 p = 0.245 NS
Antenatal anxiety					
1	First trimester Second trimester	8.38 6.27	2.531 2.431	2.11	t = 9.934 p =<0.00001 ***S
2	Second trimester Third trimester	6.27 8.11	2.431 3.325	1.84	t = -7.272 p =<0.00001 ***S
3	First trimester Third trimester	8.38 8.11	2.531 3.235	0.27	t = 0.902 p =<0.01 **S
Maternal Fetal Bonding					
1	First trimester Second trimester	14.65 18.12	2.278 1.911	3.47	t = -16.32 p =<0.00001 ***S
2	Second trimester Third trimester	18.12 15.86	1.911 2.367	2.26	t = 10.79 p =<0.00001 ***S
3	First trimester Third trimester	14.65 15.86	2.278 2.367	0.089	t = 4.7 p =<0.00001 ***S

***p<0.05, **p<0.01, ***p<0.001 S – significant NS – not significant**

Table 4 shows that the pregnancy experience mean score for first trimester was 5.33 with a standard deviation of 1.225, second trimester was 4.68 with a standard

deviation of 0.927 and third trimester was 5.50 with the standard deviation of 1.283. The calculated paired t test value for the first and second trimester was 5.245 and second and third trimester was -6.914 which was significant at $p<0.001$ level of significance and for third and first trimester was 1.168 which was not significant.

The antenatal anxiety mean score for the first trimester was 8.38 with a standard deviation of 2.531, second trimester was 6.27 with a standard deviation of 2.431 and third trimester was 8.11 with the standard deviation of 3.235. The calculated paired t test value for the first and second trimester was 9.934, second and third trimester was -7.272 which was significant at $p<0.001$ level of significance and for third and first trimester was 0.902 which was significant at $p<0.01$ level of significance.

The MFB mean score for the first trimester was 14.65 with a standard deviation of 2.278, second trimester was 18.12 with a standard deviation of 1.911 and third trimester was 15.86 with the standard deviation of 2.367. The calculated paired t test value for the first and second trimester was -16.32, second and third trimester was 10.79 and third and first trimester was 4.7 which was significant at $p<0.001$ level of significance.

SECTION V

TABLE 5: ASSOCIATION OF PREGNANCY EXPERIENCE, ANTENATAL ANXIETY AND MATERNAL FETAL BONDING WITH DEMOGRAPHIC VARIABLES OF THE PRIMIGRAVIDA.

Table 5.1: Association of pregnancy experience with age, educational and occupational status during pregnancy and type of family among primigravida.

N=120

S. No	DEMOGRAPHIC VARIABLES.	Pregnancy experience						Chi square Test
		Poor Experience		Fair Experience		Good Experience		
		(F)	(%)	(F)	(%)	(F)	(%)	
1.	**Age in years**							χ^2=4.136
	a. 21 - 25 years	1	0.8	6	5.0	43	35.8	d.f=4
	b. 26 - 30 years	0	0.0	14	11.7	46	38.4	p=0.38
	c. 31 -35 years	0	0.0	1	0.8	9	7.5	NS
2.	**Educational status**							
	a. No formal education	0	0.0	0	0.0	0	0.0	
	b. Literate	1	0.8	21	17.5	98	81.7	
	If literate,							χ^2= 6.064
	i. Primary	0	0.0	1	0.8	0	0.0	d.f= 8
	ii. Secondary	0	0.0	1	0.8	4	3.33	p=0.64
	iii. Higher secondary	0	0.0	0	0.0	5	4.16	NS
	iv. Graduate	1	0.8	17	14.1	81	67.5	
	v. Post graduate	0	0.0	2	1.66	8	6.67	
3.	**Occupational Status during pregnancy**							
	a. Unemployed	1	0.8	12	10.0	60	50	χ^2=6.203
	b. Employed	0	0.0	9	7.5	38	31.7	d.f=8
	if employed,							p=0.624
	i. Government	0	0.0	1	0.8	3	2.5	NS
	ii. Private	0	0.0	6	5.0	33	27.5	
	iii. Daily wages	0	0.0	1	0.8	0	0.0	
	iv. Business	0	0.0	1	0.8	2	1.6	
4.	**Type of family**							χ^2=1.530
	a. Nuclear family	0	0.0	11	9.2	49	40.8	d.f=4
	b. Joint family	1	0.8	10	8.3	47	39.2	p=0.82
	c. Extended family	0	0.0	0	0.0	2	1.6	NS

p<0.05,**p<0.01,p=0.001 S – significant NS – Non-significant**.

Table 5.1 shows that there was no statistically significant association between pregnancy experience with age, educational and occupational status during pregnancy and type of family.

Table 5.2: Association of pregnancy experience with marital life, type of marriage, area of residence, income per month, planned pregnancy and weeks of gestation.

N=120

S. No	DEMOGRAPHIC VARIABLES.	Maternal experience						Chi square test
		Poor Experience		Fair Experience		Good Experience		
		(F)	(%)	(F)	(%)	(F)	(%)	
5.	**Marital life**							χ^2=8.983
	a. Less than 1 year	0	0.0	4	3.33	38	31.7	d.f=4
	b. 1-3 years	0	0.0	14	11.7	46	38.31	p=0.062
	c. More than 3 years	1	0.8	3	2.5	14	1.6	NS
6.	**Type of marriage**							χ^2=5.575
	a. Consanguineous marriage	1	0.8	2	1.6	20	16.7	d.f=2 p=0.06
	b. Non consanguineous marriage	0	0.0	19	15.8	78	65.0	NS
7.	**Area of residence**							χ^2=0.612
	a. Urban	1	0.8	18	15.0	89	74.2	d.f=2
	b. Rural	0	0.0	3	2.5	9	7.5	p=0.736 NS
8.	**Family monthly income**							χ^2=1.914
	a. Less than Rs.15000	0	0.0	4	3.33	19	15.83	d.f=4
	b. Rs. 15000- Rs. 25000	1	0.8	10	8.33	39	2.5	p=0.75
	c. More than Rs. 25000	0	0.0	7	5.83	40	33.3	NS
9.	**Was this pregnancy planned**							χ^2=0.593
	a. Yes	1	0.8	17	14.1	74	61.7	d.f=2
	b. No	0	0.0	4	3.33	24	20.0	p=0.743 NS
10.	**Weeks of gestation**							χ^2=1.671
	a. 25 to 28 weeks	0	0.0	2	1.6	15	12.5	d.f=6
	b. 29 to 32 weeks	0	0.0	5	4.2	22	18.3	p=0.947
	c. 33 to 36 weeks	1	0.8	10	8.3	44	36.7	NS
	d. > 36weeks	0	0.0	4	3.3	17	14.2	

p<0.05, **p<0.01,p=0.001 S – significant NS – Non-significant**.

Table 5.2 shows that there was no statistically significant association between pregnancy experience with marital life, type of marriage, area of residence, family monthly income, planned pregnancy and weeks of gestation.

Table 5.3: Association of antenatal anxiety with age, educational and occupational status during pregnancy and type of family among primigravida.

N=120

S. No.	Demographic Variables	Antenatal anxiety						Chi square test
		Mild Anxiety		Moderate Anxiety		Severe anxiety		
		(F)	(%)	(F)	(%)	(F)	(%)	
1.	**Age in years**							χ^2=2.1
	a. 21- 25 years	20	16.7	30	25	0	0.0	d.f=2
	b. 26 - 30 years	18	15	42	35	0	0.0	p=0.350
	c. 31 -35 years	2	1.7	8	6.6	0	0.0	NS
2.	**Educational status**							
	a. No formal education	0	0.0	0	0.0	0	0.0	
	b. Literate	40	33.3	80	66.7	0	0.0	χ^2=2.132
	If literate,							d.f=4
	i. Primary	0	0.0	1	0.8	0	0.0	p=0.712
	ii. Secondary	2	1.7	3	2.5	0	0.0	NS
	iii. Higher secondary	2	1.7	3	2.5	0	0.0	
	iv. Graduate	31	25.8	68	56.7	0	0.0	
	v. Other	5	4.17	5	4.2	0	0.0	
3.	**Occupational Status during pregnancy**							
	a. Unemployed	29	24.2	44	36.7	0	0.0	χ^2=3.814
	b. Employed	11	9.17	36	30	0	0.0	d.f=4
	if employed,							p=0.432
	i. Government	1	0.8	3	2.5	0	0.0	NS
	ii. Private	9	7.5	30	25.0	0	0.0	
	iii. Daily wages	0	0.0	1	0.8	0	0.0	
	iv. Business	1	0.8	2	1.7	0	0.0	
4.	**Type of family**							χ^2=5.162
	a. Nuclear family	22	18.3	38	31.7	0	0.0	d.f=2
	b. Joint family	16	13.3	42	35.0	0	0.0	p=0.076
	c. Extended family	0	0.0	2	1.70	0	0.0	NS

p<0.05,**p<0.01,p=0.001 S – significant NS – Non-significant**.

Table 5.3 shows that there was no statistically significant association between antenatal anxiety with age, educational and occupational status during pregnancy and type of family.

Table 5.4: Association of antenatal anxiety with marital life, type of marriage, area of residence, income per month, planned pregnancy and weeks of gestation.

N=120

S. No.	Demographic Variables	Antenatal anxiety						Chi square test
		Mild anxiety		Moderate anxiety		Severe anxiety		
		(F)	(%)	(F)	(%)	(F)	(%)	
5.	**Marital life**							χ^2=5.2 d.f=2 p=0.074 NS
	a. Less than 1 year	14	11.7	28	23.3	0	0.0	
	b. 1-3 years	16	13.3	44	36.7	0	0.0	
	c. More than 3 years	10	8.33	8	6.67	0	0.0	
6.	**Type of marriage**							χ^2=.027 d.f=1 p=0.87 NS
	a. Consanguineous marriage	8	6.67	15	12.5	0	0.0	
	b. Non consanguineous marriage	32	26.7	65	54.2	0	0.0	
7.	**Area of residence**							χ^2=3.750 d.f=1 p=0.05 ***S**
	a. Urban	33	27.5	75	62.5	0	0.0	
	b. Rural	7	5.83	5	4.16	0	0.0	
8.	**Family monthly income**							χ^2=3.395 d.f=2 p=0.183 NS
	a. Less than Rs.15000	11	9.17	12	10.0	0	0.0	
	b. 15000- Rs. 25000	13	10.9	37	30.8	0	0.0	
	c. More than Rs. 25000	16	13.3	31	25.8	0	0.0	
9.	**Was this pregnancy planned**							χ^2=4.565 d.f=1 p=0.33 NS
	a. Yes	26	21.7	66	55.0	0	0.0	
	b. No	14	11.7	14	11.7	0	0.0	
10.	**Weeks of gestation**							χ^2=2.610 d.f=3 p=0.456 NS
	a. 25 to 28 weeks	8	6.67	9	7.50	0	0.0	
	b. 29 to 32 weeks	10	8.33	17	14.2	0	0.0	
	c. 33 to 36 weeks	17	14.2	38	31.7	0	0.0	
	d. > 36weeks	5	4.16	16	13.3	0	0.0	

p<0.05, **p<0.01,p=0.001 S – significant NS – Non-significant**.

Table 5.4 shows that there was no statistically significant association between antenatal anxiety with marital life, type of marriage, family monthly income, planned pregnancy and weeks of gestation. There was a statistically significant association between antenatal anxiety with area of residence at p<0.05 level of significance.

Table 5.5: Association of maternal fetal bonding with age, education, occupational status during pregnancy and type of family among primigravida.

N=120

S. No.	Demographic Variables	Maternal fetal bonding						Chi square Test
		Low bonding		Moderate bonding		High bonding		
		(F)	(%)	(F)	(%)	(F)	(%)	
1.	**Age in years**							χ^2=1.091
	a. 21 - 25 years	0	0.0	5	4.17	45	37.5	d.f=2
	b. 26 - 30 years	0	0.0	5	4.17	55	45.8	p=0.580
	c. 31 -35 years	0	0.0	0	0.0	10	8.3	NS
2.	**Educational status**							
	a. No formal education	0	0.0	0	0.0	0	0.0	
	b. Literate	0	0.0	10	8.3	110	91.7	
	If literate,							χ^2=2.790
	i. Primary	0	0.0	0	0.0	1	0.8	d.f=4
	ii. Secondary	0	0.0	0	0.0	5	4.17	p=0.594
	iii. Higher secondary	0	0.0	0	0.0	5	4.17	NS
	iv. Graduate	0	0.0	8	6.7	91	75.8	
	v. Other	0	0.0	2	1.7	8	6.7	
3.	**Occupational Status during pregnancy**							
	a. Unemployed	0	0.0	8	6.7	65	54.2	χ^2=1.911
	b. Employed	0	0.0	2	1.7	45	37.5	d.f=4
	if employed,							p=0.752
	i. Government	0	0.0	0	0.0	4	3.33	NS
	ii. Private	0	0.0	2	1.7	37	30.8	
	iii. Daily wages	0	0.0	0	0.0	1	0.8	
	iv. Business	0	0.0	0	0.0	3	2.5	
4.	**Type of family**							χ^2=0.707
	a. Nuclear family	0	0.0	4	3.3	56	46.7	d.f=2
	b. Joint family	0	0.0	6	5.0	52	43.3	p=0.702
	c. Extended family	0	0.0	0	0.0	2	1.7	NS

p<0.05, **p<0.01,p=0.001 S – significant NS – Non-significant**.

Table 5.5 shows that there was no statistically significant association between maternal fetal bonding with age, educational and occupational status during pregnancy and type of family.

Table 5.6: Association of maternal fetal bonding with marital life, type of marriage, area of residence, income per month, planned pregnancy, and gestational weeks.

N=120

S. No.	Demographic Variables	Maternal fetal bonding						Chi square Test
		Low Bonding		Moderate bonding		High bonding		
		(F)	(%)	(F)	(%)	(F)	(%)	
5.	**Marital life**							χ^2=1.101
	a. Less than 1 year	0	0.0	5	4.2	37	30.8	d.f=2
	b. 1-3 years	0	0.0	4	3.3	56	46.7	p=0.577
	c. More than 3 years	0	0.0	1	0.8	17	14.2	NS
6.	**Type of marriage**							χ^2=3.056
	a. Consanguineous marriage	0	0.0	4	3.3	19	15.8	d.f=1
	b. Non consanguineous marriage	0	0.0	6	5.0	91	75.8	p=0.080 NS
7.	**Area of residence**							χ^2=10.90
	a. Urban	0	0.0	6	5.0	102	85.0	d.f=1
	b. Rural	0	0.0	4	3.3	8	6.7	p=0.001 ***S
8.	**Family monthly income**							χ^2=.420
	a. Less than Rs.15000	0	0.0	2	1.7	21	17.5	d.f=2
	b. 15000- Rs. 25000	0	0.0	5	4.2	45	37.5	p=0.811
	c. More than Rs. 25000	0	0.0	3	2.5	44	36.7	NS
9.	**Was this pregnancy planned**							χ^2=4.337
	a. Yes	0	0.0	5	4.2	87	72.5	d.f=1
	b. No	0	0.0	5	4.2	23	19.2	p=0.037 *S
10.	**Weeks of gestation**							χ^2=1.848
	a. 25 to 28 weeks	0	0.0	2	1.7	15	12.5	d.f=3
	b. 29 to 32 weeks	0	0.0	1	0.8	26	21.7	p=0.605
	c. 33 to 36 weeks	0	0.0	6	5.0	49	40.8	NS
	d. > 36weeks	0	0.0	1	0.8	20	16.7	

p<0.05, **p<0.01,p=0.001 S – significant NS – Non-significant**.

Table 5.6 shows that there was no statistically significant association between maternal fetal bonding with marital life, type of marriage, family monthly income and weeks of gestation. There was statistically significant association between maternal fetal bonding with area of residence at p<0.001 level of significance and with planned pregnancy at p<0.05 level of significance.

CHAPTER - 5
DISCUSSION

CHAPTER V

DISCUSSION

The aim of the present study was to correlate the perception of pregnancy and maternal fetal bonding among primigravida in selected hospital, Chennai.

A total of 120 samples were selected by non probability convenient sampling method. Data on demographic variables, pregnancy experience, antenatal anxiety and maternal fetal bonding were collected by using structured interview schedule. The collected data were tabulated and analyzed using descriptive and inferential statistics and the results were interpreted. The discussion was based on the objectives specified in the study.

The significant findings of the study were as follows

In relation to demographic variables

Majority (50%) of the primigravidas were in the age group of 26-30 years, 41.7% of the primigravidas were between the age of 21yrs - 25 yrs and 0.83% of the primigravidas were in the age group of 31 yrs -35 yrs. All the primigravidas were literate in that most of the primigravidas (82.5%) were degree holders, 8.3% were postgraduates, and each 4.2% had higher secondary and secondary education. Majority (60.8%) of the primigravidas were unemployed and 39.2% of the primigravidas were employed in that 83% were working in the private sector, 8.5% were government employees, 6.4% were doing business and only 2.1% were daily wages. Most (50%) of the primigravidas were from nuclear family, 48.3% were from joint family and 1.7% was from extended family.

Majority (50%) of the primigravida's marital life was between 1-3 years, 35% of the primigravida's marital life was less than 1 year and 15% of the primigravida's marital life was more than 3 years. Majority (80.8%) of the primigravidas had non consanguineous marriage and 19.2% had consanguineous marriage. Most (90 %) of the primigravidas were residing in urban area and only 10% were from rural area. Majority (41.6%) of the primigravida's family income is between 15,000 to 25,000, 39.2% of the primigravida's family income was more than 25,000 and 19.2% of the primigravida's family income was less than 15,000. Majority (76.7%) of the primigravidas had planned their pregnancy and 23.3% had not planned their pregnancy. Most (45.8%) of the primigravida's gestational age was between 33-36 weeks, 22.5% of the primigravidas was between 29- 32 weeks of gestation, 17.5% of the primigravida's gestational age was more than 36 weeks and 14.2% of the primigravida's gestational age was between 25 to 28 weeks.

The results of the study were discussed as per objectives:

The first objective was to assess the pregnancy experience, antenatal anxiety and maternal fetal bonding among primigravida.

Table 2.1 shows that in the first trimester, majority (55%) of the primigravidas had good experience. In the second trimester, majority (61.7%) of the primigravidas had good experience. In the third trimester, majority (54.2%) of the primigravidas had good experience. The overall score showed that majority (81.7%) of the primigravidas had good experience, 17.5% of primigravidas had fair experience and only 0.8% of the primigravidas had poor experience. The percentage of primigravidas with good experience was higher in second trimester when compared to first and third trimester.

Table 2.2 shows that in the first trimester, majority (65%) of the primigravidas had moderate anxiety. In the second trimester, majority (52.5%) of the primigravidas had moderate anxiety. In the third trimester, majority (50.8%) of the primigravidas had moderate anxiety. The overall score showed that majority (66.7%) of the primigravidas had moderate anxiety and 33.3% of primigravidas had mild anxiety. The percentage of primigravidas with moderate anxiety was higher in first trimester followed by second and third trimester.

The finding of this study, that the primigravida had mild to moderate level of anxiety was in conformity with the descriptive cross-sectional study to assess the level of prenatal anxiety among pregnant women by Binita, et. al., (2019). The study findings revealed that majority (39.5%) of the respondents were primigravida and 42.1% had reported mild to moderate level of anxiety. The study concluded that the prenatal anxiety has relation with the gravid status of pregnant women

Table 2.3 shows that in the first trimester, majority (74.2%) of the primigravidas had high maternal fetal bonding. In the second trimester, majority (96.7%) of the primigravidas had high maternal fetal bonding. In the third trimester, majority (75%) of the primigravidas had high maternal fetal bonding. The overall score showed that majority (91.7%) of the primigravida had high maternal fetal bonding and only 8.3% of primigravidas had moderate bonding. The percentage of primigravidas with high maternal fetal bonding was higher in second trimester when compared first and third trimester.

The above findings were supported by a cross sectional study to assess the maternal fetal attachment behaviour and some related factors conducted by Jamshidimanesh, et. al. (2013). The study findings showed that the mothers had good attachment toward their fetus. The race, higher maternal age, planned pregnancy, sex of the fetus and assessing health of the fetus had positive effects on prenatal attachment.

The second objective was to correlate the pregnancy experience, antenatal anxiety and maternal fetal bonding among primigravida

Table 3 shows that there was a weak positive correlation between pregnancy experience and antenatal anxiety (r= 0.259), antenatal anxiety and MFB (r=0.246), pregnancy experience and MFB (r=0.283) in the first trimester and overall pregnancy experience and antenatal anxiety (r=0.247) which were significant at $p<0.01$ level of significance. There was no correlation between pregnancy experience antenatal anxiety and MFB in the second & third trimesters. Hence, the assumption stated that the negative the pregnancy experience poor the maternal fetal bonding was not supported.

The third objective was to compare the pregnancy experience, antenatal anxiety and maternal fetal bonding among three trimesters.

Table 4 shows that the pregnancy experience mean score for first trimester was 5.33 with a standard deviation of 1.225, second trimester was 4.68 with a standard deviation of 0.927 and third trimester was 5.50 with the standard deviation of 1.283. The calculated paired t test value for the first and second trimester was 5.245 and second and third trimester was -6.914 which was significant at $p<0.001$ level of significance and for third and first trimester was 1.168 which was not significant.

The antenatal anxiety mean score for the first trimester was 8.38 with a standard deviation of 2.531, second trimester was 6.27 with a standard deviation of 2.431 and third trimester was 8.11 with the standard deviation of 3.235. The calculated paired t test value for the first and second trimester was 9.934, second and third trimester was -7.272 which was significant at $p<0.001$ level of significance and for third and first trimester was 0.902 which was significant at $p<0.01$ level of significance.

The finding of the study supported that the mean anxiety score is higher in third trimester compared to first and second trimester. Krishna, P., et. al., (2017) conducted a cross sectional study to investigate the antenatal anxiety across all three trimesters of pregnancy. The results showed that the mean anxiety score for the first, second and third trimester were 10.74, 11.69 and 14.20 respectively. The study concluded that, significantly higher anxiety score during third trimester when compared to first trimester.

The MFB mean score for the first trimester was 14.65 with a standard deviation of 2.278, second trimester was 18.12 with a standard deviation of 1.911 and third trimester was 15.86 with the standard deviation of 2.367. The calculated paired t test value for the first and second trimester was -16.32, second and third trimester was 10.79 and third and first trimester was 9.934 which was significant at $p<0.001$ level of significance.

The findings of this study fit with the Reva Rubin's Maternal Role Attainment theory (1967) which addresses the maternal role identity. The model consists of three activities of incorporating role identity. These include Taking- In activities, Taking - On activities and Letting- go activities.

Based on this theory, the mother often experience fear, concentrates on her own needs more than the fetus and the mother is passive and dependent during taking-in activities. This can occur in first trimester of pregnancy which indicates that the pregnancy events would be more, anxiety is expected to be high and maternal fetal bonding is expected to be low in this trimester. The finding of this study was in conformity with this theoretical concept where the mean pregnancy experience score was 5.33, mean antenatal anxiety score was 8.38 which was the highest among all the trimesters and mean maternal fetal bonding score was 14.65 which was the least among all the trimesters.

In taking-on activities, the mother becomes independent, focuses on the fetus and self care activities. This can occur during the second trimester which indicates that the pregnancy events would be less, antenatal anxiety will be less and maternal fetal bonding is expected to be high in this trimester. The finding of this study was in conformity with this theoretical concept where the mean pregnancy experience score was 4.68, mean antenatal anxiety score was 6.27 which was the least among all the trimesters and the mean maternal fetal bonding score was 18.12 which was the highest among all the trimesters.

In third trimester, the mother often feels exhausted and wants to deliver the fetus which happens in letting-go activity which indicates that the pregnancy events would be more, anxiety is expected to be more and maternal fetal bonding is expected to reduce again. The finding of this study was in conformity with this theoretical concept where the mean pregnancy experience score was 5.50, mean antenatal anxiety score was 8.11 and

the mean maternal fetal bonding score was 15.86 which was lower than the second trimester.

The mean anxiety scores were high with low maternal fetal bonding in first and third trimester. Hence, the assumption stated that higher the level of anxiety poor the maternal fetal bonding was supported by the study findings**.**

From the study findings it was evident that the maternal fetal bonding varied among the trimesters. We can assume that the pregnancy events during first trimester were more. So, the anxiety was more and hence the maternal fetal bonding was the least during the first trimester. As the mother gets settled with her pregnancy changes, the pregnancy events were less leading to reduction in anxiety leading to increase in maternal fetal bonding during the second trimester. Also during the third trimester, the pregnancy events were more again more so, the anxiety increased leading to reduction in the maternal fetal bonding. Hence, the fourth assumption stated that the primigravida will have high maternal-fetal bonding in second trimester compared to first and third trimester was supported by the study findings.

The fourth objective was to associate the pregnancy experience, antenatal anxiety and maternal fetal bonding with the demographic variables among primigravida.

Table 5.1 & 5.2 shows that there was no statistically significant association between pregnancy experience with age, educational and occupational status during pregnancy, type of family, marital life, type of marriage, area of residence, family monthly income, planned pregnancy and weeks of gestation.

Hence, the assumption stated that the higher the age and education positive is the experience about pregnancy was not supported.

Table 5.3 & 5.4 shows that there was no statistically significant association between antenatal anxiety with age, educational and occupational status during pregnancy, type of family, marital life, type of marriage, family monthly income and weeks of gestation. There was statistically significant association between antenatal anxiety with area of residence at $p < 0.5\%$ level of significance. Hence, the assumption stated that the higher the education lesser the anxiety and higher the age higher the anxiety was not supported.

Table 5.5 shows that there was no statistically significant association between maternal fetal bonding with age, educational and occupational status during pregnancy and type of family.

Table 5.6 shows that, there was no statistically significant association between maternal fetal bonding with marital life, type of marriage, family monthly income and weeks of gestation. There was statistically significant association between maternal fetal bonding with area of residence at $p<0.001$ level of significance and planned pregnancy at $p<0.001$ level of significance.

The above findings were supported by the cross sectional study conducted by Jamshidimanesh, M. et. al., (2013), on the maternal fetal attachment behavior and some related factors. The study result concluded that the higher maternal age, planned pregnancy, and assessing heath of the fetus had positive effects on prenatal attachment.

CHAPTER - 6
SUMMARY, CONCLUSION, IMPLICATION, RECOMMENDATION, LIMITATION

CHAPTER VI

SUMMARY, CONCLUSION, IMPLICATION RECOMMENDATION AND LIMITATION

SUMMARY

The objective of the study was to correlate the perception of pregnancy and maternal-fetal bonding among primigravida in selected settings, Chennai.

A descriptive method was used to correlate the perception of pregnancy and maternal-fetal bonding among primigravida. The review of literature provided the base and indepth knowledge for the development of tool. Modified Pregnancy Experience Scale was used to assess the perception of pregnancy, Modified Perinatal Anxiety Screening Scale was used to assess the antenatal anxiety and Rating scale was used to assess the maternal fetal bonding among primigravida. A total of 120 primigravida were selected from Voluntary Health Services Multispeciality Hospital Taramani, St. Isabels Multispeciality Hospital Mylapore and Sri Ranga Hospital Mandaveli, Chennai by using non probability convenient sampling technique. The tool was validated by experts and the pilot study was conducted.

The main study was conducted at VHS Multispeciality Hospital Taramani, St. Isabels Multispeciality Hospital Mylapore, and Sri Ranga Hospital Mandaveli, Chennai. After obtaining approval from the research committee in the college**,** permission was obtained from the concerned authorities to conduct the study. Mothers were explained about the purpose of the study and willingness to participate in the study was obtained in writing. Mother who fulfilled the inclusion criteria were selected as samples. The

mothers were asked about their pregnancy experience, antenatal anxiety and maternal fetal bonding among three trimesters were assessed. The mother was asked to recall the experience of the first and second trimester. Interview method was used to obtain data from the primigravida. It took 30 to 40 minutes for collecting information from each sample.

Analysis of the demographic variables revealed that 50% of the primigravidas were in the age group of 26-30 years, all the primigravidas were literate in that most of the primigravidas (82.5%) were degree holders, 60.8% of the primigravidas were unemployed, 50% primigravidas were from nuclear family, 50% of the primigravida's marital life was between 1-3 years, majority (80.8%) of the primigravidas had non consanguineous marriage, 90% primigravidas were residing in urban area, 41.6% of the primigravida's family income was between 15,000 to 25,000, 76.7% of the primigravida had planned their pregnancy, 45.8% primigravida's gestational age was between 33-36 weeks.

Analysis of information about pregnancy experience showed that in the first trimester, majority (55%) of the primigravidas had good experience. In the second trimester, majority (61.7%) of the primigravidas had good experience. In the third trimester, majority (54.2%) of the primigravidas had good experience. The overall score showed that majority (81.7%) of the primigravidas had good experience, 17.5% of primigravidas had fair experience and only 0.8% of the primigravidas had poor experience.

Analysis of information regarding antenatal anxiety showed that in the first trimester, majority (65%) of the primigravidas had moderate anxiety. In the second trimester, majority (52.5%) of the primigravidas had moderate anxiety. In the third trimester, majority (50.8%) of the primigravidas had moderate anxiety. The overall score showed that majority (66.7%) of the primigravidas had moderate anxiety and 33.3% of primigravidas had mild anxiety.

Analysis of information about MFB showed that in the first trimester, majority (74.2%) of the primigravidas had high maternal fetal bonding. In the second trimester, majority (96.7%) of the primigravidas had high maternal fetal bonding. In the third trimester, majority (75%) of the primigravidas had high maternal fetal bonding. The overall score showed that majority (91.7%) of the primigravidas had high maternal fetal bonding and only 8.3% of primigravidas had moderate bonding.

There was a weak positive correlation between pregnancy experience and maternal fetal bonding in the first trimester ($r=0.283$), antenatal anxiety in and maternal fetal bonding in first trimester ($r=-0.246$) and the pregnancy experience and antenatal anxiety in first trimester ($r=0.259$) which were significant at $p<0.01$ level of significance. There was no correlation between pregnancy experience and MFB, antenatal anxiety and maternal fetal bonding and pregnancy experience and antenatal anxiety in second & third trimesters.

There was a weak positive correlation between overall pregnancy experience and antenatal anxiety ($r=0.247$) which was significant at $p<0.01$ level of significance. There

was no correlation between overall antenatal anxiety and maternal fetal bonding and overall pregnancy experience and maternal fetal bonding.

Comparison among trimesters revealed that the first trimester mean pregnancy experience score was 5.33, mean antenatal anxiety score was 8.38 which was the highest among all the trimesters and mean maternal fetal bonding score was 14.65 which was the least among all the trimesters.

The second trimester mean pregnancy experience score was 4.68, mean antenatal anxiety score was 6.27 which was the least among all the trimesters and the mean maternal fetal bonding score was 18.12 which was the highest among all the trimesters.

The third trimester mean pregnancy experience score was 5.50, mean antenatal anxiety score was 8.11 and the mean maternal fetal bonding score was 15.86 which was lower than the second trimester.

There was a statistically significant association between the antenatal anxiety with planned pregnancy and maternal fetal bonding with planned pregnancy and area of residence.

There was no statistically significant association between the pregnancy experience, antenatal anxiety and maternal fetal bonding with other demographic variables.

CONCLUSION

Maternal fetal bonding is the pillar of child's development. Pregnancy experience and anxiety will be the major determining factor of adequate maternal fetal bonding. Ensuring positive pregnancy experience will reduce anxiety and improve bonding. The study concluded that since there was good pregnancy experience the reported anxiety levels were mild to moderate in nature which had led to better maternal fetal bonding. Providing positive pregnancy experience is a shared responsibility of the family and the health care personnel. Providing adequate information about pregnancy and measures to cope with the changes will help the mother to achieve positive experience. World Health Organization has issued a new series of recommendation to improve the quality of antenatal care to reduce the risk of still births and pregnancy complication and give women a positive pregnancy experience by nutritional intervention, maternal fetal assessment preventive measures etc. So, regular antenatal care and education can still improve the pregnancy experience, reduce the anxiety and increase the bonding.

IMPLICATIONS FOR NURSING

The study finding has its implications in several branches of nursing namely nursing education, nursing practice, nursing administration and nursing research.

Nursing education

- Nursing curriculum should focus on teaching students about the needs of antenatal mothers and management and counseling to meet these needs.
- Nursing curriculum should provide opportunities for the students to improve their knowledge regarding health education required by these mothers to prevent complication.

- Nursing students should have more exposure to the clinical area where they can get all the cases, so that they will be able to differentiate the normal mothers from high risk women.
- Nurse educator need to teach the students about the physiological changes, minor discomforts and complication during pregnancy so that they will able to compare the complaints of each mother.

Nursing Practices

- Information about pregnancy and its changes should be explained to the primigravida mothers to reduce fear of unknown.
- Nurses can teach mothers about the daily fetal movement counting.
- Nurses can develop guidelines for management of minor disorders during pregnancy for antenatal mothers.
- Nurses to provide positive reinforcement to the mothers to help them cope with minor ailments
- The nurse working in community can identify the high risk mothers and encourage for regular antenatal checkup.
- Counseling should be provided to mothers with high risk pregnancy to reduce their anxiety.
- Nurses need to perform regular antenatal (obstetrical) examination.

Nursing Administration

- Nursing administrators should make provision for in-service education and continuing education for the nurses to handle the antenatal mothers.

- Nursing administrators should ensure that the pregnant woman gets a positive experience in the hospital during their antenatal visits.
- Information about self and baby care to provide to mothers on regular basis in antenatal mothers teaching sessions.

Nursing Research

- Research should be directed for exploring and updating the knowledge of nurses regarding the care of high risk mothers.
- Nursing Research should be conducted to prepare standard material for mother's education about the antenatal care.
- The findings of the study should be disseminated through conferences, seminar and journal publications.

RECOMMENDATIONS

1. A study can be conducted to compare the pregnancy experience and maternal fetal bonding among primigravida and multigravida.
2. A study can be conducted to assess the factors leading to anxiety during pregnancy among primigravida.
3. A study can be conducted to correlate the support systems and the maternal fetal bonding among primigravida and multigravida.
4. A study can be conducted to compare the pregnancy experience and maternal fetal bonding among primigravida residing in urban and rural areas.

LIMITATIONS

The investigator did not face any limitations.

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APPENDICES

LETTER SEKING PERMISSION FOR CONDUCTING A STUDY

From

Ms. A. Sasi Rekha,
I Year M.Sc Nursing,
M. A. Chidambaram College of Nursing,
Voluntary Health Services,
T.T.T.I. Post,
Taramani, Chennai-113.

Through

The Principal,
M. A. Chidambaram College of Nursing,
Voluntary Health Services,
T.T.T.I. Post,
Taramani, Chennai-113.

Prof. Dr. (Mrs). R. SUDHA, M.Sc (N)., Ph.D.,
PRINCIPAL
M.A. Chidambaram College of Nursing
VHS Campus, Chennai - 600 113.

To

The Administrator,
Sri Ranga Hospital,
No.06, Chokkalingam street,
Trustpakkam,
Mandaveli, Chennai- 28.

Respected Madam/ Sir,

Iam A. Sasi Rekha, I Year M.Sc Nursing student of V. H. S – M. A. Chidambaram College of Nursing, Voluntary Health Services, Taramani, Chennai-113.

As a part of the requirement in M. Sc Nursing programme as per the Tamil Nadu Dr. M.G.R medical University specification. I have to complete a dissertation. The topic I have selected is "**A study to assess the correlation between perception of pregnancy and maternal fetal bonding among primigravida in selected settings, Chennai**". I am interested in conducting the study in your esteemed institution.

The period of data collection for the study is from 2nd December 2019 to 28th December 2019.

I assure you madam/ Sir that my study will not interfere with the routine functioning of the institution. Kindly grant me permission to conduct the study.

Thanking you,

DATE : Your's faithfully,
PLACE : Chennai. A. Sasi Rekha

Permitted
05/06/19

LETTER SEEKING PERMISSION FOR CONDUCTING A STUDY

From

Ms. A. Sasi Rekha,
I Year M.Sc Nursing,
M. A. Chidambaram College of Nursing,
Voluntary Health Services,
T.T.T.I. Post,
Taramani, Chennai-113.

Through

The Principal,
M. A. Chidambaram College of Nursing,
Voluntary Health Services,
T.T.T.I. Post,
Taramani, Chennai-113.

R. Sudha

Prof. Dr. (Mrs). R. SUDHA, M.Sc (N)., Ph.D.,
PRINCIPAL
M.A. Chidambaram College of Nursing
VHS Campus, Chennai - 600 113.

To

The Administrator,
St. Isabel's Hospital,
No.49, Oliver Road,
Kattukoil garden,
Mylapore, Chennai- 04.

Respected Madam,

Iam A. Sasi Rekha, I Year M.Sc Nursing student of V. H. S – M. A. Chidambaram College of Nursing, Voluntary Health Services, Taramani, Chennai-113.

As a part of the requirement in M. Sc Nursing programme as per the Tamil Nadu Dr. M.G.R medical University specification. I have to complete a dissertation. The topic I have selected is "**A study to assess the correlation between perception of pregnancy and maternal fetal bonding among primigravida in selected settings, Chennai**". I am interested in conducting the study in your esteemed institution.

The period of data collection for the study is from 2nd December 2019 to 28th December 2019.

I assure you madam/ Sir that my study will not interfere with the routine functioning of the institution. Kindly grant me permission to conduct the study.

Thanking you,

DATE :
PLACE : Chennai.

Your's faithfully,
A. Sasi Rekha

Permitted
14/06/19.

A. Sasi Rekha.

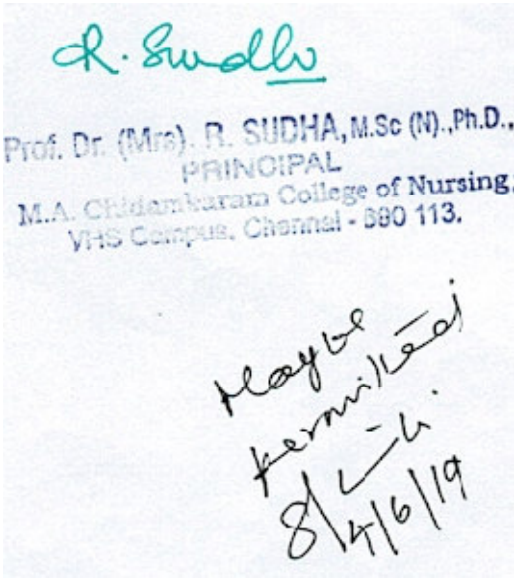
LETTER SEKING PERMISSION FOR CONDUCTING A STUDY

From

Ms. A. Sasi Rekha,
I Year M.Sc Nursing,
M. A. Chidambaram College of Nursing,
Voluntary Health Services,
T.T.T.I. Post,
Taramani, Chennai-113.

Through

The Principal,
M. A. Chidambaram College of Nursing,
Voluntary Health Services,
T.T.T.I. Post,
Taramani, Chennai-113.



To

Dr. S. Janaki,
Director, Clinical and Academic Affairs,
Voluntary Health Services,
T.T.T.I. Post,
Taramani, Chennai-113.

Respected Madam/ Sir,

Iam A. Sasi Rekha, I Year M.Sc Nursing student of V. H. S – M. A. Chidambaram College of Nursing, Voluntary Health Services, Taramani, Chennai-113.

As a part of the requirement in M. Sc Nursing programme as per the Tamil Nadu Dr. M.G.R medical University specification. I have to complete a dissertation. The topic I have selected is "**A study to assess the correlation between perception of pregnancy and maternal fetal bonding among primigravida in selected settings, Chennai**". I am interested in conducting the study in your esteemed institution.

The period of data collection for the pilot study is from 1st July 2019 to 6th July 2019 and the main study is from 2nd December 2019 to 28th December 2019.

I assure you madam/ Sir that my study will not interfere with the routine functioning of the institution. Kindly grant me permission to conduct the study.

Thanking you,

DATE :

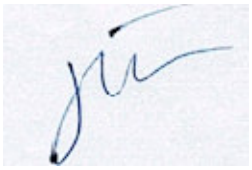
PLACE : Chennai.

Your's faithfully,

A. Sasi Rekha

CERTIFICATE OF CONTENT VALIDITY

This is to certify that the tool developed by A. Sasi Rekha, M.Sc (Nursing) student of M. A. Chidambaram College of Nursing for the study "**A study to assess the correlation between perception of pregnancy and maternal fetal bonding among primigravida in selected settings, Chennai**" has been validated by the undersigned and she can proceed with this content for her study.



Date: 25/6/19

Signature with seal,

Dr.(Mrs.) J.S.Lakshmi, M.D.
Regd.20820
Obstetrician & Gynaecologist)
SMRTHI HEALTH CARE
No.2/1, Basement Floor,
Prashanthi Apartments
2nd Cross Street, 1st Main Road
CIT Colony, Mylapore, Chennai-4

CERTIFICATE OF CONTENT VALIDITY

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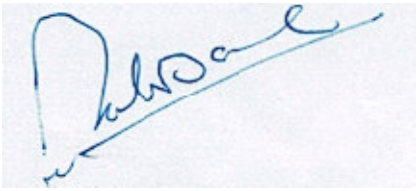
Date: 2/7/19

Radha Madhavan
Dr. RADHA MADHAVAN, M.B.B.S., D.G.O.
Reg No. 31644
SRI RANGA HOSPITAL
Chennai - 600 026.

Signature with seal,

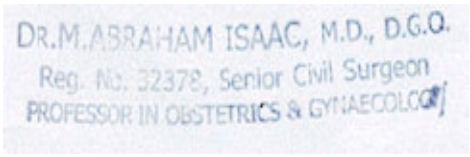
CERTIFICATE OF CONTENT VALIDITY

This is to certify that the tool developed by A. Sasi Rekha, M.Sc (Nursing) student of M. A. Chidambaram College of Nursing for the study "**A study to assess the correlation between perception of pregnancy and maternal fetal bonding among primigravida in selected settings, Chennai**" has been validated by the undersigned and she can proceed with this content for her study.



Date: 08-07-2019.

Signature with seal,



CERTIFICATE OF CONTENT VALIDITY

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Date: 3.6.19.

Signature

Dr. T. Amutha.

PROF & HEAD OF THE DEPARTMENT
OBSTETRICS & GYNAECOLOGY NURSING
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No. 45, Ambattur Road,
PUZHAL, CHENNAI - 600 066.

CERTIFICATE OF CONTENT VALIDITY

This is to certify that the tool developed by A. Sasi Rekha, M.Sc (Nursing) student of M. A. Chidambaram College of Nursing for the study "**A study to assess the correlation between perception of pregnancy and maternal fetal bonding among primigravida in selected settings, Chennai**" has been validated by the undersigned and she can proceed with this content for her study.

Date: 13/6/19

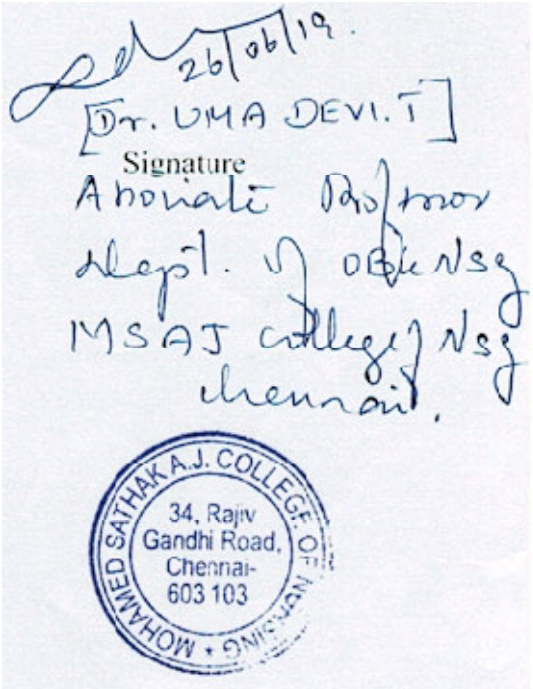
Signature:

ST. ISABEL'S COLLEGE OF NURSING
CHENNAI
600 004
MYLAPORE

CERTIFICATE OF CONTENT VALIDITY

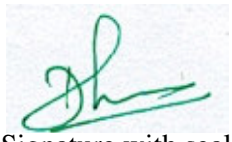
This is to certify that the tool developed by A. Sasi Rekha, M.Sc (Nursing) student of M. A. Chidambaram College of Nursing for the study "**A study to assess the correlation between perception of pregnancy and maternal fetal bonding among primigravida in selected settings, Chennai**" has been validated by the undersigned and she can proceed with this content for her study.

Date: 26/06/2019



CERTIFICATE OF CONTENT VALIDITY

This is to certify that the tool developed by A. Sasi Rekha, M.Sc (Nursing) student of M. A. Chidambaram College of Nursing for the study "**A study to assess the correlation between perception of pregnancy and maternal fetal bonding among primigravida in selected settings, Chennai**" has been validated by the undersigned and she can proceed with this content for her study.



Date: 01-07-19

Signature with seal,

VICE-PRINCIPAL
VENKATESWARA NURSING COLLEGE
THALAMBUR - 603 102

APPENDIX – III

INFORMED CONSENT FORM

Dear participants,

I am II year M.Sc (N) student of VHS - M. A. Chidambaram College of Nursing, Taramani, Chennai. I am conducting "**A study to assess the correlation between the perception of pregnancy and maternal fetal bonding among primigravida".**

With your consent, I request you to participate in this study by giving your cooperation throughout interview.

All the response will be kept confident.

Thanking you,

Signature,

Place :

Date :

ஒப்புதல்படிவம்

அடையாறு எம். ஏ. சிதம்பரம் செவிலியர் கல்லூரியில் பயிலும் மாணவி செல்வி அ.சசி ரேகா என்பவரால் மேற்கொள்ளப்படும் ஆய்வைப் பற்றி எனக்கு விவரமாக கூறப்பட்டதால், இந்த ஆய்வில் பங்கேற்க எந்த ஆட்சேபனையும் இல்லை. மேலும் என்னுடைய விவரங்களை அச்சிலேற்றவும் முழு ஒப்புதல் அளிக்கிறேன்.

கையொப்பம் :

பெயர் :

இடம் :

A STUDY TO ASSESS THE CORRELATION BETWEEN THE PERCEPTION OF PREGNANCY AND MATERNAL FETAL BONDING AMONG PRIMIGRAVIDA AT SELECTED SETTINGS, CHENNAI.

TOOLS FOR DATA COLLECTION

PART-A: DEMOGRAPHIC VARIABLES

S.No :

1. Age
   - 21yrs - 25 yrs
   - 26 yrs - 30 yrs
   - 31 yrs -35 yrs
2. Education
   - Non literate
   - Primary
   - Secondary
   - Higher secondary
   - Graduate
   - others
3. Occupational Status during pregnancy
   - Unemployed
   - Employed

     Government

     Private

     Daily wages

     Business
4. Type of family
   - Nuclear family
   - Joint family
   - Extended family
5. Marital life
   - Less than 1 year
   - 1-3 years
   - More than 3 years

6. Type of marriage
    - Consanguineous marriage
    - Non consanguineous marriage
7. Area of residence
    - Urban
    - Rural
8. Family monthly income
    - Less than Rs.15000
    - Rs. 15000- Rs. 25000
    - More than Rs. 25000
9. Was this pregnancy planned
    - Yes
    - No
10. Weeks of gestation
    - 25 to 28 wks
    - 29 to 32 wks
    - 33 to 36 wks
    - > 36wks

PART-B

TOOLS TO ASSESS THE PERCEPTION OF PREGNANY

SECTION-1

TOOL TO ASSESS THE PREGNANCY EXPERIENCE AMONG PRIMIGRAVIDA

Below are 20 items related to pregnancy, based on your experience state whether it has made you feel concerned. Place a tick mark on appropriate column.

S.No.	Content	Yes	No
	First trimester:		
1	Feeling about being pregnant at this time.		
2.	Physical intimacy.		
3.	Limitations in doing physical task/chores.		
4.	Experience of visiting obstetrician /midwife.		
5.	Restriction imposed by the family members due to being pregnant.		
6.	Normal discomforts of pregnancy (heart burn, incontinence).		
7.	Help or assistance received from others because you are pregnant.		
	Second trimester:		
8.	Weight gain and body changes due to pregnancy.		
9.	Concern about getting complication in pregnancy (pain, bleeding, headache, decreased fetal movements, increased blood pressure)		
10.	Comments from others about your pregnancy /appearance.		
11.	Movement of the baby.		
12.	Rituals performed related to pregnancy.		
13.	Thoughts about whether the baby is normal.		
	Third trimester:		
14.	Not able to wear clothes and shoes as before pregnancy.		
15.	Pain in labour and type of delivery.		
16.	Disturbance while sleeping.		
17.	Thinking about the baby appearance.		
18.	Thinking about care of baby.		
19.	Discussing with spouse about baby names.		
20.	Discussing with spouse about pregnancy or childbirth issues.		

SCORING AND INTERPRETATION:

The scoring was done as follows.

Scale legend	Section- I
Yes	1
No	0

Based on the score, pregnancy experience was arbitrarily classified as.

S.No	Score	Interpretation
1	< 07	Poor experience
2	07-13	Fair experience
3	>13	Good experience

SECTION-2

TOOL TO ASSESS THE ANTENATAL ANXIETY AMONG PRIMIGRAVIDA

Place a tick mark against appropriate feeling

As a pregnant woman how do you rate the following feeling about your pregnancy and baby?

S.No	Content	Never	Sometimes	Often	Almost always
	I Trimester				
1.	Worry about the baby/ pregnancy				
2.	Feeling disturbed while sleeping.				
3.	Feeling really uneasy in crowd				
4.	Anxious in participating social activities.				
5	Fear of travelling that may cause harm to baby				
6	Feeling jumpy or easily startled				
7	Fear that physical intimacy that may cause harm to the baby.				
	II Trimester				
8.	Worry about the physical changes due to pregnancy				
9	Fear about Blood, birth pain, needles.				
10	Fear of doing physical activities like climbing upstairs.				
11.	Worry about the original physique after delivery.				
12	Fear of something bad may happen to the baby				
13	Worry about the foods that harm the baby.				
	III Trimester				
14.	Worry about preterm birth				
15.	Worry about baby and birth process				

16.	Worry about the type of delivery				
17.	Worry about the baby's sex.				
18.	Fear that harm will come to the baby.				
19.	Worry about the baby's weight.				
20	Worry about the baby's physical and psychological growth.				

SCORING AND INTERPRETATION:

The scoring was done as follows.

Scale legend	Scores
Never	0
Sometimes	1
Often	2
Almost always	3

Based on the overall score antenatal anxiety was classified as

Scores	Category
0	No anxiety
1-20	Mild anxiety
21-40	Moderate anxiety
41-60	Severe anxiety

PART-C

TOOL FOR ASSESSING THE MATERNAL FETAL ATTACHMENT AMONG PRIMIGRAVIDA

Below 30 items related to maternal fetal attachment, Place a tick mark against appropriate column. Recall the first and second trimester attachment and state the attachment at present.

S. No.	Content	Yes	Uncertain	No
	First trimester (confirmation of pregnancy till 12 weeks)			
1.	Doubted about readiness or desire for having been conceived			
2.	Accepted the pregnancy			
3.	Concentrated in her own needs and the fetus.			
4.	Avoided food and fruit thinking harm to the baby			
5.	Avoided activities that may harm the baby.			
6.	Eager to feel the baby movement.			
7.	Perceived fetus as a separate entity			
8.	Blamed fetus for the minor physical discomfort of pregnancy			
9.	Not felt excited about pregnancy			
10.	Precautions taken to prevent abortion			
	Second trimester (from 12 weeks to 24 weeks)			
11	Accepted the baby			
12	Movement of the baby			
13	Massaged the abdomen			
14.	Wanted to hear the fetus heart sounds.			
15.	Calls baby by nick name			
16.	Was ready to assume care taking relationship with newborn			
17.	Talks to the unborn baby.			
18.	Fear and anxiety forgotten as the fetus move.			
19.	Perceived the fetus as self part			
20.	Blames baby for the restrictions and adjustments.			
	Third trimester(from 24 weeks to today)			
21.	Preparing baby's cloth, cots or bed			
22.	Eager to give birth			

S. No.	Content	Yes	Uncertain	No
23.	Feeling upset to let the fetus go.			
24.	Enjoys watching tummy jiggle as the baby kicks inside.			
25.	Picturized feeding the baby in her mind			
26.	Planning about caring of the baby			
27.	Strokes the tummy to calm the baby when there is too much kicking			
28.	Discuss with others about the baby name			
29.	Feels good when baby responds to her voices or music			
30.	Feels wonder if the baby think or feel inside me.			

SCORING AND INTERPRETATION:

The scoring was done as follows.

Question number	Type of question	Scoring
2,3,5,6,7,11,12,13,14,15,16,17, 18,19,21,22,24,25,26,27,28,29.	Positive questions	No- 0 Uncertain- 1 Yes- 2
1,4,8,9,10,20,23	Negative questions	Yes- 0 Uncertain-1 No- 2

and the score were arbitrarily classified in three trimester as

Total score	60
Low bonding	1-20
Moderate bonding	21-40
High bonding	41-60

பகுதி-I

தனி நபர்விவரம்

வழிமுறைகள்: தயவுசெய்துபின்வருவனவற்றைப்படித்துபொருத்தமான பொருத்தமானபதிலை ( ) குறியிடவும்.

1. **தாயின்வயதுஆண்டுகளில்..**
    - 21 **முதல்** 25 **வரை**
    - 26 **முதல்** 30 **வரை**
    - 31 **முதல்** 35 **வரை**
2. **கல்வி...**
    - **முறைசாராகல்வி**
    - **ஆரம்பகல்வி**
    - **உயர்நிலைகல்வி**
    - **மேல்நிலைகல்வி**
    - **பட்டபடிப்பு**
    - **மற்றவை**
3. **தொழில்..**
    - **வேலையற்றவர்**
    - **வேலை செய்பவரானால்**
        - **அரசுவேலை**
        - **தனியார்வேலை**
        - **கூலி**
        - **சுயதொழில்/வணிகம்**
4. **குடும்பத்தின்வகை..**
    - **தனிகுடும்பம்**
    - **கூட்டுகுடும்பம்**
    - **நீட்டிக்கப்பட்டகுடும்பம்**
5. **திருமணவாழ்க்கை..**
    - 1 **வருடத்திற்குக்கீழ்**
    - 1 **முதல்** 3 **வரை**
    - 3 **வருடத்திற்குமேல்**
6. **வசிக்கும்இடம்..**
    - **நகரம்**
    - **கிராமம்**

7. **மாதவருமானம்**...
    - 15,000 **ரூபாய்க்கு**
    - **ரூ** 15,000- 25,000
    - 25,000 **ரூபாய்க்குமேல்**
8. **திருமணவகை**
    - **சொந்தத்தில்திருமணம்**
    - **அயலாருடன்திருமணம்**
9. **இந்தத்திருமணம்திட்டமிடப்பட்டதா**
    - **ஆம்**
    - **இல்லை**
10. **கர்ப்பகாலவாரங்கள்**
    - 25 **முதல்** 28 **வரை**
    - 29 **முதல்** 32 **வரை**
    - 33 **முதல்** 36 **வரை**
    - 36 **வாரத்திற்குமேல்**

பகுதி-II : கர்ப்பத்தின் கருத்து.

பகுதி- அ: கர்ப்பகால அனுபவத்தை மதிப்பிடும் அளவுகோல்.

வழிமுறை: உங்கள் அனுபவத்தில் ஒன்றிப்போகும் விசையை தேர்வு செய்யவும்.

எண்	விவரங்கள்	ஆம்	இல்லை
I	முதல் மூன்று மாதங்கள்		
1	இந்த நேரத்தில் கர்ப்பமாக இருப்பதை பற்றி உணர்கிறேன் உணர்கிறேன்		
2	கர்ப்பகால உடலுறவு		
3	உடல் சார்ந்த பணிகளை செய்ய முடிகிறது		
4	மருத்துவரை காண வரும் போது		
5	கர்ப்பம் தரித்தல் காரணமாக குடும்பத்தினரால் விதிக்கப்பட்ட விதிக்கப்பட்ட கட்டுப்பாடுகள்		
6	கர்ப்பகால தொந்தரவுகள்		
7	கர்ப்பம் தரித்ததால் மற்றவர்கள் உதவினார்கள்		
II	இரண்டாவது மூன்றுமாதங்கள்		
8	எடை அதிகரிப்பு அல்லது கர்ப்பகால உடல் மாற்றங்கள் மாற்றங்கள்		
9	கர்ப்பகால அபாயங்களை அல்லது சிக்கல்களை பெருவது பெருவது பற்றிய கவலை		
10	கர்ப்பகால தோற்றம் குறித்து மற்றவர்களின் கருத்து		
11	குழந்தையின் அசைவு		
12	கர்ப்பகாலத்தில் செய்யப்படும் சடங்குகள்		
13	குழந்தையின் உடல்நலம் குறித்த யோசனை		
III	மூன்றாவது மூன்று மாதங்கள்		
14	கர்ப்பகாலத்திற்கு முன் அணிந்த உடைகள் மற்றும் காலணிகளை தற்போது அணிய முடியவில்லை		
15	பிரசவவலி மற்றும் பிரசவம் குறித்த யோசனை		
16	தூங்குவதில் தொந்தரவு		
17	குழந்தையின் தோற்றம் குறித்து எண்ணுதல்		

எண்	விவரங்கள்	ஆம்	இல்லை
18	குழந்தையை பரமரிப்பது பற்றி எண்ணுதல்		
19	குழந்தையின் பெயர் குறித்து கணவருடன் கலந்தாலோசித்தல்		
20	கர்ப்பம் அல்லது குழந்தை பிறப்பு பிரச்சனைகள் குறித்து குறித்து கணவருடன்கலந்தாலோசித்தல்		

மதிப்பீடு

ஆம் - 1

இல்லை - 0

மதிப்பீடு	பிரிவு
<7	மோசமான அனுபவம்
7-13	நியாயமான அனுபவம்
>13	நல்ல அனுபவம்

பகுதி- ஆ: கர்ப்பகால பயத்தை அளவிடும் அளவுகோல்

வழிமுறைகள்: : உங்கள் அனுபவம் ஒன்றிப்போகும் விசையைத் தேர்வு தேர்வுசெய்யவும்.

எண்	விவரங்கள்	ஒரு போதும் இல்லை	சில முறை	அடிக்கடி	கிட்டத்தட்ட எப்போதும்
I	முதல் மூன்று மாதங்கள்				
1	குழந்தை அல்லது கர்ப்பத்தை குறித்த குறித்த கவலை				
2	தூக்கத்தில் ஏற்படும் தொந்தரவு குறித்த உணர்வு				
3	கூட்டத்தில் இருக்கும் பொது ஏற்படும் ஏற்படும் சங்கடமான உணர்வு				
4	சமூக செயல்படுகளில் பங்கேற்ப்பதில் பயம்				
5	பயணம் செய்வதால் குழந்தைக்கு ஆபத்து ஏற்படலாம் என்ற பயம்				
6	எளிதில் திடுக்கிடுதல் அல்லது சந்தோசத்தில் குதித்தல் போன்ற உணர்வு				
7	உடலுறவு கொள்வதால் குழந்தைக்கு குழந்தைக்கு பாதிப்பு ஏற்படும் என்று என்று பயம்				
	இரண்டாவது மூன்றுமாதங்கள்				
8	உடலில் ஏற்படும் கர்ப்பக்கால. மாற்றம் குறித்த கவலை				
9	இரத்தம், பிரசவவலி மற்ம் ஊசி குறித்த பயம்				
10	உடல் சார்ந்த பணிகள் (படிஏறுதல்) செய்வதால் பயம்				
11	பிரசவத்திற்கு பின் பழைய உடல் வாகுவை அடைய முடியுமா என்ற பயம்				
12	குழந்தைக்கு ஏதேனும் தீங்கு				

எண்	விவரங்கள்	ஒரு போதும் இல்லை	சில முறை	அடிக்கடி	கிட்டத்தட்ட எப்போதும்
	ஏற்படுமோ என்ற பயம்				
13	குழந்தையை ஏதேனும் உணவு பாதித்து விடுமோ என்ற பயம்				
	மூன்றாவது மூன்று மாதங்கள்				
14	குறை பிரசவத்தில் குழந்தை பிறக்குமோ என்ற கவலை				
15	பிரசவம் மற்றும் குழந்தை குறித்த கவலை				
16	எந்த முறையில் குழந்தை பிறக்குமோ பிறக்குமோ என்ற கவலை				
17	குழந்தையின் பாலினம் குறித்த கவலை				
18	குழந்தைக்கு கெட்டது ஏற்படுமோ என்ற கவலை				
19	குழந்தையின் எடை குறித்த கவலை கவலை				
20	குழந்தையின் உடல் மற்றும் மனநல மனநல வளர்ச்சி குறித்த கவலை				

மதிப்பீடு

0- ஒருபோதும்இல்லை
1- சிலமுறை
2- அடிக்கடி
3- கிட்டத்தட்டஎப்போதும்

மதிப்பீடு	பிரிவு
1-20	லேசான பதட்டம்
21-40	மிதமான பதட்டம்
41-60	அதிகமான பதட்டம்

பகுதி -III

தாய்வழி கருப்பிணைப்பை அளவிடும் அளவுகோல்

வழிமுறைகள்: உங்கள் அனுபவம் ஒன்றுப்போகும் விசையை தேர்வு செய்யவும்

எண்	விவரங்கள்	ஆம்	நிச்சயமற்ற	இல்லை
I	முதல் மூன்று மாதங்கள்			
1	கருத்தரிக்கப்பட்ட ஆசை அல்லது தயார்நிலை பற்றிய பற்றிய சந்தேகம்			
2	கருவுற்றதை ஏற்றுக்கொள்ளுதல்			
3	சொந்த மற்றும் குழந்தைக்குரிய தேவைகளில் கவனம் கவனம் செலுத்துதல்			
4	குழந்தையை பாதிக்கக் கூடிய உணவு மற்றும் பழங்களைத் தவிர்த்தல்			
5	குழந்தைக்குத் தீங்கு தரக் கூடிய செயல்களைத் தவிர்த்தல்			
6	குழந்தையின் அசைவை உணர ஆவலுடன் இருத்தல் இருத்தல்			
7	குழந்தையைத் தனி உயிராக கருதுதல்			
8	கர்ப்பகால தொந்தரவுகளுக்கு குழந்தையை குறை குறை கூறுதல்			
9	கருவுற்றதற்காக உற்சாகப்படவில்லை			
10	கருகலையாமல் இருக்க முன் எச்சரிக்கை நடவடிக்கை எடுத்தல்			
II	இரண்டாவது மூன்றுமாதங்கள்			
11	குழந்தையை ஏற்றுக்கொள்ளுதல்			
12	குழந்தையின் அசைவுகளை உணர்தல்			
13	வயிற்றைத் தடவுதல்			
14	குழந்தையின் இதயதுடிப்பைக் கேட்க விரும்புதல்			
15	குழந்தைக்கு செல்ல பெயர்வைத்தல்			
16	குழந்தையை பராமரிக்கத் தயாராக இருத்தல்			
17	வயிற்றில் இருக்கும்குழந்தையுடன் பேசுதல்			

எண்	விவரங்கள்	ஆம்	நிச்சயமற்ற	இல்லை
18	குழந்தை அசைவுகள் தெரிந்தவுடன் பயம் அல்லது பதட்டம் குறைதல்			
19	குழந்தையை தன் உடலின் பகுதியாக ஏற்றுக் கொள்ளுதல்			
20	சுற்பகாலக் கட்டுபாடுகளுக்காக குழந்தையைத் குறைக்கூறுதல்			
III	மூன்றாவது மூன்று மாதங்கள்			
21	குழந்தைக்காக துணி, படுக்கைகளை தயாராக்குதல் தயாராக்குதல்			
22	குழந்தை பிறப்புக்காகக காத்திருத்தல்			
23	குழந்தை வயிற்றில் இருந்து செல்வதற்க்காக வருத்தப்படுதல்			
24	குழந்தை உதைக்கும்போது வயிற்றின் அசைவுகளை அசைவுகளை பார்த்துசந்தோசப்படுதல்			
25	குழந்தைக்குப் பாலூட்டுவதைப் போல எண்ணுதல் எண்ணுதல்			
26	குழந்தையைப் பராமரிபதைப் போல எண்ணுதல்			
27	குழந்தை அதிகமாக உதைக்கும் போது சமாதானப்படுத்த வயிற்றைத் தடவுதல்			
28	குழந்தையின் பெயர் குறித்து மற்றவர்களுடன் கலந்தாலோசித்தல்			
29	குழந்தை தன் குரலுக்கு பதிலலளிக்கும் போது சந்தோசமாக உணர்தல்			
30	குழந்தையால் வயிற்றில் இருக்கும் போதேயோசிக்க யோசிக்க முடியும் என்று அறிந்ததும் ஆச்சரிபப்படுதல் ஆச்சரியப்படுதல்			

மதிப்பீடு:

கேள்விஎண்	மதிப்பீடு
2-7, 11-19,22, 24-29	இல்லை-0 நிச்சயமற்ற-1 ஆம்-2
1,4,8-10,20,23	ஆம்-0 நிச்சயமற்ற-1 இல்லை-2

மதிப்பீடு	பிரிவு
<7	குறைந்த பிணைப்பு
7-13	மிதமான பிணைப்பு
>13	அதிக பிணைப்பு

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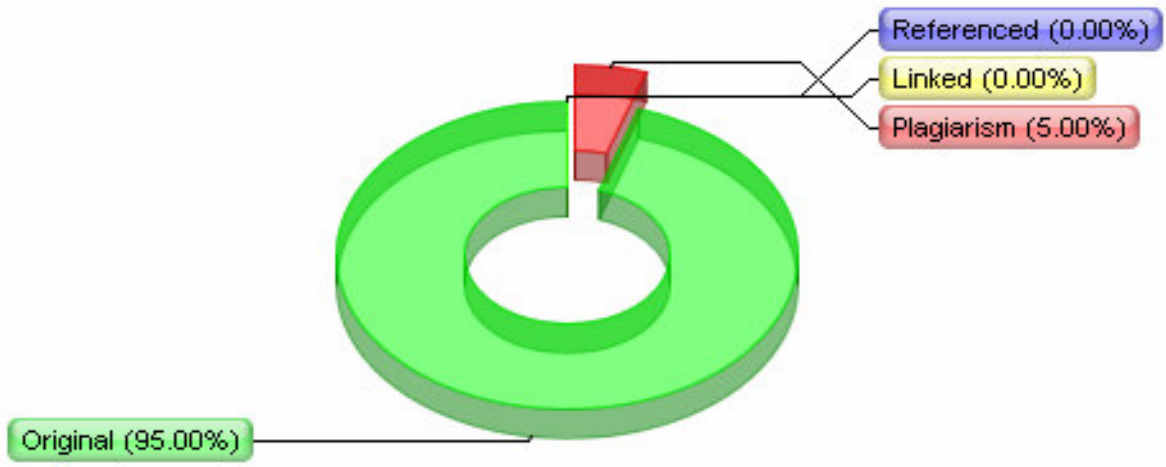

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