

**EVALUATE THE EFFECTIVENESS OF VIDEO
ASSISTED TEACHING PROGRAMME ON GESTATIONAL
DIABETESMELLITUS AMONG PRIMI GRAVIDA
MOTHERS ATTENDING ANTENATAL OUTPATIENT
DEPARTMENT AT INSTITUTE OF OBSTETRICS AND
GYNAECOLOGY AND GOVT. HOSPITAL FOR WOMEN
AND CHILDREN, EGMORE, CHENNAI-08.**

**M.Sc (NURSING) DEGREE EXAMINATION
BRANCH-III OBSTETRICS & GYNAECOLOGICAL
NURSING**

**COLLEGE OF NURSING,
MADRAS MEDICAL COLLEGE, CHENNAI-3.**



A Dissertation Submitted to
**THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY
CHENNAI-32.**

In partial fulfillment of requirements for the award of the degree of
MASTER OF SCIENCE IN NURSING

OCTOBER 2018

CERTIFICATE

This is to certify that this dissertation titled, **“EVALUATE THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON GESTATIONAL DIABETES MELLITUS AMONG PRIMI GRAVIDA MOTHERS ATTENDING ANTENATAL OUTPATIENT DEPARTMENT AT INSTITUTE OF OBSTETRICS AND GYNAECOLOGY AND GOVT. HOSPITAL FOR WOMEN AND CHILDREN, EGMORE, CHENNAI-08”**, is a bonafide work done by **Mrs.Dhatshnamoorthy Parimalam, M.Sc(N)** II Year Student, College of Nursing, Madras Medical College, Chennai-03, submitted to The Tamil Nadu Dr.M.G.R. Medical University, Chennai in partial fulfillment of the requirement for the award of the degree of Master of Science in Nursing Branch-III Obstetrics and Gynaecological Nursing under our guidance and supervision during academic period from 2016-2018.

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Examination : M.Sc (Nursing) Degree Examination
Examination month and year :
Branch & Course : III-Obstetrics & Gynaecological
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Register No : 301621252
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In partial fulfilment of requirement for the award of degree of
MASTER OF SCIENCE IN NURSING

OCTOBER 2018

ACKNOWLEDGEMENT

Would like to thank the **Almighty** for his abundant grace, blessings, wisdom, knowledge, guidance, strength and unconditional love showered in completing this study without any interruption.

My sincere thanks to **Dr.R.Jayanthi, MD., F.R.C.P (Glasg).**, Dean, Madras Medical College, Chennai-3 for permitting me to conduct the study in these esteemed institution.

I wish to express my sincere gratitude to **Dr.Sudha Shesayan M.S., Vice Principal** Madras Medical College, Chennai-03. for providing necessary facilities and extending support to conduct this study.

With deep sense of colossal contemplation, I express my whole hearted gratitude to my esteemed guide, a feet personality **Mrs.A.Thahira Begum M.Sc(N)., MBA., MPhil.**, Principal College of Nursing, Madras Medical College, Chennai for her academic and professional excellence, brain storming ideas, treasured guidance, highly instructive research mentorship, thought provoking suggestions, prudent guidance, moral support and patience that has moulded me to conquer the spirit of knowledge for sculpturing my manuscript into thesis.

I wish to express my special and sincere hearful thanks to Farmer Director **Dr.Santhi Gunasingh MD., DGO.**, Director of Insitute of Obstetrics and Gynaecology Hospital for women and children granting permission to conduct th study.

My heart felt thanks to **Dr.S.Shobha, MD., DGO.**, Director Incharge, Institute of obstetrics & Gynaecological hospital for women and children, Egmore, Chennai-08, for her valuable guidance and validated the content encouragement in making this study a grand success.

I wish to express my special and sincere heartfelt thanks to Farmer Principal **Dr.V.Kumari, M.Sc(N), Ph.D.**, College of Nursing, Madras Medical College.

My great pleasure and privilege to express my gratitude to **Mrs.V.Vijayalakshmi M.Sc(N)**, HOD obstetrics and Gynaecology Nursing, College of Nursing, Madras Medical College, Chennai – 3 for her support, encouragement, valuable suggestions and guidance in completing this study.

My sincere thanks to Obstetrics and Gynaecological Nursing Speciality faculty **Mrs.S.Thenmozhi, M.Sc(N), Lecturer** College of Nursing, Madras Medical College for their valuable guidance in completing this study.

I am deeply indebted to **Mrs.Periyarselvi, M.Sc(N)**, Class co-ordinator, College of Nursing Madras Medical College, Chennai-3 for her guidance, support, thought provoking ideas, research critiques, constructive motivation and encouragement throughout the study.

I wish to express my gratitude to all the **Faculty Members** of College of Nursing, Madras Medical College, for their valuable guidance in conducting this study.

I would like to express my special thanks to **Mrs.Rosaline Rachal, M.Sc(N), Ph.D.**, Department of Nursing, MMM College of Nursing, Nollambur, Chennai–600 095, for provoking the content validity for tool constructed for this study.

I would like to express my special thanks to **Mrs.Nalini, M.Sc(N), Ph.D.**, Principal, Sri Ramachandra medical college, college of nursing College of Nursing, Porur, Chennai-116 for provoking the content validity for tool constructed for this study.

My sincere thanks to **Mr.A.Venkatesan, M.Sc., M.Phil., Ph.D.**, Deputy Director (Statistics) Directorate of Medical Education, Chennai

for his valuable suggestion and guidance and kind cooperation in the successful completion of statistical analysis and compiling of this research study.

My special word of thanks to **Mr.Ravi, M.A., MLIS.**, Librarian, College of Nursing, Madras Medical College, Chennai – 3.

I my great sense of gratitude to **Mr.Jas Ahamed Aslam**, Shajee Computers and **Mr.Ramesh, BA.**, MSM xerox for their enthusiastic help and sincere effort in typing the manuscript with valuable computer skills and also bringing this study into a printed form.

I would like to mention my special thanks to **Mrs.Usha Nandhini, M.A.**, HOD, Department of English, Sri Santhoshi Group of Institutions for English Literature Editing and **Mrs.S.Maheswari, M.A, B.Ed.**, Head Master, Chennai Middle School, Maduma Nagar for Tamil Literature Editing.

Heart felt thanks to all my Primigravida mothers who had enthusiastically participated in this study without whom it was not possible to complete.

My extend my immense love and gratitude to my Husband **Mr.E.Haridass and my children H.Satheshkumar, H.Lokanarayane** for their loving support, encouragement, earnest prayer, which enabled me to accomplish this study.

Last but not the least, I extend my thanks to all my classmates who have been as rainbow in my cloudy days those directly and indirectly supported with my study at various stages not mentioned in this acknowledgement.

I perceive this opportunity as a big milestone in my career development. I will strive to use the gained skill and knowledge in the best possible ways and I will continue to work on their improvement in order to obtain desired career objective.

ABSTRACT

Pregnancy is a period where profound changes will take place in the body. Pregnancy may be complicated by a variety of disorders and conditions that can profoundly affect the client and her fetus. The title of study “Evaluate the Effectiveness of Video assisted teaching programme on gestational diabetes mellitus among primi gravida mothers attending antenatal outpatient department at institute of obstetrics and gynaecology and Govt. hospital for women and children, egmore, chennai-08”. Diabetes mellitus is the most common metabolic complication of pregnancy, illustrates the interaction between the physiologic changes of pregnancy and pathophysiology of disease. So, it is important to regulate blood sugar, in order to prevent from diabetic complications.

OBJECTIVE: To assess the knowledge regarding self-administration of insulin among primigravida mothers with Gestational Diabetes Mellitus. To evaluate the effectiveness of video assisted teaching program regarding self-administration of insulin among primigravida mothers with Gestational Diabetes Mellitus. To compare pre- test and post-test regarding self administration of insulin among primigravida mothers with Gestational Diabetes Mellitus. To determine the association between the knowledge regarding self administration of insulin among selected variables.

MATERIALS AND METHODS: A Pre-experimental, one group Pretest, Posttest design was conducted. A total of 60 samples were selected by using purposive sampling technique. Data were collected from the primi gravida mothers with GDM ,using a semi – structured interview schedule before and after implementation of the planned VAT

program. The data were tabulated and analyzed by descriptive and inferential statistics.

RESULTS: The finding of the study revealed that video assisted teaching program has improved the knowledge of self administration of insulin among the primigravida mothers with paired t test, $p < 0.001$. There is statistically significance in knowledge attainment on self administration of insulin among the primigravida mothers shows effectiveness of the video assisted teaching.

CONCLUSION: This study proved that VAT was immediately effective for the GDM mothers attending Antenatal outpatient department, IOG, Chenani - 600 008. Further similar studies can be replicated on large sample in various Hospitals.

KEYWORDS: Gestational Diabetes Mellitus, Video Assisted Teaching Programme, Self Administration of Insulin knowledge on GDM.

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ABBREVIATION

AN	Antenatal
GDM	Gestational Diabetes Mellitus
OGTT	Oral Glucose Tolerance Test
WHO	World Health Organization
ADA	American Diabetes Association
HOMA-IR	Homeostatic Model Assessment -Insulin Resistance
SMFM	Society for Maternal Foetal Medicine
ANC	Antenatal Care
VAT	Video Asisted Teaching

CHAPTER – I INTRODUCTION

“Every human being is the author of his own health or disease

Work out your own salvation donot depend on others-Buddha”

The prevalence of diabetes is increasing globally and these numbers include women with Gestational Diabetes Mellitus (GDM). GDM is considered as a transient abnormality of glucose intolerance during pregnancy. Women with GDM are at increased risk of diabetes in future as their children and the following subsequent generations. This fact should alert the physicians about the necessity to devote special attention to this segment of population especially in developing countries.

WHO 2016 Guideline mentioned GDM not only influences immediate maternal (preeclampsia, stillbirths, macrosomia, and need for caesarean section) and neonatal outcomes (hypoglycaemia, respiratory distress), but also increases the risk of future Type 2 diabetes in mother as well as the baby. A recent meta-analysis showed that women with gestational diabetes have a greatly increased risk of developing Type 2 diabetes (relative risk 7.43, 95% confidence interval 4.79–11.51).

WHO 2016 guideline mentioned the study from North India, women diagnosed to have GDM were subjected to an oral glucose tolerance test (OGTT) 6 weeks after delivery, as per standard recommendations. A disturbingly large proportion of GDM women had some persistent glucose abnormality after birth. Impaired fasting glucose (IFG) was seen in 14.5% and impaired glucose tolerance (IGT) in 4.8%, 8% had both IFG and IGT, and 6.4% had overt Type 2 diabetes).

These figures are a wake-up call to place GDM at the highest priority in our public health system. Global data show that children of mothers with uncontrolled diabetes – either pre-existing or originating during pregnancy – are four to eight times more likely to develop diabetes in later life compared to their siblings born to the same parents in a non-GDM pregnancy.

It is well-established that treatment of GDM reduces the risk of serious pe

rinatal complications. In addition, clinical trials now provide evidence for the impact of multiple interventions in preventing the progression to Type 2 diabetes in women with a history of GDM. Both lifestyle modification and pharmacological therapies have been shown to reduce diabetes development by 50% or more. Breastfeeding can also reduce childhood obesity.

Gestational diabetes mellitus is hyperglycaemia or glucose intolerance first detected during pregnancy. It occurs in 2-4% of all pregnancies, but its prevalence varies widely in different population(Lowdermilk Leonard, 1994).Gestational diabetes mellitus is a form of glucose intolerance diagnosed in some women during pregnancy. Centres for Disease Control and Prevention, (2007).

Gestational diabetes mellitus is defined as any degree of glucose intolerance with onset or first recognition during pregnancy. American Diabetes Association, (2003) Gestational Diabetes Mellitus occurs when the women's beta cell function is not able to overcome the antagonism created by the anti-insulin hormones of pregnancy and the increased fuel consumption required to provide for the growing foeto maternal unit.

Alberto L., (2000) Pregnancy is associated with profound changes in the fat and carbohydrate metabolism. Glucose metabolism is

characterized by a lower fasting plasma and elevated postprandial values in the early weeks. In later weeks carbohydrate metabolism is stressed by the rising levels of human chorionic somatotropin (hCS), prolactin, cortisol, and glucagons. These hormones cause decreased glucose tolerance and insulin resistance. A small pregnant population cannot withstand the physiological stresses accompanying pregnancy which result in abnormal glucose tolerance which causes Gestational diabetes mellitus.(Usha Krishnan, 2004).

Classic risk factors for gestational diabetes mellitus include obesity, family history of diabetes, family history of macrosomia and previous poor obstetric history. Thus a mother with any of these risk factors to be identified and treated well (Lowdermilk Leonard, 1994). showed that raised maternal blood sugar level in the first three months of pregnancy lead to congenital abnormalities in the baby. This is particularly true for neural tube defects and cardiac anomalies.Kappy, G., (1991)

“the worst complication is essentially the overfeeding of a baby”. That means babies get fat in the womb, especially around their shoulders and abdomen, causing them to get stuck during child birth. In turn that raises the risk for birth trauma to the baby from 2-3% in a normal birth to 5-6% in a birth involving gestational diabetes.(Buchana,T.,1998)

1.1 NEED FOR THE STUDY

Diabetes is a major public health problem in India with prevalence rates reported to be between 4.6% and 14% in urban areas, and 1.7% and 13.2% in rural areas. India has an estimated 62 million people with Type 2 diabetes mellitus (DM); this number is expected to go up to 79.4 million by 2025. This first WHO Global report on diabetes underscores the enormous scale of the diabetes problem, and also the potential to reverse current trends. The political basis for concerted action to address diabetes is there, woven into the Sustainable

Development Goals, the United Nations Political Declaration on NCDs, and the WHO NCD Global Action Plan. Where built upon, these foundations will catalyse action by all.

Countries can take a series of actions, in line with the objectives of the WHO NCD Global Action Plan 2013–2020, to reduce the impact of diabetes.

Management of diabetes and its complications imposes a huge economic burden on the society; hence effective strategies are urgently needed to control this epidemic. Not surprisingly, in parallel with the increase in diabetes prevalence, there seems to be an increasing prevalence of gestational DM (GDM), that is, diabetes diagnosed during pregnancy. The prevalence of gestational diabetes has been reported to range from 3.8% in Kashmir, to 6.2% in Mysore, 9.5% in western India and 17.9% in Tamil nadu. In more recent studies, using different criteria, prevalence rates as high as 35% from Punjab and 41% from Lucknow have been reported. The geographical differences in prevalence have been attributed to differences in age and/or socioeconomic status of pregnant women in these regions. It is estimated that about 4 million women are affected by GDM in India, at any given time point.

In order to overcome the present scenario, this study is found the needful. The study elevates awareness of GDM and self-administration on insulin. It is found the needful.

1.2. STATEMENT OF THE PROBLEM

“Evaluate the effectiveness of video assisted teaching programme on gestational diabetes mellitus among primigravida mothers attending antenatal outpatient department at institute of obstetrics and gynaecology and Govt. hospital for women and children, Egmore, Chennai-8”

1.3. OBJECTIVES

- 1) To assess the knowledge regarding self administration of insulin among primigravida mothers with Gestational Diabetes Mellitus.
- 2) To evaluate the effectiveness of video assisted teaching program regarding self administration of insulin among primigravida mothers with Gestational Diabetes Mellitus.
- 3) To compare pre-test and post-test regarding self administration of insulin among primigravida mothers with Gestational Diabetes Mellitus.
- 4) To determine the association between the knowledge regarding self administration of insulin among selected variables.

1.4 OPERATIONAL DEFINITION

Evaluate

Evaluate refers to the measure to determine significant difference between the pre-test and post-test knowledge score

Effectiveness

It refers to significant difference between the difference between the pre-test and post-test knowledge scores

Video Assisted Teaching Program

It is a method of teaching programmers for 45 minutes along with the AV aids on self-administration of insulin on management of gestational diabetes mellitus.

Knowledge

Refers to the understanding of gestational diabetes mellitus regarding causes, symptoms and its management and self-administration of insulin for gestational diabetes mothers .

Gestational Diabetes Mellitus

Gestational diabetes also known as GDM, is a condition in which without diabetes develops high blood sugar levels during pregnancy.

Primigravida

First time pregnancy with gestational diabetes mellitus

1.5 ASSUMPTION

- The primigravida mothers have some knowledge regarding gestational diabetes mellitus and self-administration of insulin.
- The result of the study will help to prevent the complications of gestational diabetes mellitus among the primigravida mothers.

1.6 HYPOTHESIS

H1: There will be a significant relationship between the pre-test and post test scores

H2: There will be a significant association between the knowledge of primigravida mothers regarding gestational diabetes mellitus and its care.

1.7 DELIMITATION

- 4 week of data collection
- 60 samples

CHAPTER-II REVIEW OF LITERATURE

This chapter deals with the information collected with relevant to the present study through published and unpublished materials. These publications are the foundation to carry out the research work. Highly extensive review of literature pertaining to research topic was done to collect maximum information for laying foundation of the study.

The purpose of review of Literature is to obtain knowledge regarding Gestational Diabetes Mellitus and to manage with self administration of Insulin, prevent the complications of GDM. This Literature review will help in developing a broad conceptual context into which research problem will fit.

This chapter consists of :

Part – I : Review of literature

Part -2 : Conceptual framework

The review of Literature related to the study is under the following headings

2.1.1 Section – : A Knowledge Regarding Causes of Gestational Diabetes

2.1.2 Section – B : Knowledge Regarding Risk factors of Gestational Diabetes

2.1.3 Section – C : Effectiveness Regarding Management of Gestational Diabetes

2.1.1. SECTION-A: CAUSES OF GESTATIONAL DIABETES

W T Parks et al., (2017) Conducted a retrospective cohort study of 1187/1374 (86.4%) women with GDM delivered between 2009 and 2012 who had placental pathology available. Placental lesions of all types were tabulated and grouped into constructs of related entities. Placental maternal vascular malperfusion lesions may be one pathway linking excess gestational weight gain to adverse pregnancy outcomes in women with GDM, and future studies are needed to identify metabolic factors that may explain this association.

E Capobianco et al., (2016) conducted a study family history of diabetes predisposes to gestational diabetes mellitus (GDM). We hypothesized that female offspring of rats with pre-gestational diabetes will develop GDM, a pathology associated with foetal overgrowth and altered placental signaling. We found normal glycemia and insulinemia in the offspring from pre-gestational diabetic rats at three months of age. We conclude that exposure of maternal diabetes in utero programs GDM in the female offspring, leading to a GDM model associated with impaired placental signaling pathways, increased pro-oxidant/pro-inflammatory environment and foetal overgrowth.

P J Mark et al., (2016) Conducted a study of Maternal obesity was established in rats by 8 weeks of pre-pregnancy CAF feeding. Maternal plasma inflammatory markers (IL-1 β , IL-6, IL-10, IL-12p40, MCP1, GRO/KC, MIP-2 and TNF α) and expression of inflammatory genes (Tnf α , Il-6, Il-1 β , Tlr2, Tlr4, Cox2 and Emr1) in maternal, placental and foetal tissues were measured at day 21 of gestation. And concluded that, Maternal obesity induced by a CAF diet before and during pregnancy does not increase the inflammatory status of the mother, placenta or foetus in late gestation.

L Sati et al., (2015) Conducted a study of Mammalian target of rapamycin (mTOR) signaling serves as a central regulator of cell growth, proliferation, and survival by interacting with various proteins. To date, few studies implicated mTOR in placenta. Human placenta in gestational diabetes mellitus (GDM) shows several alterations including villous immaturity, impaired placental function, and overgrowth. This is a descriptive study, further studies with a functional analysis to highlight the molecular mechanisms underlying this placental pathology are proposed.

M Wielgos et al., (2015) Conducted a study of continuous rise of maternal obesity is followed by increased gestational diabetes mellitus incidence. Inclusion of GDM into 'the great obstetrical syndromes' emphasizes the role of the placenta in interactions of the maternal and foetal unit. Alteration of the placental development and subsequent vascular dysfunction are presented in 6 out of 7 women with all ranges of diabetic severity. A detailed sequence of events that leads from hyperglycemia to placental dysfunction and subsequent pregnancy complications may become an important issue for further studies.

Kjos et al., (2014) Conducted a study Newborn and placental weights from women with no pregnancy complications (controls; N=5), or with GDM (N=5) were recorded. And as a result of this study, Maternal, placental and newborn weights were significantly higher in the GDM group vs. Controls. And they concluded that, Maternal GDM results in heavier placentas with aberrant placental apoptotic and inflammatory gene expression that may account, at least partially, for macrosomia in newborns.

DasguptaK et al., (2018) they studied Five databases were searched for studies published up to December 2017. Studies were reviewed by at least three reviewers and data were qualitatively

synthesized. Penetration (invited/target population) and participation (enrolled/invited) rates were calculated after data extraction. And as a result, Among 2859 records, 33 intervention studies were identified, among which 16 had sufficient information to calculate penetration or participation. And concluded that, Although penetration and participation reporting is sub-optimal, penetration is generally high while participation is variable.

H P Li et al., (2013) Conducted a study of metabolic impairments in maternal obesity and gestational diabetes mellitus (GDM) induce an abnormal environment in peripheral blood and cause vascular structure alterations which affect the placental development and function. found that findings indicate that gestational diabetes induce excessive chronic hypoxia stress and inflammatory response in placentas which may contribute mechanisms to the high risks of perinatal complications of obesity and GDM mothers. They conclude that maternal overweight induced by an HF diet stimulates mTORC1 activity and decreases eIF2alpha phosphorylation in rat placentas.

S Raha et al., (2012) Conducted a Study of maternal obesity results in a number of obstetrical and fetal complications with both immediate and long-term consequences. The increased prevalence of obesity has resulted in increasing numbers of women of reproductive age in this high-risk group. Found outcomes were associated with altered vascular development in the placenta, as well as increased hypoxia in the labyrinth. We propose that the altered placental vasculature may result in reduced oxygenation of the foetal tissues contributing to premature demise and poor neonatal survival.

2.1.2. SECTION-B: RISK FACTORS OF GESTATIONAL DIABETES

Siddigi SS et al., (2017) This cross-sectional study was conducted at outpatient antenatal check-up clinic and outpatient diabetic clinics at J. N. Medical College and Hospital, Aligarh. Detailed history, physical examination, and anthropometric measurement were done. Bone turnover markers in the form of Vitamin D, parathyroid hormone, serum ionized calcium, and serum ALP were measured in pregnant women who had gestational diabetes which was compared with normal pregnant women. Found that impaired should immediately be corrected in order to prevent its adverse effects on maternal and fetal outcome. Vitamin D supplementation should ideally be initiated in all GDM females even if the above parameters are not investigated in Indian setup.

Chen P et al., (2015) Gestational diabetes mellitus (GDM) is considered to be a typical condition of glucose intolerance in which a woman previously undiagnosed with diabetes exhibits high levels of blood glucose during the third trimester of pregnancy. A history of GDM can be considered to be one of the sturdiest risk factors concerning the development of type 2 diabetes. Among women who have a history of GDM, the risk of developing classical type 2 diabetes usually ranges from 20 to 50 %.

Zhao B et al., (2015) The reason for the study of GDM was most prevalent among Asian Indians (19.3%). Relative risks were similar across all race/ethnic groups. Advanced maternal age had higher PAFs in non-Hispanic whites (22.5%) and Hispanics (22.7%). Meanwhile family history (Asian Indians 22.6%, Chinese 22.9%) and foreign-borne status (Chinese 40.2%, Filipinos 30.2%) had higher PAFs in Asian

subgroups. They concluded that Overweight/obesity, advanced maternal age, family history of type 2 diabetes, and foreign-borne status are important risk factors for GDM.

Tongo O et al., (2014) It was a comparative cross-sectional study implemented in two phases. The first phase (Group A) of the study was a prospective study that involved 530 pregnant women who presented at the booking clinic. The second phase (Group B) was a retrospective study of 530 pregnant women managed 2 years previously who were selected by systematic random technique. And the concluded by Identification of women at risk of GDM was approximately 3-4 fold higher with the use of checklist of risk factors.

Kaiser B et al., (2013) Conducted a study Patients with gestational diabetes have a high risk of developing type 2 diabetes in the months after delivery. For this reason, GDM patients are encouraged to practice specific health behaviours during the postpartum period. Key issues are physical activity and diet rarely meet the recommendations. Risk perception, health beliefs, social support and self-efficacy are the main factors identified as having an impact on the adoption of health behaviours. However, the cross-sectional nature of the studies and the lack of social, geographical and/or ethnic variety in the populations studied do not allow us to generalize the conclusions.

Jeannot E et al., (2013) In this prospective, cohort study A targeted sample size of 200 eligible pregnant women with a diagnosis of GDM will be enrolled. Psychosocial variables that could impact adherence to health behaviors in the postpartum period (behavioral intentions, risk perceptions, general knowledge about diabetes, health beliefs, social support, self-efficacy) will be evaluated using specific

tools at the end of pregnancy, at 6 weeks postpartum and at 6 months postpartum. The study will allow a predictive theoretical model of health behavior to be established and used as a basis for reflection to optimize interventions carried out on women who have had GDM.

Adhikari A N et al., (2012) A community based cross sectional descriptive study was conducted among pregnant women with gestational age of 24-28 weeks and residing in Anuradhapura district. The 75 g oral glucose tolerance test was carried out among all participants. According to IADPSG criteria, 36 (8.9%) of pregnant women had GDM, compared to 29 (7.2%) according to WHO criteria. Out of 29 mothers who fulfilled WHO criteria, only one had an abnormal fasting plasma glucose, but 28 had abnormal 2 hour values. A total of 170 (42.0%) participants had at least one risk factor or early indicator of GDM. And concluded, The risk factor based approach misses more than one third of GDM cases. Urgent revision of current GDM screening guidelines is recommended.

Sienko J et al., (2012) 155 patients entered this case-control study. Participants fulfilled the inclusion criteria: a history of GDM, perinatal care in the study center. Oral glucose tolerance test (OGTT) was performed. The results showed, 18.1% of patients presented impaired fasting glucose during the study, 20% presented impaired glucose tolerance and 23.2% presented diabetes mellitus. They concluded, GDM increases the risk of diabetes mellitus. Several risk factors of impaired carbohydrate metabolism can be distinguished in patients with a history of GDM.

2.1.3. SECTION-C: MANAGEMENT OF GESTATIONAL DIABETES

Li T et al., (2018) This study enrolled 55 pregnant women with GDM and 87 control subjects. Fasting venous blood samples and umbilical venous blood samples (reflecting foetal metabolism) were collected from the study subjects. The neonatal ponderal index (PI) in the GDM group positively correlated with the umbilical venous blood HOMA-IR and insulin level. The HOMA-IR was significantly higher in the late pregnancy GDM women and their foetuses than in the control group. In addition, foetal HOMA-IR positively correlated to maternal HOMA-IR in late pregnancy GDM women.

Galan H et al., (2018) Use of oral agents to treat gestational diabetes mellitus (GDM) remains controversial. Recent recommendations from the Society for Maternal Foetal Medicine (SMFM) assert that metformin may be a safe first line alternative to insulin for GDM treatment and preferable to glyburide. Foetal concentrations of metformin are equal to maternal, and metformin can inhibit growth, suppress mitochondrial respiration, have epigenetic modifications on gene expression, mimic foetal nutrient restriction, and alter postnatal gluconeogenic responses. These developmental programming effects challenge the conclusion that metformin is equivalent to insulin.

Gabriele Saccone et al., (2017) studied, Electronic databases were searched from their inception until June 2017. We included all randomized controlled trials (RCTs) comparing the one-step with the two-step approaches for the screening and diagnosis of GDM. The primary outcome was the incidence of GDM. And as a result, Three RCTs ($n = 2333$ participants) were included in the meta-analysis. 910 were randomized to the one step approach (75 g, 2 hrs), and 1423 to the

two step approach. And thus concluded, The one and the two step approaches were not associated with a significant difference in the incidence of GDM. However, the one step approach was associated with better maternal and perinatal outcomes.

Zahid Hussain et al., (2014) this was a descriptive cross-sectional study conducted during the period of month July 2013 at Penang General Hospital, Penang, Malaysia .Descriptive analysis was used for data elaboration by usingSPSS20.The results showed that of 30 patients, 23 patients (76.6%) had adequate knowledge. Only, 7 (23.3%) patients had inadequate knowledge. For attitude, 23 (76.66%) of patients had a negative attitude toward disease and only 7 (23.3%) had a positive attitude. In terms of satisfaction, 25 (83.33%) patients were satisfied with the given treatment and 5 (16.66%)were unsatisfied. They conclude that although participants obtained good score on knowledge and treatment satisfaction, their attitude did not change so as to more effectively cope with their disease.

Padubidri, V., (2006) when diabetes is first detected during pregnancy and cannot be controlled by diet alone it should be treated with insulin. A postprandial plasma glucose level of more than 140 mg% over on diet control is an indication of insulin therapy. The total dose of insulin should be split as 2/3 in the morning and 1/3 before dinner. Oral antidiabetic drugs should not be used during pregnancy. These drugs cross the placenta and may have teratogenic effect or produce neonatal hypoglycemia.

Churst et al., (2017) This study explores the psychological determinants of exercise behaviour in a sample of pregnant women with GDM. Analysis of the IPQ-R data revealed 'diet' (n=37, 80.4%) as the most referred to cause of diabetes. Exercise belief data identified "managing weight gain" (n= 21, 45.7%), and "losing baby weight" (n=

31, 67.4%) as the most frequent beliefs for engaging in physical activity during pregnancy and post pregnancy.

Shanet et al., (2017) To assess the effects of diet interventions in combination with exercise interventions for pregnant women for preventing GDM and associated adverse health consequences for the mother and her infant/child. The studies varied in the diet and exercise programs evaluated and health outcomes reported was a possible reduced risk of GDM in the diet and exercise.

S H Koning et al., (2016) a cross-sectional follow-up survey among women with a history of GDM and their general practitioners (GP). And the conclusion despite the high attendance rate of six-week postpartum visit and glucose testing, we observed low rates of longer-term follow-up regarding postpartum glucose testing. Moreover, they found a suboptimal adherence to healthy lifestyle for women with a history of GDM.

R Artal et al., (2016) Exercise plays an important role in reducing the prevalence of gestational diabetes mellitus (GDM) in women with or without risk factors. GDM risk factors include obesity, family history of diabetes, high-risk ethnicity, increased maternal age, history of GDM, delivering a macrosomic infant, excessive gestational weight gain early in pregnancy (before glucose screening), sedentary behaviour, low physical activity, and vitamin D deficiency. Most GDM patients can be managed with lifestyle modifications that include medical nutrition therapy and physical activity. When adherence is high and women are fully engaged in the exercise program, GDM can be effectively managed and prevented.

Chasan – Taber L (2014) Conducted a literature search of PubMed for English language studies of randomized controlled trials of lifestyle interventions among women with a history of GDM. In total, nine studies were identified which fulfilled the eligibility criteria. The majority of randomized trials of lifestyle interventions in women with GDM have been limited to pilot or feasibility studies. However, preliminary findings suggest that such interventions can improve diabetes risk factors in women with a history of GDM. Larger, well-designed controlled randomized trials are needed to assess the effects of lifestyle interventions on preventing subsequent progression to type 2 diabetes among women with GDM.

S A Wilkinson et al., (2014) Prospective survey and retrospective chart audit of general practices that provide maternity shared care in south-east Queensland, July 2011 to June 2012. And they concluded by stating, GPs surveyed knew guidelines around the timing and type of test for women who have experienced GDM, and the audit demonstrated that this knowledge is translated into practice. This problem may exist due to the absence of a systems approach to care, resulting in a lost opportunity to systematically reduce the incidence of type 2 diabetes and promote the wellbeing of women and their infants.

Anthony R.Gregg et.al., (2016) reviewed data from pregnant women (24–28 wks) screened for GDM over two periods: (1) November 2011–May 2012 (2) November 2012–May 2013. Period 1: 2-step approach (screening 1-h glucose challenge test (GCT) followed by a diagnostic 3-h 100-g glucose tolerance test (GTT) when abnormal (≥ 140 mg/dl)). Period 2: an abnormal value after a 2-h 75-g GTT result was diagnostic of GDM. The 1-step approach resulted in 53 (15.96%) with GDM of a total 332 evaluated. Maternal weight at the start and the end of pregnancy was greater for patients diagnosed by the ACOG 2-

step approach. And they concluded, Adopting 1-step approach (ADA) to diagnose GDM resulted in a 3-fold increase in prevalence of GDM with no differences in perinatal outcomes.

Yu-Mei Wei et al., (2015) studied A retrospective study was conducted. Medical records of 25 674 pregnant women attending the Peking University First Hospital (PUFH) were analysed. Women with FPG value <4.4 mmol/L were segregated into those with and without GDM based on the IADPSG criteria. Pregnancy outcomes in the form of birth weight, neonatal hypoglycemia and cesarean delivery were compared between the two groups. And also concluded that, There is no difference in the incidence of select adverse pregnancy outcomes amongst Chinese women with mild GDM (FPG <4.4 mmol/L) with or without intervention compared to women without GDM.

Sven M.Carlsen et al., (2014) studied, A 75 g oral glucose tolerance test was performed in 687 women at 18–22 and 32–36 pregnancy weeks. GDM was defined according to the WHO criteria as fasting plasma glucose ≥ 7.0 mmol/L and/or 2-hour plasma glucose ≥ 7.8 mmol/L and by a simplified version of the IADPSG criteria as either fasting glucose ≥ 5.1 mmol/L and/or 2-h plasma glucose ≥ 8.5 mmol/L. And concluded Simplified IADPSG criteria moderately increase GDM prevalence compared with the WHO criteria. Risk factors for GDM differ with the diagnostic criteria used.

M.Shang et al., (2014) The aim of this study was to compare pregnancy outcomes of Chinese women diagnosed with gestational hyperglycaemia by the well-established American Diabetes Association (ADA) criteria, Women who were screened positive with 1 h glucose load of ≥ 7.8 mmol/l underwent a diagnostic 3 h oral glucose tolerance test. In total, 570 patients (9.19% of 6,201) met the ADA criteria and 676 (10.90% of 6,201) met the IADPSG criteria. The 518 patients who

met both standards showed a reduced caesarean section rate, as compared with 158 patients who only met the IADPSG standard and received no intervention (71.2% vs 79.7%, $p < 0.05$). The IADPSG-only group also had a higher rate of macrosomia and pre-eclampsia than the control group. they conclude that the IADPSG criteria are more suitable for the diagnosis of gestational hyperglycaemia in China.

R.Rajput, Y.Yadav, et al., (2013) conducted a study enrolling women, with their estimated gestational age between 24th and 28th week, attending antenatal care (ANC) clinic at a tertiary care hospital in Rohtak. After informing, women who consented to participate were given a standardized 2-h 75 g oral glucose tolerance test (OGTT). And concluded that, The prevalence of GDM was found to be 7.1 per cent in a tertiary care hospital in Haryana. Appropriate interventions are required for control and risk factor modifications.

P.Kalra et al., (2013) this study was carried out in 500 patients between 24 and 28 weeks of gestation, attending the antenatal outdoor. As a result, The prevalence of GDM in this study was 6.6%. Maternal and fetal complications in the GDM group were much higher than in the non-GDM group. Hypertension, vaginal candidiasis, and abruptio placentae were the common maternal complications, while macrosomia and stillbirths occurred in the fetuses. And concluded that, GDM as a disease entity adversely affects maternal and fetal outcomes. This also builds a strong case for following DIPSI guidelines in diagnosis and management of GDM.

A.Jiwani et al., (2012) studied, Data on prevalence and country practices were obtained from a survey administered to diabetologists, obstetricians and others working on GDM in 173 countries. As a result GDM prevalence estimates range from <1% to 28%, with data derived from expert estimates, and single-site, multi-site and national prevalence

assessments. And they concluded Many countries do not perform systematic screening for GDM, and practices often diverge from guidelines. Countries need to carefully assess the cost and health impact of scaling up GDM screening and management in order to identify the best policy option for their population.

K.K. Nielsen et al., (2012) studied a mixed methods approach using questionnaires and interviews was utilised to review 11 GDM projects. Two projects were conducted by the same partner; interviews were conducted in person or via phone by the first author with nine project partners and one responded via email. The interviews were analysed using content analysis. And concluded Though an international consensus on screening and diagnosis for GDM is welcome, it should ensure that the recommendations take into account feasibility and applicability in low resource settings to ensure wider usage. We need to move away from purely academic discussions focusing on sensitivity and specificity to also include what can actually be done at the basic care level.

CONCEPTUAL FRAMEWORK

2.2 CONCEPTUAL FRAMEWORK

This study based on Context, input, process and product evaluation model

CONTEXT

Context evaluations assess needs, problems, assets and opportunities to define goals and priorities. In this study, the context process includes the demographic variables like age, education, occupation, family system, place of residence, diet pattern, gestational age, duration of diabetes mellitus and family history. Pre-intervention assessment was done on level of knowledge, of gestational diabetes among the primigravida mothers.

INPUT

Input evaluations assess alternative approaches, competing action plans and budgets for their feasibility and potential cost-effectiveness to meet targeted needs and achieve Goals. In this study the input the selected sample receives video teaching on of gestational diabetes.

PROCESS

Process evaluations assess the implementation of plans. In this study Process includes the transformation of knowledge regarding of gestational diabetes.

PRODUCT

Product evaluations identify and assess outcomes. This study the product is change in level of knowledge, regarding of gestational diabetes among the a primigravida mothers.

EVALUATION

Evaluation is the feed back of the effectiveness of video assisted teaching programme. This study the feed back gives information of environmental responses to the system, output is utilized by the system in adjustment correction and accommodation to the interaction.

CHAPTER- III METHODOLOGY

This chapter deals with the methodology which was followed study to assess effectiveness of video assisted teaching programme on knowledge regarding gestational diabetes mellitus among antenatal mothers at outpatient department in institute of obstetrics and gynaecology hospital for women and children .

3.1 RESEARCH APPROACH

Quantitative approach

3.2 DURATION OF THE STUDY

The study was conducted for a period of 4 weeks.

3.3 STUDY SETTING

The study was conducted in 60 Primigravida Mothers with GDM at IOG Outpatient Department.

3.4 STUDY DESIGN

Pre experimental one group pre - test pos - test design.

Pre Test	Video Assisted Teaching	Post Test
O1	X	O2

Notes

O1 Pre-test

X Video Assisted teaching on gestational diabetes among the Prim mothers with gestational diabetes mellitus

O2 Post –test

3.5 STUDY POPULATION

3.5.1 Target Population

Antenatal mothers at IOG Outpatient Department.

3.5.2 Accessible Population

Primi mothers with gestational diabetes melitus at IOG antenatal outpatient department.

3.6 SAMPLE SIZE

60 Primi mothers with gestational diabetes mellitus.

3.7 SAMPLING CRITERIA

3.7.1 Inclusion criteria

- Out patients who are primi gravida mothers with gestational diabetes mellitus.
- Primi gravida mothers who are willing to participate
- Primi gravida mothers who are able to read and write in Tamil and English

3.7.2 Exclusion criteria

- Primi gravida mothers who are all with other complications.
- Primi gravida mothers who are all not willing to participate

3.8 SAMPLING TECHNIQUE

convenient sampling technique

3.9 RESEARCH VARIABLES

3.9.1 Independent variable

Video Assisted teaching

3.9.2 Dependent variable

Primi gravida mothers Knowledge about GDM

3.9.3 Attribute Variable

Age, Education, Occupation, Type of family system, Place of residence, Diet pattern, Gestational age, Duration of diabetes mellitusfamily history.

3.10 DEVELOPMENT AND DISCRPTION OF THE TOOL

3.10.1 Development tool

Opinion of experts from medicine and nursing, Construction of tool, Content validity,Pretesting of tool, Reliability of tool and instrument was as certained by test – retest reliability.

3.10.2 Description of the tool

The tool was prepared by the investigator. The tool consists of two sections;

Section-A: Demographic data which includes age, religion, and family income, and parent’s educational status, type of family.

Section-B: Semi StructuredQuestionnaire. It consists of 20 semi structured questionairres to assess the knowledge regarding GDM and self administration of insulin among primi gravida mothers with gestational diabetes.

The tool consists of questions related to knowledge and 9 questions related to causes, risk factors, Management by diet, excersie, insulin therapy, related to prevention. Demographic variables were coded to assess the background of primi gravida mothers and there by subject It for statistical analysis.

3.12 CONDENT VALIDITY

Content validity was determined by experts from Nursing and Medical and statistics. They suggested certain modifications in tool. After the modifications they agreed this tool for assessing Evaluate the effectiveness of video assisted teaching program on knowledge regarding self administration of insulin among primigravida mothers with gestational diabetes mellitus attending antenatal outpatient department at institute of obstetrics and gynaecology-hospital for women and children. Chennai-08.

3.13 ETHICAL CONSIDERATION

The study objectives, intervention and data collection procedure were approved by the research and the institutional ethics committee of Madras Medical College.

3.14 RELIABILITY

After pilot study reliability of the tool was assessed by using Test retest method. Knowledge score reliability correlation coefficient value is 0.83. This correlation coefficient is very high and it is good tool for assessing Evaluate the effectiveness of video assisted teaching program on knowledge regarding self administration of insulin among primi gravida mothers with gestational diabetes mellitus attending antenatal outpatient department at institute of obstetrics and gynecology-hospital for women and children. Chennai-08.

3.15 PILOT STUDY

The pilot study was conducted after getting formal administrative permission and ethical clearance. The pilot study was conducted at IOG antenatal outpatient department for a period of one week. The study in which the prior conducted was excluded for the main study. The data related to the variables were collected. The pre and post assessment of

effects of gestational diabetes knowledge was given to the participants by investigator in person. Results were analysed. The investigator found that the instrument was feasible to use and further no modifications were needed before the actual implementation of the study.

3.16 DATA COLLECTION PROCEDURE

The study was conducted at outpatient department in Institute of Obstetrics and Gynaecology and Govt. Hospital for women and children. After obtained formal permission from Principal College of Nursing, the Ethics Committee Director IOG. A self introduction was given by the investigator and the informed written consent was obtained from the primigravida mothers. The objectives and purpose of the study were explained and confidentiality was maintained Semi Structure questionnaire constructed.

The data collection procedure was done participants selected by convenient sampling technique 60 samples taken and divided into two batch, each batch 30 antenatal mothers selected. Then pre test Semi Structure questionnaire used to collect the data by interview method. After that each batch 25to 30 minutes video assisted teaching given regarding effects of gestational diabetes mellitus, self administration of insulin. Finally I have clarified the doubt. After 7 days of pretest using the same Semi-Structured questionnaire same procedure was followed for all the 60 samples. There by the researcher completed the data collection procedure successfully.

3.17 INTERVENTION PROTOCOL

S. No	Protocol	Pre experimental group
1.	Place	outpatient department in Institute of Obstetrics and Gynaecology hospital
2.	Intervention tool	Video assisted teaching
3.	Duration	7 days
4.	Time	8.00am to 9.00am
5.	Administered by	Investigator

3.18 DATA ENTRY AND ANALYSIS

Data entry: Entered the data into the excel sheet and coding the data into SPSS statistical package system.

Analysis: Collected data were analysed by descriptive and inferential statistics.

Descriptive Analysis

Frequency and percentage analysis used to describe demographic characteristic of out patients primi gravida mothers.

Range, mean and standard deviation used to assess the knowledge of out patients mothers primi gravid mothers.

Inferential Analysis

Paired t-test used to compare the pre-test and post-test knowledge.

Chi-square analysis used to find out the association between the pre-test knowledge scores and demographic variable.

$P < 0.05$ was considered statistically significant.

CHAPTER-IV

DATA ANALYSIS AND INTERPRETATION

Analysis is a process of organizing synthesizing data in such a way that a research questions can be answered and hypothesis tested.

- (Polit and Hungler 2008)

This chapter deals with the analysis and interpretation of the data obtained from 60 with reference primigravida mothers their knowledge regarding self administration of insulin. The analysis and interpretation of the study was based on the data collected through structured Multiple Choice Questions to assess the knowledge. The collected data were tabulated and presented according to the objectives under the following headings.

Section –I: Distribution of demographic variables of primi gravid mothers participated in the study.

Section-2: Assessment of Pre-test level and post-test of knowledge regarding self administration of insulin among primi gravida mothers.

Section -3: comparison of pre-test and post-test level of knowledge among primi gravida mothers

Section –4: Effectiveness of video assisted teaching on self administration of insulin among primi gravida mothers.

Section-5: Association between pre and posttest level knowledge with selected demographic variables.

SECTION-I: DISTRIBUTIONS OF DEMOGRAPHIC VARIABLES OF STUDY PARTICIPANTS

Table-4.1: Demographic Profile

Demographic variables		No. of primi gravida mothers	%
Age	18 -21 years	0	0.0%
	22 -25 years	16	26.7%
	26 -30 years	40	66.6%
	>30 years	4	6.7%
Education	Non formal education	6	10.0%
	Primary education	11	18.3%
	Higher secondary education	27	45.0%
	Diploma/ Graduation	16	26.7%
Occupation	Housewife	31	51.7%
	Self employee	10	16.7%
	Coolie	16	26.6%
	Govt employee	3	5.0%
Type of family system	Joint family	16	26.7%
	Nuclear family	44	73.3%
Place of residence	Rural	32	53.3%
	Urban	28	46.7%
Diet pattern	Vegetarian	12	20.0%
	Non vegetarian	48	80.0%
Gestational age	16 -20 weeks	0	0.0%
	21 -24 weeks	16	26.7%
	25 -28 weeks	20	33.3%
	29 -32 weeks	24	40.0%

Demographic variables		No. of primi gravida mothers	%
	25 -28 weeks	20	33.3%
	29 -32 weeks	24	40.0%
Duration of Diabetes Mellitus	One month	28	46.7%
	Two months	20	33.3%
	Three months	8	13.3%
	> Three months	4	6.7%
Family history	Grand father	10	16.7%
	Grand mother	8	13.3%
	Father	9	15.0%
	Mother	9	15.0%
	None	24	40.0%
Test used	FBS	24	40.0%
	PPBS	36	60.0%

Above the table reveals the demographic information of primigravida mothers those who were participated for the following study “Evaluate the effectiveness of video assisted teaching program on knowledge regarding self administration of insulin among primigravida mothers with gestational diabetes mellitus attending antenatal out patient department at institute of obstetrics and gynecology-hospital for women and children. Chennai-08.”

Summarizes the demographic characteristics of primigravida mothers with GDM regards to age, highest group of people affected (66.6%) were between 26-30 years and the lowest group between 18-21 years 0.0%.

SECTION-2: ASSESSMENT OF PRE-TEST LEVEL AND POST-TEST OF KNOWLEDGE REGARDING SELF ADMINISTRATION OF INSULIN AMONG PRIMI GRAVIDA MOTHERS.

In considering demographic profile according to age 66.6%(40) primigravida were in the age group of 26 to 30 years an education 45.0%(27) were in the higher secondary education, occupation 51.7%(31) were house wife, according to type of family system 73.3%(44) were nuclear family, according to place of residence 53.3%(32) were in Rural area, according to the diet pattern 80%(48) were in the non-vegetarian, according to the gestational age 40.0%(24) were in the 29-32 weeks, according to the duration diabetes mellitus 46.7%(28) were in one month according to the family history 46.7%(24) non were, according to the test 60.0%(36) were in the test.

Table-4.2: Each Domainwise Pretest Percentage of Knowledge Regarding Self Administration of Insulin among Primigravida Mothers with Gestational Diabetes Mellitus

S. No	Domains	No. of questions	Min – Max score	Knowledge score		
				Mean	SD	% of mean score
1	General Knowledge	6	0 -6	3.08	2.11	51.33%
2	Signs and Symptoms	2	0 - 2	.85	.80	42.50%
3	Health Education Diet	9	0 - 9	4.45	2.17	49.44%
4	Exercise	3	0 - 3	1.10	.82	36.67%
5	Management	10	0 - 10	4.62	2.71	46.20%
	Total	30	0 - 30	14.10	7.09	47.00%

Above the table reveals domain wise pre-test percentage of knowledge regarding self administration of insulin among primigravida mothers with Gestational Diabetes Mellitus. They are having maximum knowledge in **General Knowledge**(51.33%) and minimum knowledge score in **Exercise** (36.67%).

Table-4.3: Overall Pre-test Knowledge Score

	No. of questions	Min – Max score	knowledge score	
			Mean \pm SD score	%
Overall score	30	0 -30	14.10 \pm 7.09	47.00%

Above the table reveals pre-test percentage of knowledge on self administration of insulin among primigravida mothers with Gestational Diabetes Mellitus. Overall pretest percentage of knowledge score is 47.00% among primi mothers.

Table-4.4: Pretest Level of Knowledge

Level of knowledge	No. of primigravidamothers	%
Inadequate knowledge	45	75.0%
Moderate knowledge	15	25.0%
Adequate knowledge	0	0.0%
Total	60	100%

Above the table reveals the primigravidamothers pretest level of knowledge. In general, 75.0% of the primigravidamothers are having inadequate knowledge and 25.0% of them having moderate knowledge and none of them were having adequate knowledge.

KNOWLEDGE SCORE INTERPRETATION

Min=0 Max=1 Total questions= 30 Maximum marks=30

S No.	Grade	Percentage	Marks
1.	Adequate knowledge	76 – 100%	22.6-30.0
2.	Moderate knowledge	50 – 75%	15.1-22.5
3.	Inadequate knowledge	0 – 50 %	<15

Table-4.5: Each Domainwise Posttest Percentage of Knowledge regarding Self Administration of Insulin among Primigravida Mothers with Gestational Diabetes Mellitus

S. No	Domains	No. of questions	Min – Max score	Knowledge score		
				Mean	SD	% of mean score
1	General Knowledge	6	0 -6	5.03	1.52	83.83%
2	Signs and Symptoms	2	0 - 2	1.57	.50	78.50%
3	Health Education Diet	9	0 - 9	7.30	1.25	81.11%
4	Exercise	3	0 - 3	2.42	.77	80.67%
5	Management	10	0 - 10	7.75	1.72	77.50%
	Total	30	0 - 30	24.07	3.55	80.23%

Above the table reveals the domain wise post-test percentage of knowledge regarding self administration of insulin among primigravida mothers with Gestational Diabetes Mellitus. They were having maximum knowledge in **General Knowledge** (83.83%) and minimum knowledge score in **Exercise** (80.67%).

Table-4.6: Overall Post test Knowledge Score

	No. of questions	Min – Max score	knowledge score	
			Mean \pm SD score	%
Overall score	30	0 -30	24.07 \pm 3.55	80.23%

Above the table reveals post-test percentage of knowledge on self administration of insulin among primigravida mothers with Gestational Diabetes Mellitus. Overall posttest percentage of knowledge score is 80.23% among primigravida mothers.

Table-4.7: Post test Level of Knowledge

Level of knowledge	No. of primigravida mothers	%
Inadequate knowledge	0	0.0%
Moderate knowledge	12	20.0%
Adequate knowledge	48	80.0%
Total	60	100%

In general, none of the primigravida mothers were having inadequate knowledge and 20.0% of them having moderate knowledge and 80% of them were having adequate knowledge.

SECTION-3: COMPARISON OF PRE-TEST AND POST-TEST LEVEL OF KNOWLEDGE AMONG PRIMI GRAVIDA MOTHERS

Table-4.8: Comparison of Pretest and Post test Knowledge Score

S. No	Knowledge on	Pretest		Posttest		Mean Difference	Student's paired t-test
		Mean	SD	Mean	SD		
1	General Knowledge	3.08	2.11	5.03	1.52	1.95	t=7.12 P=0.001 *** DF= 59 , Significant
2	Signs and Symptoms	.85	.80	1.57	.50	0.72	t=7.09 P=0.001 *** DF= 59 , Significant
3	Health Education Diet	4.45	2.17	7.30	1.25	2.85	t=9.61 P=0.001 *** DF= 59 , Significant
4	Exercise	1.10	.82	2.42	.77	1.32	t=8.81 P=0.001 *** DF= 59 , Significant
5	Management	4.62	2.71	7.75	1.72	3.13	t=10.24 P=0.001 *** DF= 59 , Significant
	Total	14.10	7.09	24.07	3.55	9.97	t=14.53 P=0.001 *** DF= 59 , Significant

*** very high significant at $P \leq 0.001$

Considering Knowledge regarding **General knowledge**, in pretest, mothers were having 3.08 score whereas in post test they were having 5.03 score. Difference is 1.95 . This difference is large and it is statistically significant difference.

Considering **Signs and Symptoms**, in pretest, mothers are having 0.85 score whereas in post test they are having 1.57 score. Difference is 0.72 This difference is large and it is statistically significant difference.

Considering **Health Education Diet**, in pretest , mothers were having 4.45 score whereas in posttest they were having 7.30 score. Difference is 2.85 . This difference is large and it is statistically significant difference.

Considering **Exercise**, in pretest , mothers were having 1.10 score whereas in post test they were having 2.42 score. Difference is 1.32. This difference is large and it is statistically significant difference.

Considering **Management**, in pretest, mothers were having 4.62 score whereas in post test they were having 7.75 score. Difference is 3.13. This difference is large and it is statistically significant difference.

Significance of difference between pretest and post test score was calculated using student paired t-test.

Table-4.9: Comparison of Overall Knowledge Score before and after Video Assisted Teaching Programme

	No. of primi gravida mothers	Pretest Mean±SD	Posttest Mean±SD	Mean difference Mean±SD	Student'S paired t-test
Overall Knowledge Score	60	14.10 ± 7.09	24.07 ± 3.55	9.97 ± 5.31	t=14.53 P=0.001*** DF = 59, significant

*** very high significant at $P \leq 0.001$

On an average, primigravida mothers are improved their knowledge from 14.10 to 24.07 after the administration of video assisted teaching program. Or we can say , in pretest they were able to answer only 14questions before administration of VAT after administration of VAT they are able to answer upto24questions. Due to VAT they are able to answer 12 more questions correctly. This difference is statistically significant. Statistical significance was calculated by using student's paired 't'test.

Table-4.10: Each Domainwise Pretest and Posttestpercentage of Knowledge

S. No	Domains	Posttest knowledge	Pretest knowledge	% of knowledge gain
1	General Knowledge	83.83%	51.33%	32.50%
2	Signs and Symptoms	78.50%	42.50%	36.00%
3	Health Education Diet	81.11%	49.44%	31.67%
4	Exercise	80.67%	36.67%	44.00%
5	Management	77.50%	46.20%	31.30%
	Total	80.23%	47.00%	33.23%

Table-4.10 shows each domain wise knowledge gain score among the primigravida mothers.

Table-4.11: Comparison of Pretest and Posttest Level of Knowledge Score

Level of knowledge	Pretest		Posttest		Generalized McNemar's test
	n	%	n	%	
Inadequate knowledge	45	75.0%	0	0.0%	$\chi^2=54.45$ $P=0.001^{***}(S)$
Moderate knowledge	15	25.0%	12	20.0%	
Adequate knowledge	0	0.0%	48	80.0%	
Total	60	100.0%	60	100.0%	

***very high significant at $p < 0.001$ level

Table No.11 shows the pretest and post-test level of knowledge among women.

Before VAT, 75.0% of the primigravida mothers are having inadequate level of knowledge score, 25.0% of them having moderate level of knowledge score and none of them were having adequate level of knowledge score.

After VAT, none of the primigravida mothers were having inadequate knowledge and 20.0% of them having moderate knowledge and 80.0% of them were having adequate knowledge.

Level of knowledge gain of between pretest and posttest was calculated using Generalised McNemar's chi-square test.

Table-4.12: Effectiveness and Generalization of Video assisted Teaching Programme on Knowledge Gain Score

	Max score	Mean score	Mean Difference of knowledge gain score with 95% Confidence interval	Percentage Difference of knowledge gain score with 95% Confidence interval
Pretest	30	14.10	9.97(8.60 – 11.33)	33.23% (28.67% – 37.76%)
Posttest	30	24.07		

Table no 12 shows the effectiveness of video assisted teaching program on knowledge regarding self administration of insulin among primigravida mothers with gestational diabetes mellitus attending antenatal out patient department at institute of obstetrics and gynecology-hospital for women and children. Chennai-08. After VAT primigravida mothers were gained 33.23% of knowledge score than pretest score.

Differences and generalization of knowledge gain score between pretest and post test score was calculated using and mean difference with 95% CI and proportion with 95% CI.

Table-4.13: Association between pre test level of Knowledge and their Demographic Variables

Demographic variables		Pretest Level of knowledge						N	Chi square test
		Inadequate		Moderate		Adequate			
		N	%	n	%	n	%		
Age	18 -21 years	0	0.0%	0	0.0%	0	0.0%	0	$\chi^2=1.46$ P=0.48 (NS)
	22 -25 years	12	75.0%	4	25.0%	0	0.0%	16	
	26 -30 years	29	72.5%	11	27.5%	0	0.0%	40	
	>30 years	4	100.0%	0	0.0%	0	0.0%	4	
Education	Non formal education	4	66.7%	2	33.3%	0	0.0%	6	$\chi^2=1.19$ P=0.75(NS)
	Primary education	8	72.7%	3	27.3%	0	0.0%	11	
	Higher secondary education	22	81.5%	5	18.5%	0	0.0%	27	
	Diploma/ Graduation	11	68.8%	5	31.2%	0	0.0%	16	
Occupation	Housewife	23	74.2%	8	25.8%	0	0.0%	31	$\chi^2=1.14$ P=0.76 (NS)
	Self employee	3	50.0%	3	50.0%	0	0.0%	10	
	Coolie	12	75.0%	4	25.0%	0	0.0%	16	
	Govt employee	3	100.0%	0	0.0%	0	0.0%	3	
Type of family system	Joint family	11	68.8%	5	32.0%	0	0.0%	16	$\chi^2=1.15$ P=0.77 (NS)
	Nuclear family	34	77.3%	10	22.7%	0	0.0%	44	
Place of residence	Rural	25	78.1%	7	21.9%	0	0.0%	32	$\chi^2=0.35$ P=0.55 (NS)
	Urban	20	71.4%	8	28.6%	0	0.0%	28	
Diet pattern	Vegetarian	8	66.7%	4	33.3%	0	0.0%	12	$\chi^2=0.55$ P=0.46 (NS)
	Non vegetarian	37	77.1%	11	22.9%	0	0.0%	48	

Demographic variables		Pretest Level of knowledge						N	Chi square test
		Inadequate		Moderate		Adequate			
		N	%	n	%	n	%		
Gestational age	16 -20 weeks	0	0.0%	0	0.0%	0	0.0%	0	$\chi^2=0.48$ P=0.78 (NS)
	21 -24 weeks	12	75.0%	4	25.0%	0	0.0%	16	
	25 -28 weeks	16	80.0%	4	20.0%	0	0.0%	20	
	29 -32 weeks	17	70.8%	7	29.2%	0	0.0%	24	
Duration of Diabetes Mellitus	One month	22	78.6%	6	21.4%	0	0.0%	28	$\chi^2=3.12$ P=0.37(NS)
	Two months	16	80.0%	4	20.0%	0	0.0%	20	
	Three months	4	50.0%	4	50.0%	0	0.0%	8	
	> Three months	3	75.0%	1	25.0%	0	0.0%	4	
Family history	Grand father	6	60.0%	4	40.0%	0	0.0%	10	$\chi^2=4.23$ P=0.37 (NS)
	Grand mother	5	62.5%	3	37.5%	0	0.0%	8	
	Father	7	77.8%	2	22.2%	0	0.0%	9	
	Mother	6	66.4%	3	33.6%	0	0.0%	9	
	None	21	87.5%	3	12.5%	0	0.0%	24	
Test used	FBS	20	83.3%	4	16.7%	0	0.0%	24	$\chi^2=1.48$ P=0.22 (NS)
	PPBS	25	69.4%	11	30.6%	0	0.0%	36	

Table no 13 shows the association between pretest level of knowledge and their demographic variables. None of the demographic variables were significantly associated with their pretest level of knowledge score. Statistical significance was calculated using Pearson chi square test.

Table-4.14: Association between Posttest Level of Knowledge and their Demographic Variables

Demographic variables		Posttest Level of knowledge						N	Chi square test
		Inadequate		Moderate		Adequate			
		n	%	n	%	n	%		
Age	18 -21 years	0	0.0%	0	0.0%	0	0.0%	0	$\chi^2=8.20$ P=0.02(S)
	22 -25 years	0	0.0%	7	43.8%	9	56.2%	16	
	26 -30 years	0	0.0%	4	10.0%	36	90.0%	40	
	>30 years	0	0.0%	1	25.0%	3	75.0%	4	
Education	Non formal education	0	0.0%	4	66.7%	2	33.3%	6	$\chi^2=10.42$ P=0.02(S)
	Primary education	0	0.0%	3	27.3%	8	72.7%	11	
	Higher secondary education	0	0.0%	3	11.1%	24	88.9%	27	
	Diploma/ Graduation	0	0.0%	2	12.5%	14	87.5%	16	
Occupation	Housewife	0	0.0%	5	16.1%	26	83.9%	31	$\chi^2=4.72$ P=0.19 (NS)
	Self employee	0	0.0%	1	10.0%	9	90.0%	10	
	Coolie	0	0.0%	6	37.5%	10	62.5%	16	
	Govt employee	0	0.0%	0	0.0%	3	100.0%	3	
Type of family system	Joint family	0	0.0%	3	18.8%	13	81.3%	16	$\chi^2=0.02$ P=0.88 (NS)
	Nuclear family	0	0.0%	9	20.5%	35	79.5%	44	
Place of residence	Rural	0	0.0%	6	18.8%	26	81.3%	32	$\chi^2=0.06$ P=0.76 (NS)
	Urban	0	0.0%	6	21.4%	22	78.6%	28	
Diet pattern	Vegetarian	0	0.0%	5	41.7%	7	58.3%	12	$\chi^2=2.87$ P=0.09 (NS)
	Non vegetarian	0	0.0%	7	14.6%	41	85.4%	48	

Demographic variables		Posttest Level of knowledge						N	Chi square test
		Inadequate		Moderate		Adequate			
		n	%	n	%	n	%		
Gestational age	16 -20 weeks	0	0.0%	0	0.0%	0	0.0%	0	$\chi^2=7.73$ P=0.02 (S)
	21 -24 weeks	0	0.0%	1	6.3%	15	93.7%	16	
	25 -28 weeks	0	0.0%	2	10.0%	18	90.0%	20	
	29 -32 weeks	0	0.0%	9	37.5%	15	62.5%	24	
Duration of Diabetes Mellitus	One month	0	0.0%	3	10.7%	25	89.3%	28	$\chi^2=8.57$ P=0.03(S)
	Two months	0	0.0%	3	15.0%	17	85.0%	20	
	Three months	0	0.0%	4	50.0%	4	50.0%	8	
	> Three months	0	0.0%	2	50.0%	2	50.0%	4	
Family history	Grand father	0	0.0%	0	0.0%	10	100.0%	10	$\chi^2=6.87$ P=0.14(NS)
	Grand mother	0	0.0%	3	37.5%	5	62.5%	8	
	Father	0	0.0%	3	33.3%	6	66.7%	9	
	Mother	0	0.0%	3	33.3%	6	66.7%	9	
	None	0	0.0%	3	12.5%	21	87.5%	24	
Test used	FBS	0	0.0%	7	29.2%	17	70.8%	24	$\chi^2=2.10$ P=0.14 (NS)
	PPBS	0	0.0%	5	13.9%	31	86.1%	36	

Above the table reveals the association between post test level of knowledge and their demographic variables. Elder mothers, More educated mothers, 21-Gestational weeks mothers, less duration of DM mothers were gained more knowledge than others.

Statistical significance was calculated using pearson chi square test.

Table-4.15: Association between Knowledge Gain Score and Demographic Variables

Demographic variables		Knowledge gain score						N	Chi square test
		Pretest		Posttest		Gain score= Post-Pre			
		Mean	SD	Mean	SD	Mean	SD		
Age	18 -21 years	0.00	0.00	0.00	0.00	0.00	0.00	0	$\chi^2=8.20$ P=0.02(S)
	22 -25 years	14.3	7.7	24.7	3.2	10.5	5.5	16	
	26 -30 years	14.6	7.1	24.2	3.6	9.6	5.5	40	
	>30 years	9.0	.0	20.0	.8	11.0	.8	4	
Education	Non formal education	21.7	5.2	25.5	1.4	3.8	4.5	6	$\chi^2=10.42$ P=0.02(S)
	Primary education	7.9	4.5	21.6	3.4	13.7	5.7	11	
	Higher secondary education	10.6	2.2	22.3	2.5	11.7	2.5	27	
	Diploma/ Graduation	21.4	6.2	28.1	1.4	6.7	5.4	16	
Occupation	Housewife	14.5	5.9	24.4	3.1	9.9	4.6	31	$\chi^2=4.62$ P=0.20 (NS)
	Self employee	16.2	7.8	25.3	3.1	9.1	5.6	10	
	Coolie	10.7	4.0	18.9	3.4	8.2	4.9	16	
	Govt employee	12.0	.0	22.7	.6	10.7	.6	3	
Type of family system	Joint family	12.0	7.2	23.4	3.4	11.4	5.3	16	$\chi^2=0.86$ P=0.39 (NS)
	Nuclear family	14.9	7.0	25.0	3.6	10.1	5.1	44	
Place of residence	Rural	13.3	6.9	24.2	3.8	10.8	5.2	32	$\chi^2=1.37$ P=0.17(NS)
	Urban	15.0	7.4	24.0	3.3	9.0	5.4	28	
Diet pattern	Vegetarian	14.0	8.1	22.5	2.9	8.5	5.8	12	$\chi^2=1.06$ P=0.28 (NS)
	Non vegetarian	14.1	6.9	24.5	3.6	10.3	5.2	48	

Demographic variables		Knowledge gain score						N	Chi square test
		Pretest		Posttest		Gain score= Post-Pre			
		Mean	SD	Mean	SD	Mean	SD		
Gestational age	16 -20 weeks	0.00	0.00	0.00	0.00	0.00	0.00	0	$\eta^2=8.09$ P=0.01 (S)
	21 -24 weeks	12.0	7.0	26.1	2.3	14.1	5.2	16	
	25 -28 weeks	14.6	5.7	22.8	2.5	8.3	4.0	20	
	29 -32 weeks	15.1	8.1	23.7	4.4	8.7	5.0	24	
Duration of Diabetes Mellitus	One month	13.3	7.2	23.9	3.1	10.6	6.0	28	$\eta^2=3.33$ P=0.03(S)
	Two months	17.8	2.8	25.2	3.5	11.4	2.5	20	
	Three months	12.5	6.9	19.1	2.3	6.6	5.1	8	
	> Three months	15.5	7.0	20.3	.5	4.8	6.8	4	
Family history	Grand father	15.4	5.8	27.2	1.8	11.8	4.4	10	$\eta^2=6.77$ P=0.15(NS)
	Grand mother	8.5	3.8	22.1	2.7	10.6	4.2	8	
	Father	13.7	5.8	23.3	3.6	9.7	3.0	9	
	Mother	18.1	8.7	22.8	4.7	9.7	4.7	9	
	None	14.1	7.4	24.2	3.2	8.1	5.6	24	
Test used	FBS	13.7	6.3	22.9	4.1	9.2	4.0	24	$\eta^2=0.90$ P=0.37 (NS)
	PPBS	14.4	7.6	24.9	2.9	10.5	6.0	36	

Above the table reveals the association between level of knowledge gain score and their demographic variables Elder mothers, More educated mothers, 21-24 Gestational weeks mothers, less duration of DM mothers were gained more knowledge than others.

Statistical significance was calculated using oneway analysis of variance F-test and student independent t-test.

CHAPTER – V DISCUSSION

The study findings are discussed under the following headings,

- 1) Assess the knowledge regarding self-administration of insulin among primigravida mothers with Gestational Diabetes Mellitus.
- 2) Evaluate the effectiveness of video assisted teaching program regarding self -administration of insulin among primigravida mothers with Gestational Diabetes Mellitus.
- 3) Compare pretest and post-test regarding self-administration of insulin among primigravida mothers with Gestational Diabetes Mellitus.
- 4) Determine the association between the knowledge regarding gestational diabetes mellitus among selected variables
- 5) A significant relationship between the pre-test and post test scores
- 6) A significant association between the knowledge of antenatal mothers regarding gestational diabetes mellitus and its care

5.1. Objective: 1

Assess the knowledge regarding self-administration of insulin among primigravida mothers with Gestational Diabetes Mellitus.

To assess the knowledge regarding self-administration of insulin among 30 primigravida gestational diabetic mothers revealed that 93.3% had inadequate knowledge and practice regarding insulin among gestational diabetic mothers 76.7% had inadequate practice in pre-test. Later, it revealed that there was need for structured teaching programme regarding gestational diabetes mellitus among gestational diabetic mothers. These findings are consistent with the findings that reported

54.29% had inadequate knowledge; 40% had moderately adequate knowledge; and 5.71% had adequate knowledge in pretest and recommended for providing health information concerning GDM.

5.2 Objective: 2

Evaluate the effectiveness of video assisted teaching program regarding self-administration of insulin among primigravida mothers with Gestational Diabetes Mellitus.

The evaluation of knowledge regarding self-administration of insulin among 30 primigravida gestational diabetic mothers revealed that, 40% of mothers had adequate knowledge, 56.7% had moderately adequate knowledge. Assessing practice of insulin regarding gestational diabetes among gestational diabetic mothers showed that 46.7% had adequate practice and 53.3% had moderately adequate practice. After being exposed to structured teaching programme the findings showed that knowledge and practice scores had been markedly increased. These findings are consistent and reported that 54.29% had adequate knowledge; 31.43% had moderately adequate knowledge; and 14.29% had inadequate knowledge in post-test.

S Raha et al., (2012) Conducted a Study of maternal obesity results in a number of obstetrical and fetal complications with both immediate and long-term consequences. The increased prevalence of obesity has resulted in increasing numbers of women of reproductive age in this high-risk group. Found outcomes were associated with altered vascular development in the placenta, as well as increased hypoxia in the labyrinth. We propose that the altered placental vasculature may result in reduced oxygenation of the foetal tissues contributing to premature demise and poor neonatal survival.

5.3 Objective: 3

Compare pretest and post-test regarding self-administration of insulin among primigravida mothers with Gestational Diabetes Mellitus.

The Comparison on pretest and post-test regarding self-administration of insulin among primigravida mothers with Gestational Diabetes Mellitus had showed markedly increased as evidenced by the post test analysis. This revealed that the mean posttest knowledge scores of mothers was 18.8 (SD-4.58) which was increased compared to the mean pretest knowledge scores 7.46 (SD-2.04). The 't' value was of 1.699 which is highly significant at ($P < 0.05$) level. Hence H1, the mean post test knowledge scores is significantly higher than the mean pre test knowledge scores was accepted. It showed that the mean posttest practice scores of antenatal mothers with gestational diabetes mellitus was 6.63 (SD 1.35) which was increased compared to the mean pretest practice scores 2.96 (SD-0.87). The 't' value was 1.699 which is highly significant at ($P < 0.05$) level.

Determine the association between the knowledge regarding gestational diabetes mellitus among selected variables.

There is positive correlation between mean post test knowledge and pre test on determining the association between the knowledge regarding gestational diabetes mellitus among selected variables. Further it could be inferred that knowledge and practice depends on each other. The reason might be when the knowledge is improving, practice also will improve. Hence, there is a significant correlation between post test knowledge and practice scores on gestational diabetes among gestational diabetic mothers. There is a significant correlation between post test knowledge score and practice scores was accepted.

E Capobianco et al., (2016) conducted a study family history of diabetes predisposes to gestational diabetes mellitus (GDM). We

hypothesized that female offspring of rats with pre-gestational diabetes will develop GDM, a pathology associated with foetal overgrowth and altered placental signaling. We found normal glycemia and insulinemia in the offspring from pre-gestational diabetic rats at three months of age. We conclude that exposure of maternal diabetes in utero programs GDM in the female offspring, leading to a GDM model associated with impaired placental signaling pathways, increased pro-oxidant/pro-inflammatory environment and foetal overgrowth.

A significant relationship between the pre-test and post test scores.

A significant relationship between the pre-test and post test scores. Among these, three demographic variables were associated with posttest knowledge scores of antenatal mothers with gestational diabetes mellitus. They were educational status ($\chi^2=7.22$), duration of gestational diabetes mellitus ($\chi^2=4.44$) and gestational age ($\chi^2=6.43$) respectively. So educational status plays an important role in gaining knowledge. There was a significant association found between posttest knowledge scores with duration of GDM and gestational age as they are already exposed to treatment and instruction.

A significant association between the knowledge of antenatal mothers regarding gestational diabetes mellitus and its care.

These findings are consistent with the findings investigated the association between the knowledge of antenatal mothers regarding gestational diabetes mellitus and its care. Women completed the Test of Functional Health Literacy in adult short form and a questionnaire. A score of ≤ 30 was defined as low functional health literacy. Of 74 women participated in the study, 16 (22%) were classified as having low functional health literacy. Compared with women with adequate health literacy, those with low health literacy were significantly more likely to have an unplanned pregnancy.

R Artal et al., (2016) Exercise plays an important role in reducing the prevalence of gestational diabetes mellitus (GDM) in women with or without risk factors. GDM risk factors include obesity, family history of diabetes, high-risk ethnicity, increased maternal age, history of GDM, delivering a macrosomic infant, excessive gestational weight gain early in pregnancy (before glucose screening), sedentary behaviour, low physical activity, and vitamin D deficiency. Most GDM patients can be managed with lifestyle modifications that include medical nutrition therapy and physical activity. When adherence is high and women are fully engaged in the exercise program, GDM can be effectively managed and prevented.

CHAPTER – VI

SUMMARY, IMPLICATION, LIMITATION, RECOMMENDATION AND CONCLUSION

This chapter deals with Summary, Implication, Recommendation and Conclusion. GDM is the most common metabolic complication of pregnancy, illustrates the interaction between the physiologic changes of pregnancy and pathophysiology of disease. So it is important to regulate blood sugar in order to prevent from complications.

A formal Ethical approval was obtained after the content validity of the tool from Medical and Nursing experts the tool (Semi-Structured Questionnaire) was used in the pilot study to assess its reliability by test-retest method and feasibility of the study was assessed. The study was conducted between 02.01.2017 and 27.01.2018. The investigator chose pre-experimental one group pre-test, post-test design in a quantitative research approach. Samples selected by using convenient sampling technique among primigravida mothers with Gestational Diabetes attending AN OPD and their knowledge of GDM before and after VAT.

The findings of the study derived from statistical analysis with its pertinence of the objectives and related to the study. The problem stated was Evaluate the effectiveness of video assisted teaching programme on gestational diabetes mellitus among primigravida mothers attending antenatal outpatient department at Institute of Obstetrics and Gynaecology hospital for women and Children, Egmore, Chennai-08.

The Study findings are summarized below:

- 1) The study reveals demographic characteristics of 60 primigravida mothers who participated in this study among which 66.6% belongs to 26-30 years .

- 2) Education of the primigravida mothers who are participated in this study among which 45.0 % belongs to higher secondary education.
- 3) Occupation of primigravida mothers who are participated in this study among which 51.7 % were home maker .
- 4) Type of family system of the primigravida mothers who are participated in this study among which 73.3% belongs to nuclear family.
- 5) Place of residence were 53.3 % in Rural
- 6) Diet pattern was 80% nonvegetarian
- 7) Gestational age was 40%
- 8) Duration of gestational age was one month in 40 .0 %
- 9) Family history 40 % was none .

Findings related to knowledge regarding administration of insulin

- 1) Out of 60 samples in general information
- 2) 0.0%were inadequate knowledge,
- 3) 20.0% were moderate knowledge,
- 4) 80.0% adequate knowledge

Findings related to association with demographic variables

There was significant association with the effectiveness of video assisted teaching regarding self administration of insulin and their age χ^2 value-1.46 p-6.48*

There was significant association with the effectiveness of video

assisted teaching regarding self administration of insulin and their education x2 value-1.19 p-0.75*

There was significant association with the effectiveness of video assisted teaching regarding self administration of insulin and their occupation x2 value-1.14 p-0.76*

There was significant association with the effectiveness of video assisted teaching regarding self administration of insulin and their type of family system

6.2 IMPLICATION

Nursing Service

- 1) The video assisted teaching programme used to improve the knowledge regarding gestational diabetes mellitus among gestational diabetic mothers.
- 2) Healthy baby from the healthy mother is a vital function of the nurse and Nurse can use this video assisted teaching programme among all the gestational diabetic mothers in community.
- 3) The video assisted teaching programme programme can be used to improve the knowledge regarding gestational diabetes mellitus and self =administration of insulin utilization to the expectant mothers.

Nursing Education

- 1) Students can utilize the video assisted teaching teaching programme to give health education to mothers with gestational diabetes mellitus.
- 2) Teacher can utilize the video assisted teaching programme to teach community health nursing students in their community.

- 3) Hand out can be used for all the beneficiaries in a community set up.
- 4) The structured video assisted teaching programme can be utilized by the nurses to educate the mothers in sub centers , primary health centers.

Nursing Administration

- 1) Nursing administrators can utilize the video assisted teaching programme while conducting in service education programme for directing and motivating the staff towards implementation of awareness programme.
- 2) Nursing administrators have more responsibility as supervisor on creating awareness regarding GDM among primimothers by facilitating free distribution of booklets, handouts, and charts regularly to patients in outpatient department of hospitals, health clinics in urban and rural.
- 3) Nursing administrators can formulate policies that will includes all nursing staff to be actively involved in health education programme in their respective hospitals.

NURSING RESEARCH

- 1) This study can be effectively utilized by the emerging researchers for their reference purpose.
- 2) This study can be base line for further studies is build upon.

6.3 LIMITATION

It was time consuming for the investigator, as it took one hour 30 minutes to interview and educate the mother.

The study assessed only knowledge.

The study was limited to the primigravida mothers with GDM of IOG out patient department.

The duration of the study was limited only to 4 weeks.

6.4 RECOMMENDATIONS

- 1) A longitudinal study can be done using post test after 2 weeks, 3 weeks and 4 weeks to see retention of knowledge.
- 2) This similar study can be replicated on large sample in various hospitals, there by findings can be generalized in large population.
- 3) This similar study can be replicated with control and experimental group.

6.5 CONCLUSION

Planned video teaching programme was conducted to enhance and improving the knowledge among the primigravida mothers with Gestational Diabetes Mellitus and its management by using self administration of insulin, diet, exercise attending Antenatal Outpatient Department, Institute of Obstetrics and Gynaecology, Govt. Hospital for Women and Children, Egmore, Chennai. Before planned teaching programme, 80% of primi gravida mothers having inadequate level of knowledge score, 25% of primi gravida mothers having moderate level of knowledge score and none of them having adequate level of knowledge score. After plnated video assisted teaching programme, immediatly gain adequate level of knowledge score and average in post test after having planning video assisted teaching programme. Hence the planned video assisted teaching programme was instructionally effective appropriate and feasible.

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SEMISTRUCTURED QUESTIONNAIRE
PART-I
A) DEMOGRAPHIC VARIABLES

- 1) Antenatal Mother's Age
 - a) 18-21 Years
 - b) 22-25 Years
 - c) 26-30 Years
 - d) 30 Years and above

- 2) Antenatal Mother's Education Level
 - a) No formal education
 - b) Primary Education
 - c) Secondary Education
 - d) Degree/ Diploma

- 3) Occupation
 - a) House Wife
 - b) Self Employed
 - c) Private Employee/ Daily Wages
 - d) Government Employee

- 4) Type of Family
 - a) Nuclear
 - b) Joint

- 5) Residence
 - a) Urban
 - b) Rural

- 6) Dietary Pattern
 - a) Vegetarian
 - b) Non Vegetarian
 - c) Mixed Diet

B) CLINICAL VARIABLES

- 7) Gestational Age
- a) 20-23 Weeks
 - b) 24-27 Weeks
 - c) 28-30 Weeks
 - d) 31-34 Weeks
- 8) Duration of Gestational Diabetes Mellitus
- a) One Month
 - b) Two Month
 - c) Three Months
 - d) Four Months
- 9) Family History of Diabetes Mellitus
- a) Grandfather
 - b) Grandmother
 - c) Father
 - d) Mother
- 10) Blood Sugar Level
- a) Fasting
 - b) Postprandial
 - c) HbA1C Value
 - d) Oral glucose tolerance test value
- 11) Insulin should be stored in
- a) Room Temperature
 - b) Refrigerator
 - c) Freezer Box
 - d) Don't Know
- 12) Insulin injection should be used by the following manner
- a) Vigorous shaking of the insulin vial
 - b) Up and down shaking the insulin vial
 - c) Roll on hands over insulin vial
 - d) Don't know

PART-II

MEANING

- 1) Diabetes Mellitus is
- a) Metabolic disorder
 - b) Deficiency of carbohydrate
 - c) Deficiency of Protein
 - d) Don't know
- 2) Gestational Diabetes Mellitus is
- a) 1st recognition of high Blood Sugar during pregnancy
 - b) Impaired Insulin Level
 - c) Impaired Insulin Tolerance
 - d) Don't know
- 3) Gestational Diabetes Mellitus will be the
- a) Temporary condition
 - b) Permanent
 - c) Continue as Diabetes Mellitus
 - d) Don't know

CAUSES

- 4) Gestational Diabetes Mellitus can occur due to
- a) Family history of diabetes and obesity
 - b) Consanguineous Marriage
 - c) High Parity
 - d) Don't know

SIGNS AND SYMPTOMS

- 5) Main symptoms of hypoglycemia are
- a) Giddiness, Unconsciousness
 - b) Polyuria
 - c) Dullness
 - e) Don't know

- 6) Main symptoms of hyperglycemia are
- a) Polyuria
 - b) Unconsciousness
 - c) Irritability
 - d) Don't know

INVESTIGATION

- 7) Gestational Diabetes Mellitus is usually diagnosed at
- a) Second trimester of the pregnancy
 - b) During first trimester
 - c) As soon as the pregnancy is confirmed
 - d) Don't know
- 8) The confirmatory test to diagnose gestational Diabetes Mellitus is
- a) Blood test OGCT
 - b) Random blood sugar
 - c) F/PP
 - d) Don't know

MANAGEMENT

- 9) The food rich in fibre content are
- a) Green Vegetables
 - b) Cereals, Pulses
 - c) Egg, Milk
 - d) Don't know
- 10) The food rich in complex Carbohydrates are
- a) Whole grains, wheat
 - b) Potato
 - c) Butter, Curd
 - d) Don't know

- 11) The foods rich in protein are
- a) Pulses, Spurts, Egg
 - b) Rice
 - c) Fruits
 - d) Don't know
- 12) Foods rich in fat are
- a) Rice
 - b) Meat, Chicken
 - c) Wheat
 - d) Don't know
- 13) Which type of food can be taken during midmorning
- a) Raw Vegetables
 - b) Chips
 - c) Cream Biscuits
 - d) Don't know
- 14) Fruit that is not rich in sugar
- a) Mango
 - b) Banana
 - c) Guava
 - d) Don't know
- 15) Split diet regimen for women with GDM is
- a) Three meals and three snacks
 - b) Four meals and no snacks
 - c) Three meals and no snacks
 - d) No Snacks
- 16) The vegetable can be avoided by the Gestational Diabetes Mellitus Mother is
- a) Beet Root
 - b) Green Leaves
 - c) Drumstick
 - d) Don't know

- 17) Simple home management of hypoglycemia is
- e) Take insulin
 - f) Take sugar
 - g) Take Salt
 - h) Don't know
- 18) The exercise which is recommended for gestational Diabetes mother is
- i) Cycling
 - j) Walking
 - k) Swimming
 - l) Don't know
- 19) Specific exercise which is recommended for Gestational Diabetes Mother is
- a) Leg Exercise
 - b) Hand Exercise
 - c) Abdominal Exercise
 - d) Don't know
- 20) Need for exercise in Gestational Diabetes Mother is
- a) Helps to reduce serum glucose level and insulin need
 - b) Helps to increased SG level
 - c) It will reduce insulin secretion
 - d) Don't know

INSULIN THERAPY

- 21) The correct time to take insulin in
- a) $\frac{1}{2}$ an Hour before food
 - b) $\frac{1}{2}$ an Hour after food
 - c) 2 Hrs before food
 - e) Don't know

22) Which part is advised for insulin injection for Gestational Diabetes is

- a) Arms (posterior Surface), Thighs (anterior surface)
- b) Abdomen, Arms
- c) Only Thighs
- d) Don't know

23) How many times we can use the disposable syringe

- d) Single Use
- e) One Day
- f) One Week
- e) Don't know

24) Pain may be minimized while giving injection by

- a) Avoiding muscle to keep use
- b) Keeping the injection site tense
- c) Use severe needle
- d) Don't know

25) Insulin dose will be adjusted as per

- a) Doctors advice
- b) Self
- c) As per our food intake
- d) Don't know

COMPLICATION

26) From the following one will be main complication

- a) Excess fluid intake amniotic sac
- b) Increased chance of instrumental delivery
- c) Back Pain
- d) Don't know

- 27) From the following one will be foetal complication
- a) Delayed delivery
 - b) Big baby
 - c) Defect in the vertebral column
 - d) Don't know

FOLLOWUP & HEALTH EDUCATION

- 28) During postpartum period, the mother should
- a) Fully avoid breast feeding
 - b) Immediately start breast feeding
 - c) Delayed to start breast feeding
 - d) Don't know

- 29) Gestational Diabetes Mellitus management through
- a. Medical Management
 - b. Medical Nutrition Therapy
 - c. Physical Activity & Monitoring blood glucose level
 - b) Don't know

- 30) The best contraception prepared after delivery in
- e) Pills
 - f) Copper T
 - g) No need to take anything
 - c) Don't know

KEY ANSWERS

1) a
2) a
3) a
4) a
5) a
6) a
7) a
8) a
9) a
10) a

11) a
12) b
13) a
14) c
15) a
16) a
17) b
18) b
19) b
20) a

21) a
22) a
23) a
24) a
25) a
26) b
27) b
28) b
29) d
30) b

பிரிவு-1
தாயின் சுய குறிப்பு

அ) கருவுற்ற தாயின் சுய தகவல்கள்

- 1) கருவுற்ற தாயின் வயது
- அ) 18-21 வயது
- ஆ) 22-25 வயது
- இ) 26-30 வயது
- ஈ) 30 வயது மற்றும் அதற்கு மேல்
- 2) கருவுற்ற தாயின் கல்வித்தகுதி
- அ) முறைசாரா கல்வி
- ஆ) ஆரம்பக் கல்வி
- இ) உயர்நிலை பள்ளிக்கல்வி
- ஈ) பட்டப்படிப்பு/ பட்டயப்படிப்பு
- 3) தொழில்
- அ) இல்லத்தரசி
- ஆ) சுய தொழில்
- இ) தினக்கூலி
- ஈ) அரசாங்க பணி
- 4) குடும்ப வகை
- அ) கூட்டுக்குடும்பம்
- ஆ) தனிக்குடும்பம்
- 5) இருப்பிடம்
- அ) கிராமம்
- ஆ) நகரம்
- 6) உணவுமுறை
- அ) சைவம்
- ஆ) அசைவம்

ஆ) மருத்துவ தகவல்கள்

- 7) கர்ப்ப காலம்
- அ) 16-20 வாரங்கள்
- ஆ) 21-24 வாரங்கள்
- இ) 25-28 வாரங்கள்
- ஈ) 29-32 வாரங்கள்
- 8) நீரிழிவு நோயின் காலம்
- அ) ஒரு மாதம்
- ஆ) இரண்டு மாதங்கள்
- இ) மூன்று மாதங்கள்
- ஈ) நான்கு மாதங்கள் மற்றும் அதற்கு மேல்
- 9) நீரிழிவு நோய் குறித்து பரம்பரை குறிப்பு
- அ) தாத்தா
- ஆ) பாட்டி
- இ) அப்பா
- ஈ) அம்மா
- 10) இரத்தத்தில் குளுகோஸின் அளவு அதிகம் இருந்தது
- அ) வெறும் வயிற்றில் எடுத்த பரிசோதனை அளவு
- ஆ) உணவுக்கு பிறகு எடுத்த பரிசோதனை அளவு
- இ) குளுகோஸ் கலந்து குடித்த பிறகு எடுத்த பரிசோதனை அளவு
- ஈ) மூன்று மாதகால குளுக்கோஸ் அளவு
- 11) இன்சலின் மருந்து வைத்திருக்க வேண்டிய இடம்
- அ) அறையின் தட்பவெப்ப நிலையில் போதுமானது
- ஆ) குளிர்சாதனபெட்டியில் வைக்க வேண்டும்
- இ) மூடிய பெட்டியில்
- ஈ) குளிர்சாதன பெட்டியின் உறைநிலை பகுதியில் வைக்க வேண்டும்

- 12) இன்சலின் மருந்தை உபயோகப்படுத்துவதற்கு முன் குப்பியை
- அ) வேகமாக கலக்க வேண்டும்
- ஆ) மேலும் கீழும் கலக்க வேண்டும்
- இ) உள்ளங்கைகளுக்கு இடையில் வைத்து மிதமாக உருட்ட வேண்டும்
- ஈ) கலக்க தேவை இல்லை

பிரிவு-2

அர்த்தங்கள்

- 1) நீரிழிவு நோய் என்பது
- அ) இரத்தத்தில் சர்க்கரையின் அளவு மாறுபடுவது
- ஆ) தோல் சம்பந்தப்பட்ட குறைபாடு
- இ) சிறுநீரக நோய்
- ஈ) தெரியவில்லை
- 2) கர்ப்ப கால நீரிழிவு நோய் என்பது
- அ) முதன்முறையாக கர்ப்பகாலத்தில் கண்டறியப்பட்டது
- ஆ) இன்சலின் அளவு மாறுபடுதல்
- இ) வளர்ச்சிதை குறைபாடு
- ஈ) தெரியவில்லை
- 3) கர்ப்ப கால நீரிழிவு நோயானது
- அ) தற்காலிகமானது
- ஆ) நிரந்தரமானது
- இ) தொடரும் நோய்
- ஈ) தெரியவில்லை

காரணிகள்

- 4) கர்ப்ப கால நீரிழிவு நோய் கீழ்க்கண்ட காரணத்தினால் வரலாம்
- அ) குடும்ப பரம்பரையை பொறுத்தது, பருமன்
- ஆ) நெருங்கிய உறவில் திருமணம் செய்தல்
- இ) அதிக குழந்தை பெற்றுக்கொண்டால்
- ஈ) தெரியவில்லை

அறிகுறிகள்

- 5) சர்க்கரை குறைதலின் அறிகுறியானது
- அ) தலைசுற்றல்
- ஆ) அதிகசிறுநீர் வெளியேறுதல்
- இ) வெப்பம் குறைந்து சில்லிட்டுபோதல்
- ஈ) தெரியவில்லை
- 6) சர்க்கரையின் அளவு அதிகரித்தலில் அறிகுறியானது
- அ) அதிக சிறுநீர் வெளியேறுதல்
- ஆ) சுய நினைவை இழந்துவிடுதல்
- இ) எரிச்சலுண்டாதல்
- ஈ) தெரியவில்லை

பரிசோதனைகள்

- 7) கார்ப்பகால நீரிழிவு நோய், கார்ப்பத்தின் எந்த காலகட்டத்தில் கண்டறியப்படுகிறது?
- அ) கார்ப்பகாலத்தின் இரண்டாவது பாதியில்
- ஆ) முதல் மூன்று மாதங்களுக்குள்
- இ) கருத்தரித்த உடனே
- ஈ) தெரியவில்லை
- 8) கார்ப்பகால நீரிழிவு நோயை உறுதிபடுத்தும் பரிசோதனை எது?
- அ) குளுக்கோஸ் அருந்திய பிறகு இரத்தத்தில் சர்க்கரையின் அளவை பரிசோதிக்கும் முறை
- ஆ) தோராயமான இரத்தப் பரிசோதனை
- இ) உணவுக்கு முன் எடுக்கப்படும் இரத்த பரிசோதனை
- ஈ) தெரியவில்லை

கவனிப்பு முறைகள்

- 9) கார்ப்பகால நீரிழிவு நோய் உள்ள தாய் சேர்த்துக்கொள்ள வேண்டிய நாளாச்சத்து அதிகமுள்ள உணவு வகையானது
- அ) கீரை, காய்கறிகள்
- ஆ) சிறுதாணியங்கள்
- இ) முட்டை, பால்
- ஈ) தெரியவில்லை

- 10) கர்ப்பகால நீரிழிவு நோய் உள்ள தாய் தவிர்க்கவேண்டிய மாவுச்சத்து அதிகமுள்ள உணவுவகையானது
- அ) பயிறு வகைகள், கோதுமை
- ஆ) கீழங்கு வகைகள்
- இ) தயிர், மோர்
- ஈ) தெரியவில்லை
- 11) கர்ப்ப கால நீரிழிவு நோய் உள்ள தாய் சேர்த்துக்கொள்ள வேண்டிய புரதச்சத்து அதிகமுள்ள உணவுகள் யாவை?
- அ) முளைகட்டிய பயறு வகைகள், பருப்பு வகைகள், முட்டை
- ஆ) அரிசி
- இ) பழங்கள்
- ஈ) தெரியவில்லை
- 12) கொழுப்புச்சத்து நிறைந்த உணவு வகைகள்
- அ) அரிசி
- ஆ) கறி, கோழி கறி
- இ) கோதுமை
- ஈ) தெரியவில்லை
- 13) நண்பகல் நேரத்தில் எந்த வகையான உணவுகளை எடுத்துக்கொள்ள வேண்டும்?
- அ) பச்சை காய்கறிகள் கலவை
- ஆ) பொரித்த உணவு வகைகள்
- இ) ரொட்டி வகைகள்
- ஈ) தெரியவில்லை
- 14) சர்க்கரையின் அளவு குறைவாக உள்ள பழம் எது
- அ) மாம்பழம்
- ஆ) வாழைப்பழம்
- இ) கொய்யாப்பழம்
- ஈ) தெரியவில்லை

- 15) கர்ப்பகால நீரிழிவு நோய் உள்ள தாய் எடுத்துக்கொள்ள வேண்டிய பகிர்உணவு முறை எது?
- அ) மூன்றுமுறை உணவு, மூன்றுமுறை தின்பண்டங்கள்
- ஆ) இரண்டுமுறை உணவு, மூன்றுமுறை தின்பண்டங்கள்
- இ) நான்குமுறை உணவு, தின்பண்டங்கள் இல்லை
- ஈ) தெரியவில்லை
- அ) பச்சை காய்கறி சாலட்
- ஆ) பொரித்த உணவுகள்
- இ) கேக்
- ஈ) தெரியவில்லை
- 16) கர்ப்பகால நீரிழிவு நோய் உள்ள தாய் தவிர்க்க வேண்டிய காய்கறி எது?
- அ) பீட்ரூட்
- ஆ) கீரைவகைகள்
- இ) முருங்கைக்காய்
- ஈ) தெரியவில்லை
- 17) இரவில் சர்க்கரை குறைவதினால் அவதிப்படும் தாய் செய்ய வேண்டிய எளிய தீர்வு எது?
- அ) இன்சலின் மருந்து எடுத்துக்கொள்ள வேண்டும்
- ஆ) சர்க்கரை எடுத்துக்கொள்ள வேண்டும்
- இ) உப்பு எடுத்துக்கொள்ள வேண்டும்
- ஈ) தெரியவில்லை
- 18) கர்ப்பகால நீரிழிவு நோய் உள்ள தாய்மார்களுக்கு பரிந்துரைக்கப்படும் எளிய உடற்பயிற்சி எது?
- அ) மிதிவண்டி ஓட்டுதல்
- ஆ) நடைபயிற்சி
- இ) நீச்சல் பயிற்சி
- ஈ) தெரியவில்லை

19) கர்ப்பகால நீரிழிவு நோய் உள்ள தாய்மார்களுக்கு அளிக்கப்படும் சிறப்பு பயிற்சி எது?

- அ) கால் பயிற்சி
- ஆ) கை பயிற்சி
- இ) வயிற்று தசை பயிற்சி
- ஈ) தெரியவில்லை

20) கர்ப்பகால நீரிழிவு நோய் உள்ள தாய்மார்களுக்கு உடற்பயிற்சி செய்வதன் அவசியம் என்ன?

- அ) இரத்தத்தில் சர்க்கரையின் அளவையும், இன்சலின் தேவையையும் குறைக்க உதவுகிறது
- ஆ) சர்க்கரையின் அளவை அதிகரிக்கச் செய்கிறது
- இ) இன்சலின் உற்பத்தியை குறைக்கிறது
- ஈ) தெரியவில்லை

ஊசி மருந்து பயன்படுத்தும் முறை

21) இன்சலின் போடும் சரியான நேரம்

- அ) உணவு உண்பதற்கு அரை மணி நேரத்திற்கு முன்
- ஆ) உணவு உண்ட அரை மணி நேரத்திற்கு பின்
- இ) உணவு உண்பதற்கு இரண்டு மணி நேரத்திற்கு முன்
- ஈ) தெரியவில்லை

22) கர்ப்பகால நீரிழிவு நோய் உள்ள தாய்மார்களுக்கு இன்சலின் ஊசி போட பரிந்துரைக்கப்படும் உடல் பகுதி எது?

- அ) பின்பக்க கை, முன் தொடை
- ஆ) வயிறு
- இ) தொடைகளில் மட்டும்
- ஈ) தெரியவில்லை

23) இன்சலின் ஊசியை எத்தனை முறை உபயோகப்படுத்தலாம்?

- அ) ஒரு முறை
- ஆ) ஒரு நாள்
- இ) ஒரு வாரம்
- ஈ) தெரியவில்லை

- 24) ஊசி போடும்போது வலி தெரியாமல் இருக்க
- அ) தசையை இலகுவாக வைத்திருக்க வேண்டும்
- ஆ) இருக்கமாக வைத்திருக்க வேண்டும்
- இ) ஒரே ஊசியை உபயோகப்படுத்தலாம்
- ஈ) தெரியவில்லை

- 25) இன்சலின் மருந்தின் அளவை மாற்றுவதற்கு?
- அ) மருத்துவரின் ஆலோசனை கட்டாயம் வேண்டும்
- ஆ) தாமசுவே மாற்றலாம்
- இ) நாம் சாப்பிடும் உணவிற்கேற்ப மாற்றலாம்
- ஈ) தெரியவில்லை

குறைபாடுகள்

- 26) கர்ப்பகால நீரிழிவு நோயுள்ள தாய்மார்களுக்கு ஏற்படும் பாதிப்பு என்ன?
- அ) அதிக நீர் கோர்த்தல்
- ஆ) ஆயுத பிரசவம்
- இ) முதுகு வலி
- ஈ) தெரியவில்லை

- 27) கர்ப்பகால நீரிழிவு நோயினால் குழந்தைகளுக்கு ஏற்படும் பாதிப்பு என்ன?
- அ) காலதாமதமான பிரசவம்
- ஆ) பெரிய குழந்தை
- இ) முதுகுதண்டில் குறைபாடு
- ஈ) தெரியவில்லை

பின்பற்ற வேண்டிய சுகாதார கல்வி

- 28) குழந்தை பிறந்த பின் தாய்ப்பால் புகட்டுவதை?
- அ) முழுவதுமாக தவிர்க்க வேண்டும்
- ஆ) உடனடியாக தாய்ப்பால் புகட்ட வேண்டும்
- இ) சிறிது நேரம் கழித்து தாய்ப்பால் புகட்ட வேண்டும்
- ஈ) தெரியவில்லை

- 29) கர்ப்பகால நீரிழிவு நோயுள்ள தாய்மார்கள் தங்களை
கவனித்துக்கொள்ள செய்ய வேண்டியது
- அ) மருத்துவ ஆலோசனையுடன் கூடிய உணவுமுறை
- ஆ) உணவு முறை மாற்றம்
- இ) உடற்பயிற்சி மற்றும் இரத்தப் பரிசோதனை
- ஈ) தெரியவில்லை
- 30) பிரசவத்திற்கு பின் சிறந்த கருத்தடை முறை எது?
- அ) மாத்திரைகள்
- ஆ) காப்பர்-டி
- இ) எதுவும் இல்லை
- ஈ) தெரியவில்லை

STRUCTURE TEACHING PROGRAMME

GESTATIONAL DIABETES MELLITUS

Topic : Gestational Diabetes Mellitus

Duration : 45 minutes

Group : Antenatal mothers with gestational diabetes mellitus

Place : Institute of Obstetrics & Gynaecological Hospital.

Method of Teaching: Lecture cum discussion.

Medium of Instruction: Tamil.

Teaching Aids: Compact Disc with laptop.

GENERAL OBJECTIVES:-

At the end of the teaching, mothers will be able to acquire in depth knowledge regarding gestational diabetes mellitus and its management and develop skills in their day to day life.

SPECIFIC OBJECTIVES:-

The mothers will be able to;

- define gestational diabetes mellitus
- list down the risk factors
- explain the pregnancy increased metabolic changes
- enlist the diagnosis of gestational diabetes
- differentiate the sign and symptoms
- narrate the effects of pregnancy on diabetes
- discuss the effect of diabetes on pregnancy
- describe the management for gestational mellitus.

Specific objective	Content	AV aids	Teacher learner activity
<p data-bbox="91 280 297 360">Introduce the topic</p> <p data-bbox="91 799 259 959">Define gestational diabetes mellitus</p>	<p data-bbox="327 280 1568 719">INTRODUCTION : Pregnancy is a period where profound changes will takes place in the body. Pregnancy may be complicated by a variety of disorders and conditions that can profoundly affect the client and her fetus. The pathophysiology of many disorders may adversely affect pregnancy. Similarly, the physiologic changes may modify the clinical course of some disorders and their management. Diabetes mellitus is the most common metabolic complication of pregnancy, illustrates the interaction between the physiologic changes of pregnancy and pathophysiology of disease. So it is important to regulate blood sugar, in order to prevent from diabetic complications.</p> <p data-bbox="327 783 1559 871">DEFINITION : Gestational diabetes mellitus is defined as any degree of glucose intolerance with the onset or first recognition occurring during pregnancy.</p>		

Specific objective	Content	AV aids	Teacher learner activity
List down the risk factors	<p>RISK FACTORS</p> <ul style="list-style-type: none"> • Obesity • Family history of diabetes. • Previous large newborn. • Previous newborn with a congenital anomaly. • Unexplained pregnancy wastage (Spontaneous abortion / still birth). • Multiparty. • Presence of hydramnios. • Age over 35 years. • Maternal hypertension. 		

Specific objective	Content	AV aids	Teacher learner activity
<p>Explain the pregnancy increased metabolic changes</p>	<p>Pregnancy induced metabolic changes: During the later half of the pregnancy , increased levels of hormones (human chorionic somatotropin, prolactin, cortisol, and glucagons) Causes alteration in the carbohydrate metabolism. Because of this, it affects the liver to decrease the glycogen storage and increase glycogen production which results in increase in blood sugar level . This high level of sugar in blood will not be utilized properly which causes increase the blood sugar of fetus and it grows bigger. Increased blood sugar in fetus causes increased urination which results in polyhydramnios.</p> <p>DIAGNOSIS</p> <ul style="list-style-type: none"> • History • Clinical risk factors • Oral glucose tolerance test 		

Specific objective	Content	AV aids	Teacher learner activity																						
	<p>This oral glucose tolerance test has been the accepted standard for diagnosis of GDM. This test will be performed between 24-28 weeks of gestation (second half of the pregnancy). The mother will be asked to take 50 gram of glucose 200 ml of waterorally and after two hour 2-3 ml of blood will be drawn to test the sugar level. A threshold value of 140 mg/dl is considered a positive screen result.</p> <p>Signs and symptoms</p> <table border="1" data-bbox="331 651 1585 1281"> <thead> <tr> <th data-bbox="331 651 958 699">Hypoglycemia</th> <th data-bbox="958 651 1585 699">hyperglycemia</th> </tr> </thead> <tbody> <tr> <td data-bbox="331 699 958 746">Hunger</td> <td data-bbox="958 699 1585 746">Increased appetite</td> </tr> <tr> <td data-bbox="331 746 958 794">Nausea</td> <td data-bbox="958 746 1585 794">Nausea</td> </tr> <tr> <td data-bbox="331 794 958 842">Headache</td> <td data-bbox="958 794 1585 842">Headache</td> </tr> <tr> <td data-bbox="331 842 958 890">Sweating</td> <td data-bbox="958 842 1585 890">Polyurea</td> </tr> <tr> <td data-bbox="331 890 958 938">Nervousness</td> <td data-bbox="958 890 1585 938">Polydypsia</td> </tr> <tr> <td data-bbox="331 938 958 986">Fatigue</td> <td data-bbox="958 938 1585 986">Dry mouth</td> </tr> <tr> <td data-bbox="331 986 958 1034">Shallow respiration</td> <td data-bbox="958 986 1585 1034">Fatigue</td> </tr> <tr> <td data-bbox="331 1034 958 1082">Pallor, cold,</td> <td data-bbox="958 1034 1585 1082">Tachypnea</td> </tr> <tr> <td data-bbox="331 1082 958 1129">clammy skin</td> <td data-bbox="958 1082 1585 1129">Flushed hot skin</td> </tr> <tr> <td data-bbox="331 1129 958 1177">Blurred vision</td> <td data-bbox="958 1129 1585 1177"></td> </tr> </tbody> </table>	Hypoglycemia	hyperglycemia	Hunger	Increased appetite	Nausea	Nausea	Headache	Headache	Sweating	Polyurea	Nervousness	Polydypsia	Fatigue	Dry mouth	Shallow respiration	Fatigue	Pallor, cold,	Tachypnea	clammy skin	Flushed hot skin	Blurred vision			
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Specific objective	Content	AV aids	Teacher learner activity
	<p>EFFECTS OF PREGNANCY ON DIABETES : Once gestational diabetes mellitus occurs, the pregnancy may result some of the adverse effect that may worsen the condition. They are;</p> <ol style="list-style-type: none"> 1. Renal infection is most common during pregnancy. This cause hyperglycemia and raise the demand for insulin. So the mother should be careful in maintaining proper personal hygiene and should get treatment if she got any urinary tract infection. 2. During third trimester because of increased levels of placental hormones, the blood sugar level will be increased. So there is increased need of insulin. 3. Soon after delivery, the mother should withdraw the insulin only after confirming whether glucose tolerance isrestored. It takes around six weeks to get to the normal level. 		

Specific objective	Content	AV aids	Teacher learner activity
<p>Discuss the effects of diabetes on pregnancy.</p>	<p>EFFECTS OF DIABETES ON PREGNANCY :</p> <p>Gestational diabetes mellitus also affects the pregnancy. Some mothers will exhibit symptoms like excessive thirst, hunger, urination and weakness. It affects both the mother as well as the fetus.</p> <p>MATERNAL EFFECTS: 1. Abortion(rarely) 2. Pregnancy induced hypertension 3. Renal infection 4. Hydramnios 5. Abnormal presentation 6. Prolonged labour 7. Puerperal infection</p>		

Specific objective	Content	AV aids	Teacher learner activity
Describe the management for gestational diabetes mellitus	<p>FETAL EFFECTS :</p> <p>1. Big baby 2. Neural tube defect 3. Respiratory distress syndrome 4.</p> <p>Cardiac anomalies</p> <p>MANAGEMENT :</p> <p>Management of gestational diabetes mellitus includes ; • Diet • Exercise •</p> <p>Insulin Adequate control over the blood sugar will help to prevent or lessen the incidence of perinatal mortality or morbidity.</p> <p>NUTRITION :</p> <p>Dietary therapy for a gestational diabetic mother includes nutrient meals and meal planning and control of maternal weight gain.</p> <p>• The caloric requirement for the normal weight client is 35 k.cal per kilogram of ideal weight per day or approximately 2,000 to 2,500 calories.</p>		

Specific objective	Content	AV aids	Teacher learner activity
	<ul style="list-style-type: none"> • Of the dietary calories the mother should take, 20% to 30 from protein; 40% to 60% from carbohydrate; and 25% to 40% from fat. • Mother can divide the total calories into three meals and three snacks, is a usual regimen for a women with diabetes during pregnancy. • It may be extremely vulnerable for hypoglycemia at night due to the continous fetal use of glucose during the time she sleep. If so, she can take her final snack of the day one of protein and complex carbohydrate (like dhal or sundal) to allow slow digestion during the night. • The appropriate weight gain for the gestational diabetic mother in 10 – 20 kg during second and third trimester or 350 – 400 gm per week. 		

Specific objective	Content	AV aids	Teacher learner activity
	<p>FOODS TO BE INCLUDED :</p> <p>1. All types of pulses and sprouts. 2. Fresh vegetables which grow above the ground level like ladies finger, Broad beans, Beans, Brinjal, Drumstick, Bitter ground, Cauliflower, Bottle gourd, Radish, Plantainstem, Chow chow, Cabbage, Capsicum, Tomatoes, Onions, and Garlic.</p> <p>3. All types of green leafy vegetables. 4. Vegetable Soups, Butter milk, lime juice (without sugar)</p> <p>numbers</p>		

Specific objective	Content	AV aids	Teacher learner activity
	<p>TIPS REGARDING DIET :</p> <ol style="list-style-type: none">1. Eat small and frequent meals2. Never skip a meal3. Avoid fasting or feasting4. Eat food that is rich in complex carbohydrates and fiber such as greens because they help to reduce blood cholesterol.5. Walking for about 45 minutes is good for health which helps to reduce weight.6. Use cooking oil in rotation7. Avoid alcohol and smoking.8. Don't exercise on an empty stomach as it may cause low blood sugar9. To have an immediate recovery from hypoglycemic state always have sugar or candy in your pocket .		

Specific objective	Content	AV aids	Teacher learner activity
	<p>10. Drink water before taking a meal because it reduces your food intake.</p> <p>CARBOHYDRATES : Foods rich in carbohydrates are; • Whole grains • Greens • Vegetables • Rice • Cereals • Milk • Fresh fruits</p> <p>PROTEINS: Foods rich in protein are; • Cereals • Pulses • Sprouts • Egg • Milk • Green leafy vegetables • Paneer (cottage cheese) FAT: Foods rich in fat are; • Ghee • Butter • Mutton • Egg yolk • Cheese • Coconut oil</p> <p>EXERCISE: Daily exercise is an integral part of the treatment plan because it helps in many ways to the gestational diabetic mother.</p>		

Specific objective	Content	AV aids	Teacher learner activity
Mention the areas for insulin administration	<ul style="list-style-type: none"> • If the arm in which insulin is injected, when the mother actively exercises, the insulin is released quickly and hypoglycemia can be marked. To avoid this phenomenon, the mother should eat a snack consisting of protein or complex carbohydrate before exercise and should maintain a consistent exercise program. • Exercise following a meal may be helpful in preventing meal related blood glucose elevation. • She should follow a consistent and structured program of activity rather than an irregular and unpredictable schedule. If any discomforts arise like head ache, giddiness, sweating she should discontinue the activity and immediately take sugar to get relief of hypoglycemia. <p>INSULIN: • If diet alone is not helpful in regulating blood sugar, insulin therapy should be started. • If the mother's fasting plasma blood glucose level exceeds 105mg/ dl or post prandial blood glucose level</p>		

Specific objective	Content	AV aids	Teacher learner activity
	<p>more than 140mg /dl, it indicated she may need insulin therapy</p> <ul style="list-style-type: none"> • Oral hypoglycemic agents during pregnancy may produce teratogenic effects on the fetus. • Take insulin half an hour before meals. • The main areas for injection are the arm (posterior surface) thighs (anterior surface) and hips. • Rotate the insulin injection sites regularly. E.g; if you take injection on the arm in the morning, you can change it to thighs in the evening • Store your insulin in normal room temperature is enough . It is safe for you to have intrauterine contraceptives (Copper -T) but you should be careful to note any infections arise. • The safest method is the barrier method E.g. Condom, Diaphragm 		

Specific objective	Content	AV aids	Teacher learner activity
	<p>CONCLUSION:- We have discussed regarding gestational diabetes mellitus, its causes, its pathological changes, its effects, self-administration of insulin, storage, symptoms, and management. Hope this will help to have self-care management on gestational diabetes mellitus.</p>		

Specific objective	Content	AV aids	Teachers Learners activity
	<p>Purpose of exercise: • Exercise helps the muscles to increase their uptake of glucose</p> <p>• thus helps to lower the blood glucose level. • It decrease the need of insulin • It helps to reduce weight in case of obese mother. • Although pregnancy is not optimum time to begin vigorous exercise, the mother can do low to moderate intensity of exercise which is believed to be safe and beneficial. • Walking is often recommended and should do at the same time each day.</p>		

பொதுவான நோக்கம்

இந்த பயிற்சியின் முடிவில், கர்ப்பகால நீரிழிவு நோயுள்ள தாய்மார்கள், கர்ப்பகால நீரிழிவு நோய் பற்றியும், அதன் சிகிச்சை முறையைப் பற்றியும் தெரிந்துகொள்வதுடன், அதனை அன்றாட வாழ்வில் கடைப்பிடிக்க உதவும்.

குறிப்பிட்ட நோக்கங்கள்

கர்ப்பகால நீரிழிவு நோயுள்ள தாய்மார்கள் தெரிந்துகொள்ள வேண்டியவை

- ❖ கர்ப்பகால நீரிழிவு நோய் பற்றி அறிதல்
- ❖ அதன் காரணிகள் பற்றி அறிதல்
- ❖ கர்ப்ப காலத்தில் ஏற்படும் வளர்சிதை மாற்றங்கள் பற்றி விவரித்தல்
- ❖ கர்ப்பகால நீரிழிவு நோய் பற்றி கண்டறிதல்
- ❖ அறிகுறிகளை தெளிவு பெறுதல்
- ❖ கர்ப்பகாலத்தினால் நீரிழிவு நோய்க்கு ஏற்படும் விளைவுகள் பற்றி விவரித்தல்
- ❖ நீரிழிவு நோயால் கர்ப்பத்திற்கு ஏற்படும் பாதிப்புகள் பற்றி விவரித்தல்
- ❖ கர்ப்பகால நீரிழிவு நோயைக் கட்டுப்படுத்தும் முறைகள் பற்றி விவரித்தல்
- ❖ இன்கலின் மருந்தை ஊசி மூலம் செலுத்துதல் பற்றி தெரிந்து கொள்ளுதல்

முன்னுரை

கர்பம் என்பது உடலில் ஏற்படும் ஒரு பெரிய மாற்றம். பல்வேறு விதமான வியாதிகளால் கர்பகாலம் பாதிக்கப்படலாம். இது தாய்க்கும் அவள் கருவிற்கும் பாதிப்பு ஏற்படுத்தும். பல்வேறு விதமான நோய் செயல்பாடுகள் காரணத்தினால் கர்ப்பகாலம் முழுவதுமாக பாதிக்கப்படுகிறது. நீரிழிவு நோயினால் ஏற்படும் பாதிப்பு கர்ப காலத்தில் ஆபத்தை விளைவிக்கக் கூடியது. ஆகையால் இரத்த பரிசோதனை செய்து இரத்தத்தில் சர்க்கரையின் அளவை சரி செய்து கொள்வது மிகவும் நன்று.

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
1.	2 நிமி	கர்ப்பகால நீரிழிவு நோய் பற்றி அறிதல்	<p>குறிப்புரை</p> <p>கர்ப்பகால நீரிழிவு நோய் என்பது இரத்தத்தில் சர்க்கரையின் அளவு சராசரியின் அளவுக்கு மாறாக இருப்பதை முதன் முறையாக கர்ப்பகாலத்தில் கண்டறியப்படுவதாகும்.</p>	விவரித்தல்	கவனித்தல்		கர்ப்பகால நீரிழிவு நோய் என்றால் என்ன?
2.	3 நிமி	அதன் காரணிகள் பற்றி அறிதல்	<p>காரணிகள்</p> <ul style="list-style-type: none"> • பருமன் • குடும்ப பரம்பரை • முதல் குழந்தை பிறப்பு கோளாறுகளோடு பிறந்தது • விவரிக்க முடியாத கருக்கலைப்பு • குழந்தை இறந்தே பிறந்தது • 35 வயதிற்கு மேல் கர்ப்பமாதல் • கருப்பையில் அதிக நீர் உள்ளவர்கள் 				கர்ப்பகால நீரிழிவு நோய்க்கான காரணிகள் யாவை?

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
3	5 நிமி	கர்பகால நீரிழிவு நோய் பற்றி கண்டறிதல்	<p><u>நோய் கண்டறியும் முறை</u></p> <ul style="list-style-type: none"> • குடும்ப குறிப்பு • மருத்துவ ரீதியான காரணிகள் • குளுக்கோஸ் சகிப்புத்தன்மை ஆய்வு <p>குளுக்கோஸ் சகிப்புத்தன்மை ஆய்வு என்பது கர்பகால நீரிழிவு நோயை உறுதிபடுத்தக்கூடிய பரிசோதனையாகும். இது கர்பகாலத்தில் 24லிருந்து 28 வாரங்களுக்குள் செய்யப்படும். இதில் 50 கிராம் குளுக்கோஸ் வாய் வழியாக எடுத்துக்கொண்ட பிறகு ஒரு மணி நேரம் கழித்து 2 மி.லி. இரத்தம் எடுத்து சர்க்கரையின் அளவை சோதிக்க வேண்டும். இரத்தத்தில் சர்க்கரையின் அளவு குறைந்தபட்சமாக 140 மி.கி./டெ.லி. இருந்தால் அது சர்க்கரை நோய் உள்ளதை உறுதிபடுத்தும்.</p>				கர்பகால நீரிழிவு நோயா கண்டறியும் முறையை கூறுக?

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
4.		அறிகுறிகளை தெளிவு பெறுதல்	<p><u>அறிகுறிகள்</u></p> <p><u>சர்க்கரை குறைதலின் அறிகுறிகள்</u></p> <ul style="list-style-type: none"> • அதிக பசி • குமட்டல் • தலைவலி • வியர்த்தல் • நடுக்கம் • தலை சுற்றல் • பலவீனம் • மூச்சு வாங்குதல் • உடல் வெளிரிப்போதல் • தோல் குளிர்ந்து போதல் • மங்கலான பார்வை 				சர்க்கரையின் அளவு குறைதலின் அறிகுறிகள் யாவை?

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
5.		சர்க்கரை அதிகமாதலின் அறிகுறிகள்	<p><u>சர்க்கரை அதிகமாதலின் அறிகுறிகள்</u></p> <ul style="list-style-type: none"> • அதிகமான பசி • அதிக தாகம் • அதிகமான சிறுநீர் கழித்தல் • குமட்டல் • தலைவலி • வறண்ட வாய் • பலவீனம் • சோர்வு • மூச்சு வாங்குதல் 				சர்க்கரையின் அளவு அதிகமாதலின் அறிகுறிகள் யாவை?

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
6.		கர்ப காலத்தினால் நீரிழிவு நோய்க்கு ஏற்படும் விளைவுகள் பற்றி விவரித்தல்	<p>கர்பத்தினால் நீரிழிவு நோய்க்கு ஏற்படும் விளைவுகள்</p> <p>நீரிழிவு நோய் ஏற்பட்டால் கர்ப காலத்தில் பல மாற்றங்கள் ஏற்படும். கர்பகாலத்தில் சிறுநீரக தொற்று ஏற்பட வாய்ப்புள்ளது. இதனால் இரத்தத்தில் சர்க்கரையின் அளவு அதிகரிப்பதுடன் இன்சலின் தேவையை அதிகரிக்கிறது. இதை தடுக்க கர்பகாலத்தில் தாய்மார்கள் உடலை சுத்தமாக வைத்துக்கொள்ள வேண்டும். அப்படி ஏதாவது சிறு தொற்று காணப்பட்டால் உடனடியாக மருத்துவரை அணுகி சிகிச்சை பெற வேண்டும்.</p> <p>கர்பத்தின் கடைசி மூன்று மாதங்களில் சுரப்பிகள் அதிகரிப்பதால் இரத்தத்தில் சர்க்கரையின் அளவு அதிகமாவதுடன் இன்சலின் தேவையும் அதிகமாகிறது.</p> <p>பிரசவத்திற்கு பின் இரத்தத்தில் சர்க்கரையின் அளவு சாதாரண நிலைக்கு திரும்பிவிட்டதா? என்று உறுதிபடுத்திய பிறகே இன்சலினை நிறுத்த வேண்டும். இதற்கு சுமார் ஆறு வாரங்கள் எடுக்கும்.</p>				கர்பத்தினால் நீரிழிவு நோய்க்கு ஏற்படும் விளைவுகள் யாவை?

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
			<p>நீரிழிவு நோயால் கர்பத்திற்கு ஏற்படும் விளைவுகள்</p> <p>சில தாய்மார்களுக்கு இந்நோயால் அதிக தாகம், அதிக பசி, அதிக சிறுநீர் வெளியேறுதல், பலவீனம் போன்ற அறிகுறிகள் ஏற்படும். இது தாயையும் கருவையும் பாதிக்கும்.</p> <p>தாய்க்கு ஏற்படும் பாதிப்பு</p> <ul style="list-style-type: none"> • கர்பத்தினால் இரத்த அழுத்தம் அதிகரித்தல் • சிறுநீர் தொற்று • கருப்பையில் அதிக நீர் உண்டாதல் • கருப்பையில் கரு தவறான நிலையில் இருத்தல் • நீண்ட நேர பிரசவ வலி <p>கருவிற்கு ஏற்படும் பாதிப்பு</p> <ul style="list-style-type: none"> • பெரிய குழந்தை • தண்டுவர கோளாறுகள் • சுவாச கோளாறுகள் • இருதய கோளாறு 				நீரிழிவு நோயால் கர்பத்திற்கு ஏற்படும் விளைவுகள் யாவை?

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
7.		கர்பகால நீரிழிவு நோயைக் கட்டுப்படுத்தும் முறைகள் பற்றி விவரித்தல்	<p>சிகிச்சை முறை</p> <p>கர்பகால நீரிழிவு நோயை கட்டுப்படுத்த வேண்டிய சிகிச்சை முறையாவன</p> <ul style="list-style-type: none"> • உணவு கட்டுப்பாட்டு முறை • உடற்பயிற்சி • இன்சலின் <p>இரத்தத்தில் சர்க்கரையின் அளவை கட்டுப்படுத்தினால் கர்பகாலத்தில் ஏற்படும் விளைவுகளையும், சாவின் எண்ணிக்கையையும் குறைக்கலாம்.</p> <p>உணவு கட்டுப்பாடு</p> <p>சரிவிகித உணவுமுறை, எடை கட்டுப்பாடு இவையெல்லாம் கர்பகால நீரிழிவு நோயுள்ள தாய்மார்கள் கடைபிடிக்க வேண்டியவை.</p> <p>சரியான எடையுள்ள தாய்க்கு ஒரு நாளிக்கு 35 கலோரி/ கிலோ கலோரி அளவுகளில் 20%-30% புரத்திலிருந்து, 40%-60% மாவு சத்திலிருந்து 25%-40% கொழுப்பு சத்திலிருந்து</p>				

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
			<p>எடுத்துக்கொள்ள வேண்டும்.</p> <p>கர்ப கால நீரிழிவு நோய் தாய்மார்கள் எடுக்கும் மொத்த கலோரியை மூன்று முறை உணவு, மூன்று முறை தின்பண்டம் எனப் பிரித்து உண்ண வேண்டும்.</p> <p>கர்பகாலத்தில் கடைசி நாட்களில் நெஞ்சொசிச்சல் உண்டானால் மருத்துவரை அணுகி சிகிச்சை பெற வேண்டும்.</p> <p>இரவில் அதிகமாக சர்க்கரையின் அளவு குறையும் வாய்ப்புள்ள தாய்மார்கள் படுக்கைக்கு முன் புரத சத்து அல்லது மாவுச்சத்துள்ள தின்பண்டம் எடுத்துக்கொள்ள வேண்டும் (புரப்பு அல்லது சுண்டல்) இது மெதுவாக செரிப்பதற்கு உதவுகிறது.</p> <p>கர்பகால நீரிழிவு நோய் உள்ள தாய்க்கு எடை 10லிருந்து 12 வரை அதிகரிக்க வேண்டும். இதனால் தாய்மார்கள் அவர்களது எடையை சரிபார்த்துக் கொள்ள வேண்டும்.</p>				

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
			<p>தவிர்க்க வேண்டிய உணவு வகைகள்</p> <ul style="list-style-type: none"> ● சர்க்கரை, வெல்லம், தேன், குளுகோஸ் மற்றும் இனிப்பு வகைகள் ● பேக்கரி பொருட்களான கிரீம், பிஸ்கட்ஸ், பப்ஸ், பேஸ்டரீஸ். ● உலர்ந்த கொட்டை மற்றும் பழ வகைகள் (பாதாம், பிஸ்தா, தேங்காய், நிலக்கடலை, முந்திரி, உலர்ந்த திராட்சை) ● குளிர்மானங்கள் (பெப்ஸி, மிராண்டா) மற்றும் இளநீர் ● சத்து பானங்கள் (பூஸ்ட், ஹார்லிக்ஸ்) ● நெய், டால்டா, வெண்ணெய், தேங்காய் எண்ணெய் ● எண்ணெயில் பொரித்த பண்டங்களான (வடை, பஜ்ஜி, மீன் வறுவல், போண்டா, பூரி) போன்றவை ● சீத்தாபழம், மாம்பழம், வாழைப்பழம், சப்போட்டா, அன்னாச்சி, பேரிச்சம்பழம் ● கொழுப்பு சத்து மிக்க மாமிச உணவு 				<p>எந்த உணவுப் பொருட்களில் சர்க்கரையின் அளவு அதிகமாக உள்ளது?</p>

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
			<p>வகைகளான முட்டையின் மஞ்சள் கரு, உறுப்பு மாமிசங்களான மூளை, ஈரல் மற்றும் ஆட்டிறைச்சி, மாட்டு இறைச்சி</p> <ul style="list-style-type: none"> • மைதா மாவு, வெள்ளை ரவை • பழச்சாறு • ஜாம், ஜெல்லி, சாக்லேட், சாஸ் வகைகள் <p>கீழ்க்கண்ட குறிப்புகளை பின்பற்ற வேண்டும்</p> <ul style="list-style-type: none"> • ஒரே சமயத்தில் அதிக உணவு உண்பதை விட சிறிது சிறிதாக 6 முறைகள் சாப்பிலாம். • கண்டிப்பாக விரதம் கடைபிடிக்கக் கூடாது • அதிக அளவு நார்ச்சத்து மிகுந்து உணவுப் பொருட்களான கீரை வகைகள், சேலட், பயறு வகைகள், காய்கறிகள் ஆகியவற்றை சேர்த்து கொள்வதன் மூலம் சர்க்கரை வியாதியையும், கொழுப்பு சத்தையும் கட்டுப்பாட்டுக்குள் வைத்துக் கொள்ளலாம். • நடை பயிற்சி மேற்கொள்ள வேண்டும். இது உடல் எடையை குறைத்து ஆரோக்கியமாக இருக்க உதவும். 				

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
			<ul style="list-style-type: none"> • பையில் எப்பொழுதும் சர்க்கை (அ) மிட்டாய் (அ) குளுக்கோஸ் வைத்துக்கொள்ள வேண்டும். இதை தாழ்நிலை இரத்த சர்க்கரை வந்தால் எடுத்துக்கொள்ள வேண்டும். • எல்லா தானியங்களும் ஏறத்தாழ ஒரே அளவு சக்தியைத்தான் (கலோரி) கொடுக்கின்றன. கோதுமை மற்றும் ராகி மட்டும் சாப்பிடுவதால் சர்க்கரையின் அளவை கட்டுப்படுத்த முடியாது. எனவே சர்க்கரை வியாதி உள்ளவர்கள் அரிசியையும் அளவாக அன்றாட உணவில் சேர்த்துக்கொள்ளலாம். • ஒரே சமையல் எண்ணெய் உபயோகிக்காமல் மாற்றி உபயோகிக்கவும். • வெறும் வயிற்றில் பயிற்சி மேற்கொள்ளக் கூடாது, என்னில் தாழ்நிலை சர்க்கரை ஏற்படக் கூடும். • உணவருந்தும் முன் தண்ணீர் குடிப்பதன் மூலமாகவும், பச்சை காய்கறிகளின் கலவை எடுப்பதன் மூலமாகவும் உணவு உட்கொள்ளும் அளவு குறையும். 				

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
			<p><u>மாவுச்சத்து நிறைந்த உணவு வகைகள்</u></p> <ul style="list-style-type: none"> • தானியங்கள் • அரிசி • பருப்பு வகைகள் • பால் • பழங்கள் • காய்கறிகள் • பச்சை கீரைகள் <p><u>புரதச்சத்து நிறைந்த உணவு வகைகள்</u></p> <ul style="list-style-type: none"> • பருப்புகள் • முளைகட்டிய பயறுகள் • முட்டை • பால் • இறைச்சி • பச்சை காய்கறிகள் 				

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
			<p><u>கொழுப்பு சத்து நிறைந்த உணவுகள்</u></p> <ul style="list-style-type: none"> • வெண்ணெய் • நெய் • இறைச்சி • முட்டையின் மஞ்சள் கரு • பாலாடை • தேங்காய் எண்ணெய் • மீன் <p><u>உடற்பயிற்சி</u></p> <p>காற்பகால நீரிழிவு நோய் சிகிச்சை முறையில் மிக முக்கியமான ஒன்று உடற்பயிற்சி செய்வதாகும்.</p> <p><u>உடற்பயிற்சியின் நோக்கம்</u></p> <p>உடற்பயிற்சி செய்வதால் உடலில் உள்ள தசைகள் இரத்தத்தில் உள்ள சர்க்கரையின் அளவினை எடுத்துக் கொள்கிறது. இதனால் இரத்தத்தில் சர்க்கரையின் அளவு குறைகிறது.</p>				

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
			<p>இன்சலின் தேவையை குறைக்கிறது.</p> <p>இது பருமனான தாய்மார்களுக்கு எடையை குறைக்க உதவுகிறது.</p> <p>கர்ப்பகாலம், அதிக சிரமமான உடற்பயிற்சி செய்ய சரியான நேரம் இல்லாவிட்டாலும் இலகுவான உடற்பயிற்சி செய்யலாம். தினமும் நடைபயிற்சி மேற்கொள்வதால் உடல்நிலை சீர்பெறும். சுவாசம் சம்பந்தமான உடற்பயிற்சியை பார்க்கிலும் நடைபயிற்சியே சிறந்தது. ஒரு நாள் உடற்பயிற்சி செய்து மறுநாள் ஒன்றும் செய்யாமல் இருப்பதை விட தினமும் 30 நிமிடங்கள் நடைபயிற்சி செய்வது நல்லது.</p> <p>ஒழுங்கற்ற உடற்பயிற்சி நமது உடலை பாதிக்கும். அதனால் எப்பொழுதும் வகுத்து அமைக்கப்பட்ட உடற்பயிற்சிகளை மேற்கொள்ள வேண்டும்.</p> <p>உடற்பயிற்சியின் போது தலைவலி, தலை சுற்றல், வியர்வை போன்ற அறிகுறிகள் ஏற்பட்டால் சிறிது சர்க்கரையை எடுத்துக்கொள்ள வேண்டும்.</p>				

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
8.		இன்சலின் மருந்தை ஊசி மூலம் செலுத்துதல் பற்றி தெரிந்து கொள்ளுதல்	<p>இன்சலின்</p> <p>உணவு முறை மட்டும் நீரிழிவு நோயை சீர்படுத்த முடியாமல் போனால், இன்சலின் முறையையும் மேற்கொள்ள வேண்டும். கர்பமுற்ற தாயின் சர்க்கரை அளவு இரத்தத்தில் உணவுக்கு முன் 105 மி.கி/டெ.லி.ஐ விட அதிகமாக இருந்தாலோ அல்லது உணவிற்கு பின் 140 மி.கி./டெ.லி.ஐ விட அதிகம் இருந்தாலோ இன்சலின் முறையை கையாள வேண்டும். வாய்வழி உணவுக்கு ½ மணி நேரத்திற்கு முன் இன்சலின் ஊசி போட வேண்டும். இன்சலின் ஊசியை போட சிறந்த இடம் பின்னங்கை மற்றும் முன்தொடை. மேலும் ஒவ்வொரு முறை இன்சலின் ஊசி போடும் போதும் இடத்தை மாற்ற வேண்டும் (காலையில் கையிலும், மாலையில் தொடையிலும்). இன்சலினை குளிர்சாதன பெட்டியில் வைத்தல் வேண்டும் என்ற கட்டாயம் இல்லை.</p> <p>வீட்டில் இருக்கும்போது கவனிக்க வேண்டியவை</p> <ul style="list-style-type: none"> • தவறாமல் இன்சலின் எடுத்துக்கொள்ள வேண்டும். • கருவின் தூடிப்பை கவனிக்க வேண்டும். 				

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
			<ul style="list-style-type: none"> உடற்பயிற்சியை தவறாமல் செய்ய வேண்டும். நீரிழு நோயைக் கட்டுப்படுத்தும் உணவு முறையைப் பின்பற்ற வேண்டும். தவறாமல் கர்பகால பரிசோதனைக்கு வர வேண்டும். <p>மகப்பேறு பிற்காலம்</p> <ul style="list-style-type: none"> மகப்பேறு பிற்காலத்தில் 98% கர்பகால நீரிழிவு நோயாளிகள் சரியான சர்க்கரையின் அளவை அடைவார். குழந்தை பிறந்த ஆறு வாரத்திற்கு பின் வாய்வழி குளுக்கோஸ் அருந்தி நீரிழிவு நோய் உள்ளதா என பரிசோதனை செய்ய வேண்டும். கீருமி தாக்குதலில் இருந்து தற்காத்துக் கொள்ள கீருமி நாசினியை எடுத்துக்கொள்ள வேண்டும். குழந்தைக்கு தாய்ப்பால் கொடுப்பது அவசியம். 				

வ. எண்	நேரம்	குறிப்பான நோக்கங்கள்	பொருளடக்கம்	ஆராய்ச்சி யாளர் செயல்	மாணவர்கள் செயல்கள்	ஒலி, ஒளி சார் உபகரணங்கள்	மதிப்பீடு
			<p>கருத்தடை செய்தல்</p> <ul style="list-style-type: none"> வாய்வழி உட்கொள்ளும் கருத்தடை மாத்திரைகளை சாப்பிடக் கூடாது. இது இரத்தத்தில் உள்ள சர்க்கரையை அதிகரிக்கும். காப்பர்-டி முறையை உபயோகிப்பது பாதுகாப்பானது. ஆனால் தொற்று வராமல் பாதுகாப்பாக இருக்க வேண்டும். மிகவும் பாதுகாப்பான கருத்தடை முறை ஆணுறையை (நிரோதி) உபயோகிப்பதாகும். 				

முடிவுரை

இதுவரை நாம் கர்பகால நீரிழிவு நோய் பற்றியும், அதன் செயல்பாடுகள் பற்றியும், அந்நோய்க்கான சிகிச்சை முறைகளையும் கண்டோம். தாமாகவே ஊசி மூலம் இன்சலின் செலுத்திக்கொள்வது இது உங்களுக்கு மிகவும் உபயோகமாக இருக்கும் என நினைக்கிறேன். இன்று பார்த்த எல்லா விதிமுறைகளையும் பின்பற்றினால் இந்நோயின் விளைவுகளைத் தடுக்க முடியும். மேலும் தாய்சேய் நலத்தையும் பேண முடியும்.

PATIENT CONSENT FORM

TITLE:

Name of Participant :

Date :

Age/sex :

Name of the Principal

Investigator : Dhatshnamoorthy Parimalam

Name of the institution : madras medical college, Chennai-03

Enrollment No :

Documentation of the informed consent :

I _____ have read/it has been read for me, the information in this form. I was free to ask any questions and they have been answered. I am over 18 years of age and exercising my free power of choice, hereby give my consent to be included as a participant in the study.

- I have read and understood this consent form and the information provided to me.
- I have had the consent document explained in detail to me.
- I have been explained about the nature of my study.
- My rights and responsibilities have been explained to me by the investigator
- I am aware of the fact that I can opt out of the study at any time without having to give any reason and this will not affect my future treatment in this hospital.
- I hereby give permission to the investigators to release the information obtained from me as a result of participation in this study to the regulatory authorities, government agencies and Institutional ethics committee. I understand that they are publicly presented.
- My identity will be kept confidential if my data are publicly presented.
- I have had my questions answered to my satisfaction
- I am aware that I have any question during this study; I should contact the concerned investigator. By signing this consent form I attest that the information given in this document has been clearly explained to me and understood by me. I will be given a copy of this consent form.

1. Name and signature / thumb impression of the participant(or legal representative if participant is incompetent)

Name : _____ Signature: _____

Date: _____

2. Name and signature of impartial witness (required for illiterate patients)

Name : _____ Signature: _____

Date: _____

3. Name and signature of the Investigator or her representative obtaining consent:

Name : _____ Signature: _____

Date: _____

INFORMATION TO PARTICIPANTS

TITLE :A STUDY TO EVALUATE THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING GESTATIONAL DIABETES MELLITUS AMONG PRIMIGRAVIDA MOTHERS ATTENDING ANTENATAL OUTPATIENT DEPARTMENT AT INSTITUTE OF OBSTETRICS AND GYNAECOLOGICAL HOSPITAL FOR WOMEN AND CHILDREN,EGMORE,CHENNAI-08.

Name of the Participant :

Date :

Age/sex :

Investigator : Dhatshnamoorthy Parimalam

Name of the institution : Madras Medical College, Chennai-03

Enrolment No :

You are invited to take part in this study. The information in this document is meant to help you decide whether or not to take part. Please feel free to ask if you have any queries or concerns.

You are being asked to Cooperate in this study being conducted in selected Rajiv Gandhi Government General Hospital at Chennai.

What is the Purpose of the Research (explain briefly)

This research is conducted a study to evaluate the effectiveness of planned teaching program on knowledge regarding prevention and early detection of breast cancer among female patients admitted in medical wards at Rajiv Gandhi Government General Hospital, Chennai-03. We obtained permission from the institutional ethics committee.

Study Procedures

- Study will be conducted after approval of ethics committee
- A written formal permission will be obtained from authorities of Rajiv Gandhi government general hospital, Chennai to conduct study.
- The purpose of study will be explained to the participants.
- The investigator will obtain informed consent.
- The investigator will assess the knowledge level of each participant before the structured teaching programme by using a structured questionnaire.
- The procedure of will be explained to them with the help of planned teaching programme
- Following that the level of knowledge will be assessed after planned teaching programme

Possible benefits to other people

The result of the research may provide benefits to the early detection and prevention of breast cancer and also empathetic care to them by investigator.

Confidentiality of the information obtained from you

You have the right to confidentiality regarding the privacy of your personal details. The information from this study, if published in scientific journals or presented at scientific meetings, will not reveal your identity.

How will your decision not to participate in the study affect you?

Your decisions not to participate in this research study will not affect your activity of daily living, medical care or your relationship with investigator or the institution.

Can you decide to stop participating in the study once you start?

The participation in this research is purely voluntary and you have the right to withdraw from this study at any time during course of the study without giving any reasons.

Your Privacy in the research will be maintained throughout study. In the event of any publications or presentation resulting from the research, no personally identifiable information will be shared.

Signature of Investigator

Signature of participants

Date

Date

சுய ஒப்புதல் படிவம்

ஆராய்ச்சியின் தலைப்பு

எழும்பூர், மகப்பேறு மற்றும் குழந்தைகள் நல மருத்துவமனை
வெளிநோயாளிகள் பிரிவிற்கு வரும் கர்ப்பினி தாய்மார்களிடம்
காட்சி பிம்ப வழிகாட்டுதலுடன் கற்பிக்கும் திட்டத்தின் மூலம் கர்ப்பகால
நீரிழிவு நோயுள்ள தாய்மார்களின் அறிவு சார்ந்த செயல்திறனை மதிப்பீடு
செய்தல்

ஆராய்ச்சியாளர் பெயர் : த.பரிமளம்

பெயர் : தேதி :

வயது :

பால் : ஆராய்ச்சி சேர்க்கை எண். :

இந்த ஆராய்ச்சியின் விவரங்கள் அதன் நோக்கங்களும்
முழுமையாக எனக்கு தெளிவாக விளக்கப்பட்டது.

எனக்கு விளக்கப்பட்ட விவரங்களை நான் புரிந்து கொண்டு எனது
சம்மதத்தை தெரிவிக்கிறேன்.

இந்த ஆராய்ச்சியில் பிறரின் நிர்பந்தமின்றி என் சொந்த
விருப்பத்தின்பேரில் பங்கு பெறுகின்றேன். இந்த ஆராய்ச்சியில் இருந்து
நான் எந்நேரமும் பின்வாங்கலாம் என்பதையும் அதனால் எந்த பாதிப்பும்
ஏற்படாது என்பதையும் நான் புரிந்துகொண்டேன்.

நான் என்னுடைய சுயநினைவுடனும் மற்றும் முழு சுதந்திரத்துடனும்
இந்த ஆராய்ச்சியில் என்னை சேர்த்துக்கொள்ள சம்மதம் தெரிவிக்கிறேன்.

பங்கேற்பாளர் கையொப்பம்

இடம்

தேதி

பங்கேற்பாளர் பெயர்

ஆராய்ச்சியாளர் கையொப்பம்

ஆய்வு தகவல் தாள்

எழும்பூர், மகப்பேறு மற்றும் குழந்தைகள் நல மருத்துவமனை வெளிநோயாளிகள் பிரிவின்கு வரும் கர்ப்பினி தாய்மார்களிடம் காட்சி பிம்ப வழிகாட்டுதலுடன் கற்பிக்கும் திட்டத்தின் மூலம் கர்ப்பகால நீரிழிவு நோயுள்ள தாய்மார்களின் அறிவு சார்ந்த செயல்திறனை மதிப்பீடு செய்தல்

நீங்களும் இந்த ஆராய்ச்சில் பங்கேற்க நாங்கள் விரும்புகிறோம். இந்த ஆராய்ச்சியில் உங்களிடம் கர்ப்பகால நீரிழிவு நோய் பற்றி சில கேள்விகள் கேட்கப்படும். அதன் தகவல்களை ஆராய்வோம்.

முடிவுகளை அல்லது கருத்துக்களை வெளியிடும்போதோ அல்லது ஆராய்ச்சியின் போதோ தங்களது பெயரையோ அல்லது அடையாளங்களையோ வெளியிட மாட்டோம் என்பதையும் தெரிவித்துக் கொள்கிறோம்.

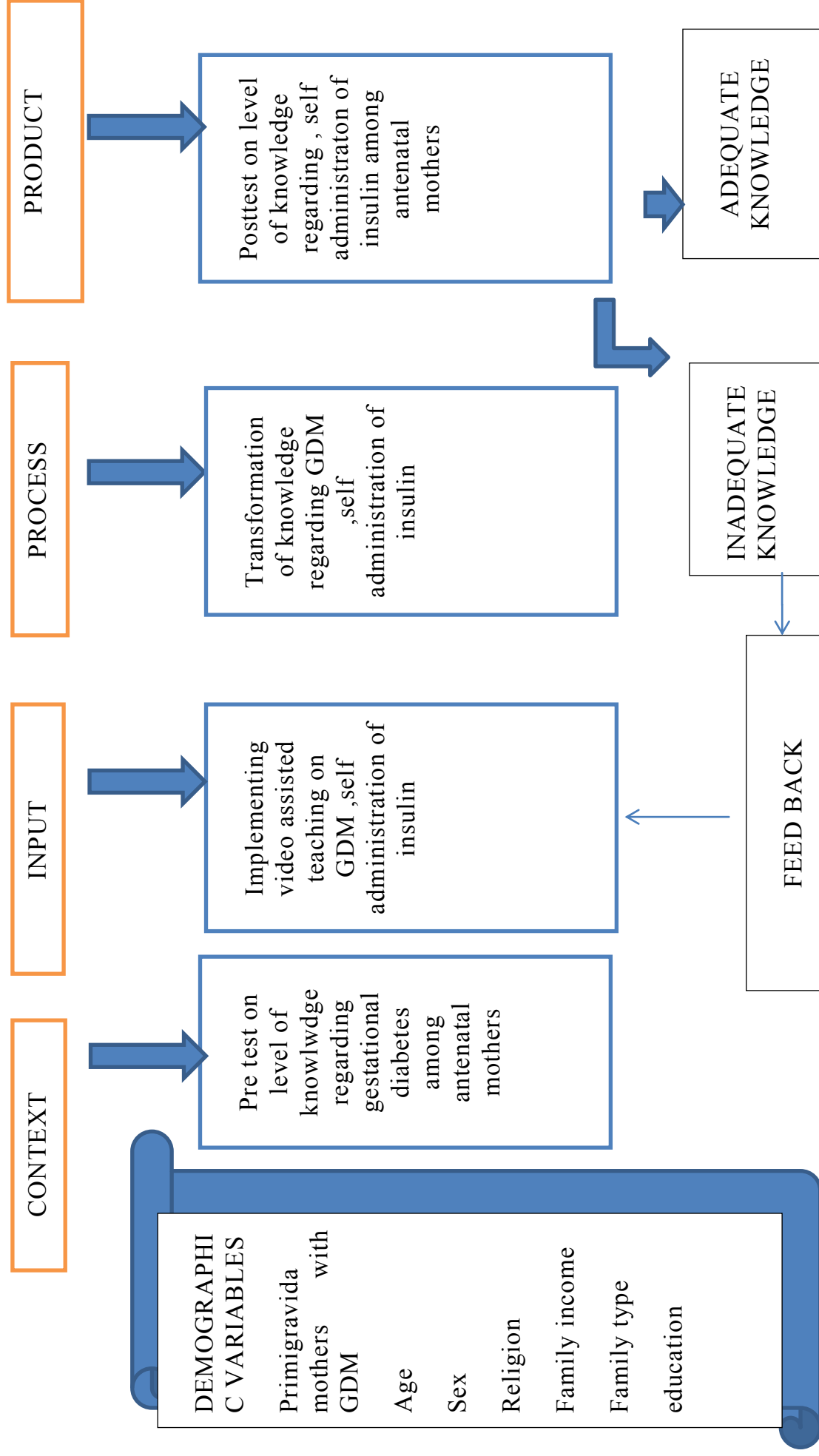
இந்த ஆராய்ச்சில் பங்கேற்பது தங்களுடைய விருப்பத்தின் பேரில் தான் இருக்கிறது. மேலும் நீங்கள் எந்நேரமும் இந்த ஆராய்ச்சியிலிருந்து பின்வங்கலாம் என்பதையும் தெரிவித்துக் கொள்கிறோம்.

ஆய்வாளர் கையொப்பம்

பங்கேற்பாளர் கையொப்பம்

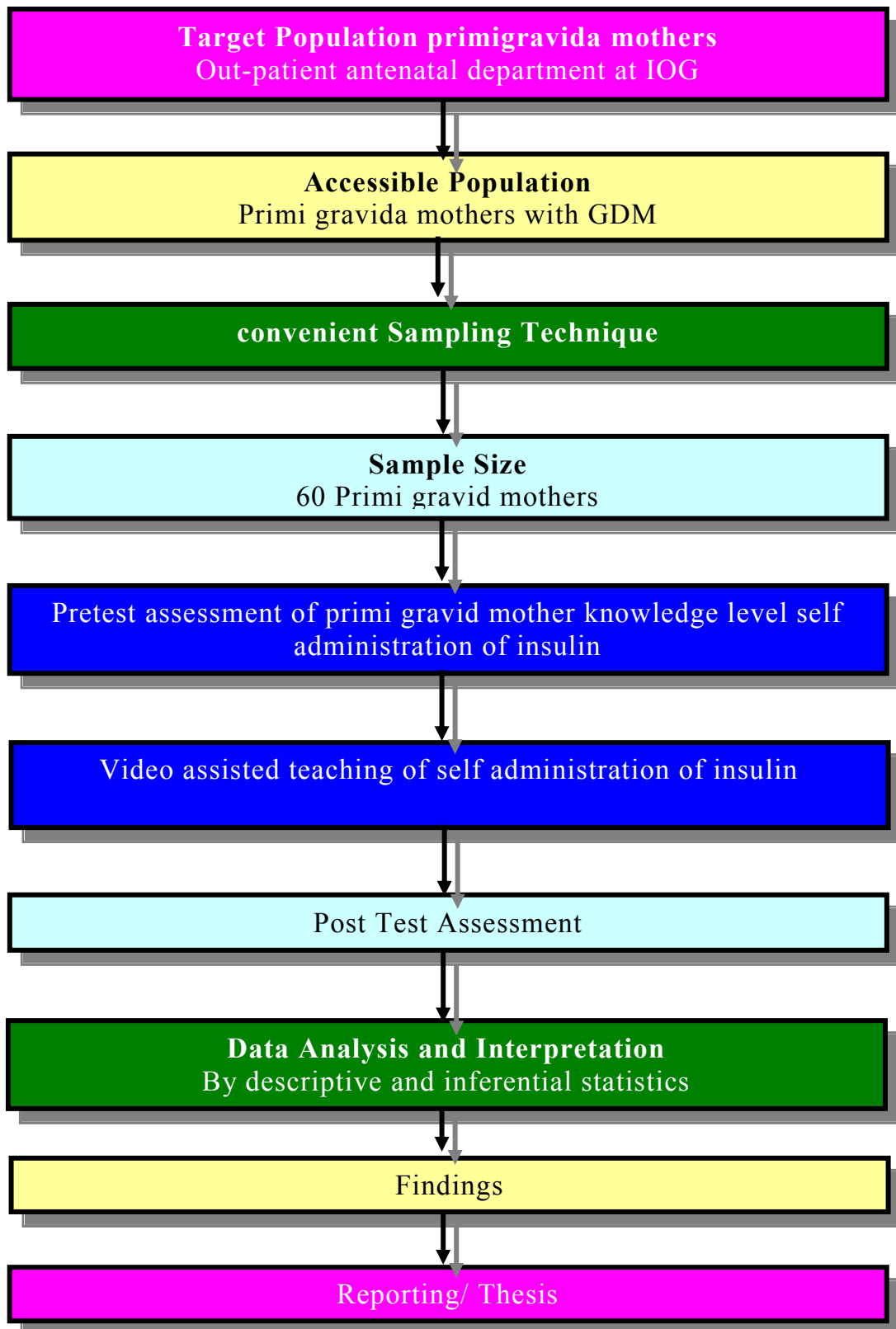
நாள் :

இடம் :



CONCEPTUAL FRAMEWORK ADOPTED AND MODIFIED FROM DANIEL.L STUFFLEBEAM'S CONTEX, INPUT, PROCESS AND PRODUCT EVALUATION (CIPP) MODEL 2003

FIGURE : 2 SCHEMATIC REPRESENTATION OF RESEARCH DESIGN



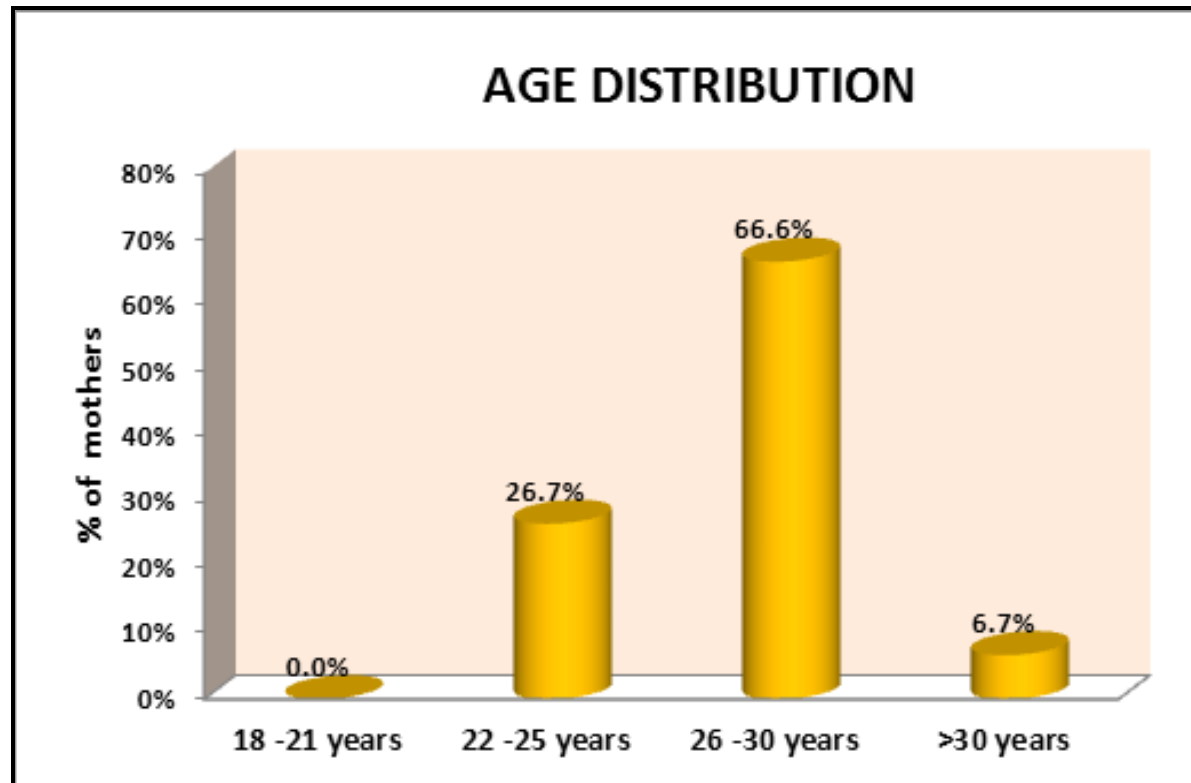


Fig: 4.1 Age wise distribution of Primigravida mothers shows the result of 26-30 years gesttional diabetes mothers are 66.6%,22-25 years are 26%,above 30 years are 6.7%,18-21 years are 0.0%.

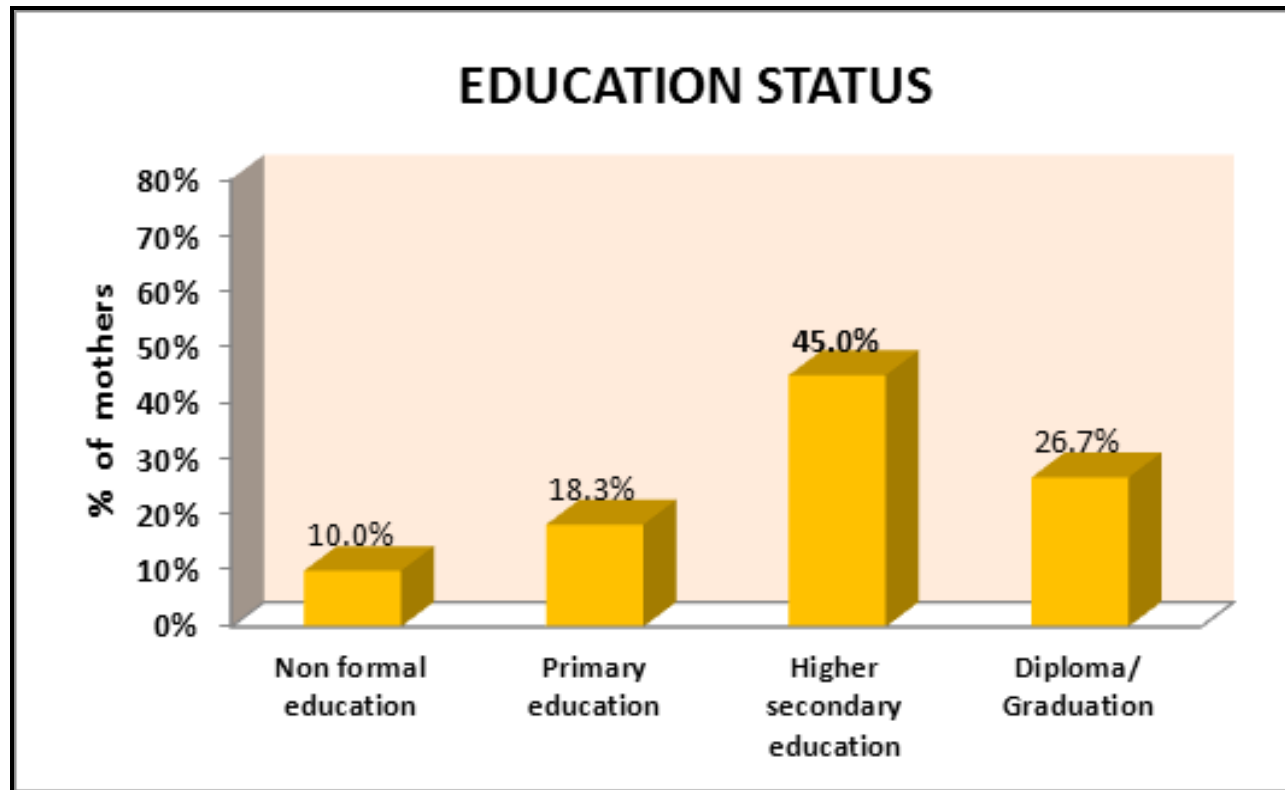


Fig: 4.2 Education status wise distribution of Primigavida mothers shows the result of higher secondary gestational diabetes mothers were 45.0%, diploma/graduation are 26.7%,primary education are 18.3%, non formal education are 10.0%.

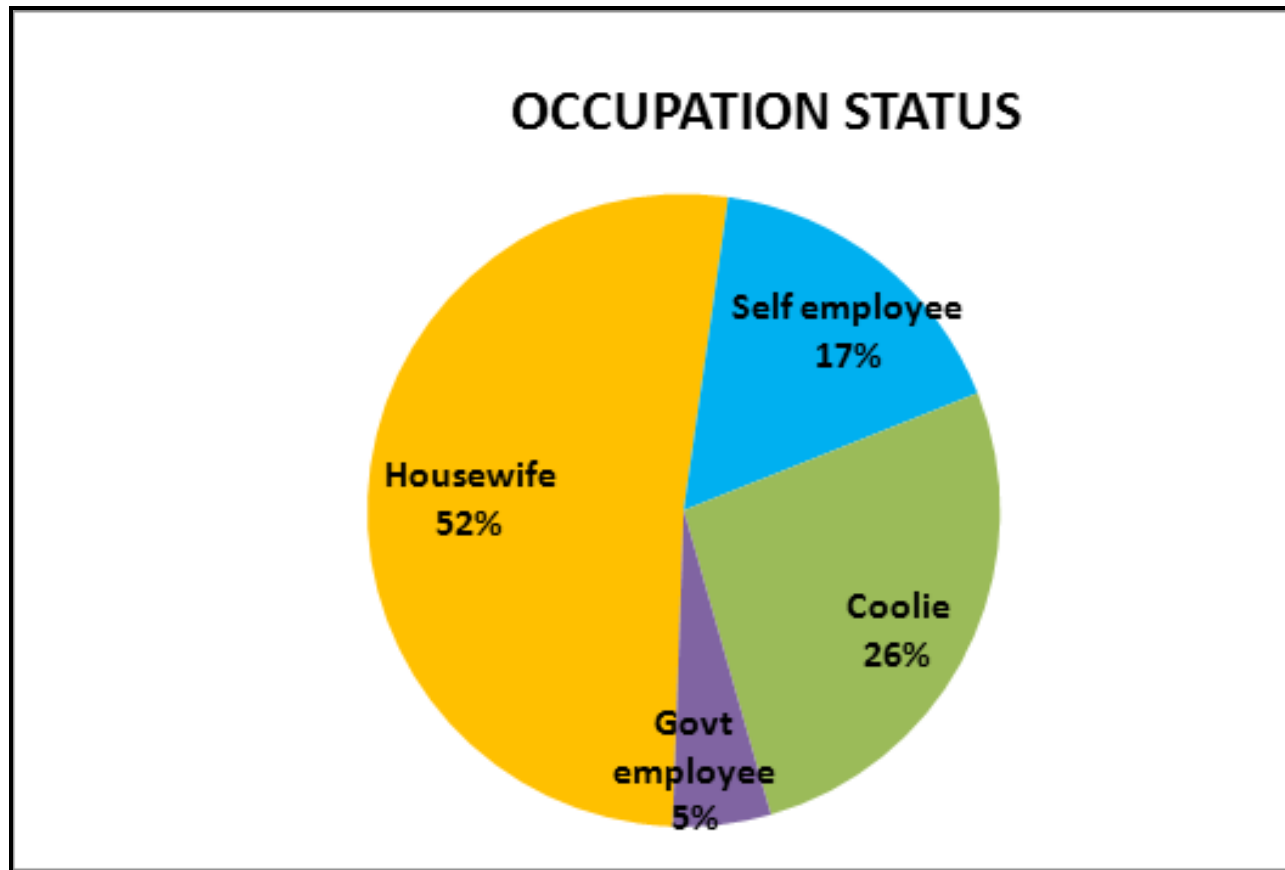


Fig:4.3 Occupations status wise distribution of Primigavida mothers shows the result of Housewife gestational diabetes mothers were 52.%, Coolie were 26%,Self employee were 17%, Govt employee were 5%.

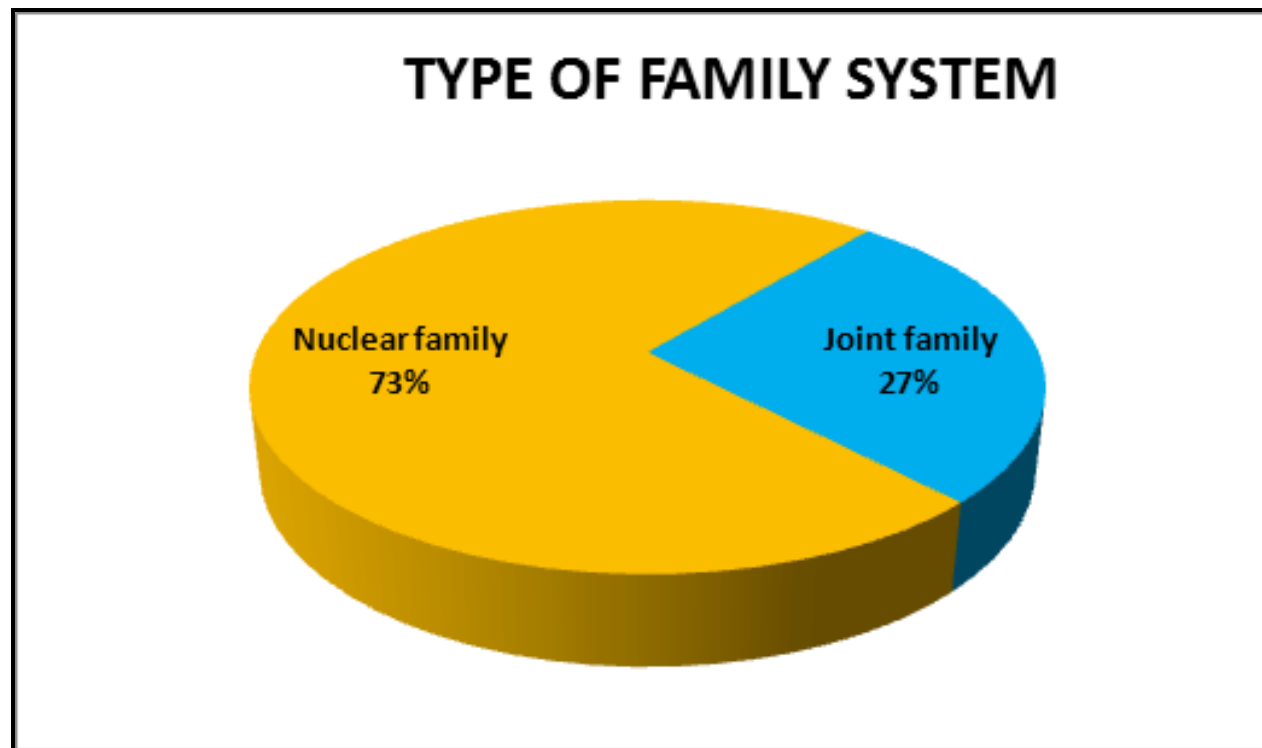


Fig:4.4 Family system wise distribution of Primigavida mothers shows the result of Nuclear family gestational diabetes mothers were 73.%, Joint family are 27%.

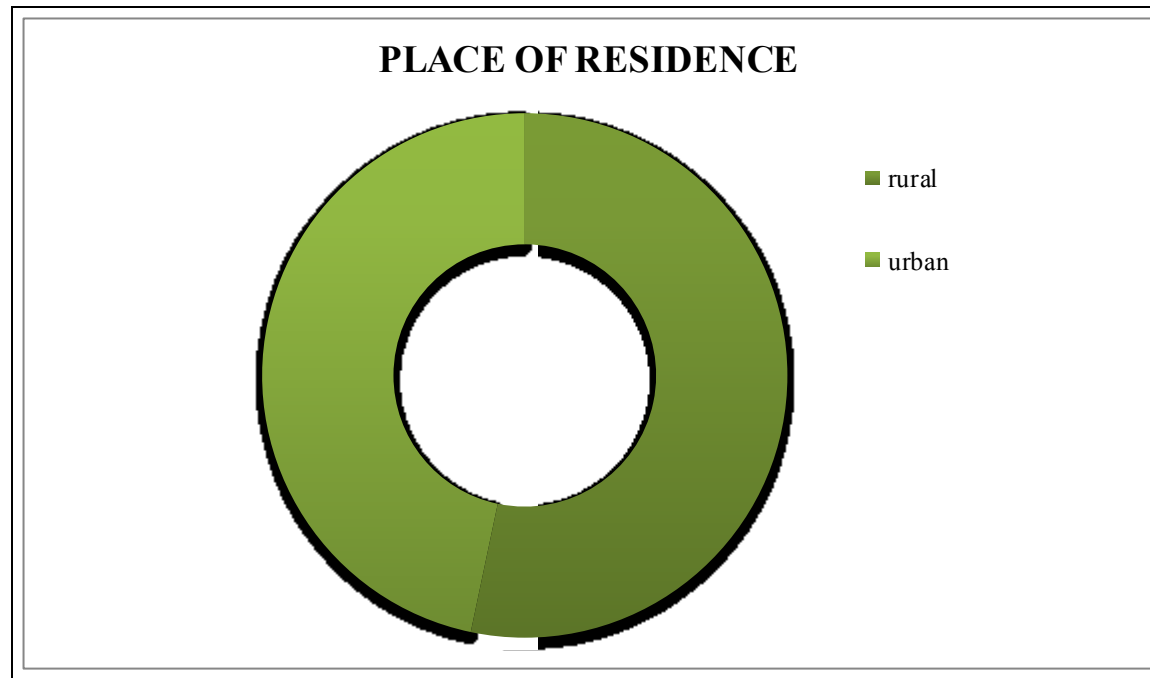


Fig:4.5 Type of family system of Primigavida mothers shows the result of Urban gestational diabetes mothers were 46.7%, Rural gestational diabetes mothers were 53.3%.

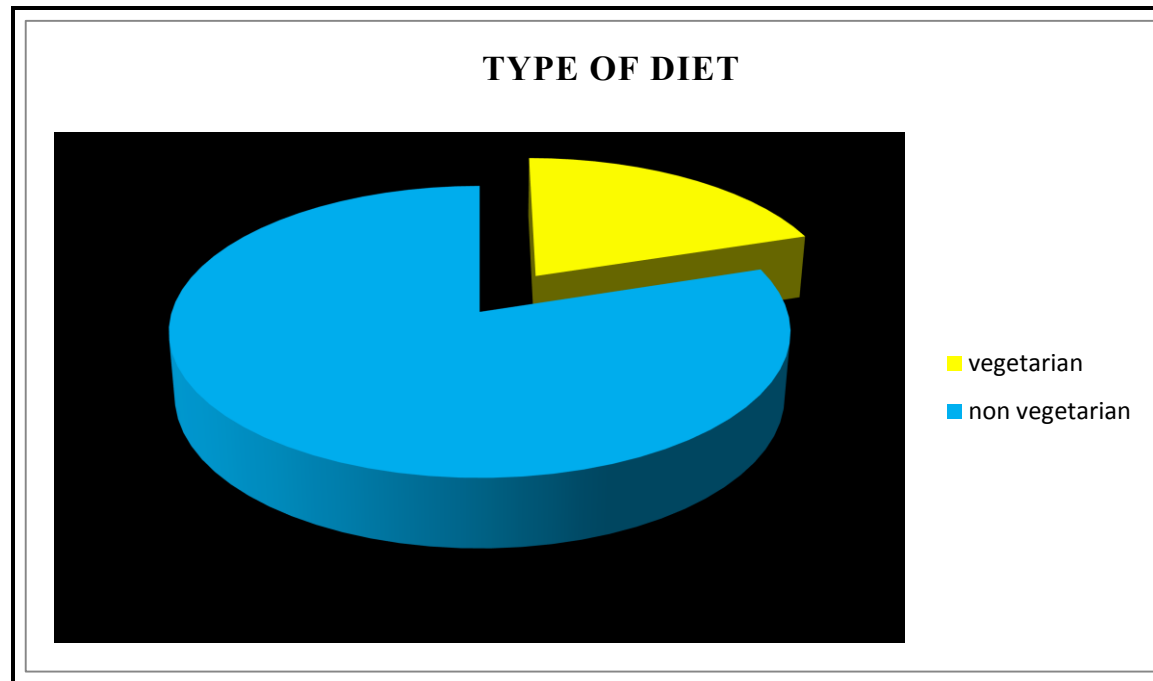


Fig :4.6 Place of Residence Primigravida mothers shows the result of Non vegetarian gestational diabetes mothers were 80 %, Vegetarian gestational diabetes mothers were 20 %.

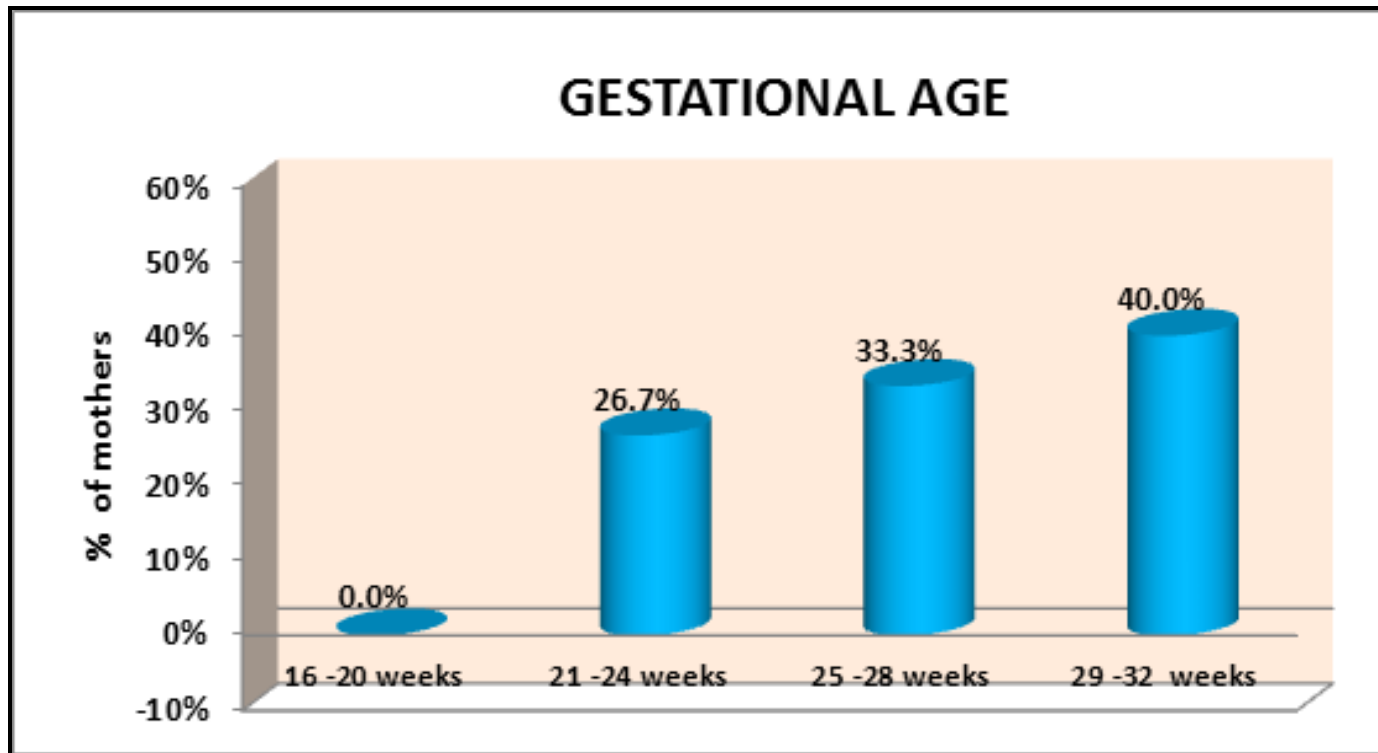


Fig:4.7 Gestational age of Primigavida mothers shows the result of 29-32 weeks gestational diabetes mothers were 40.0%,25-28 weeks gestational diabetes mothers were 33.3%,21-24 weeks were 26.7%, 16-20 weeks were 0.0%.

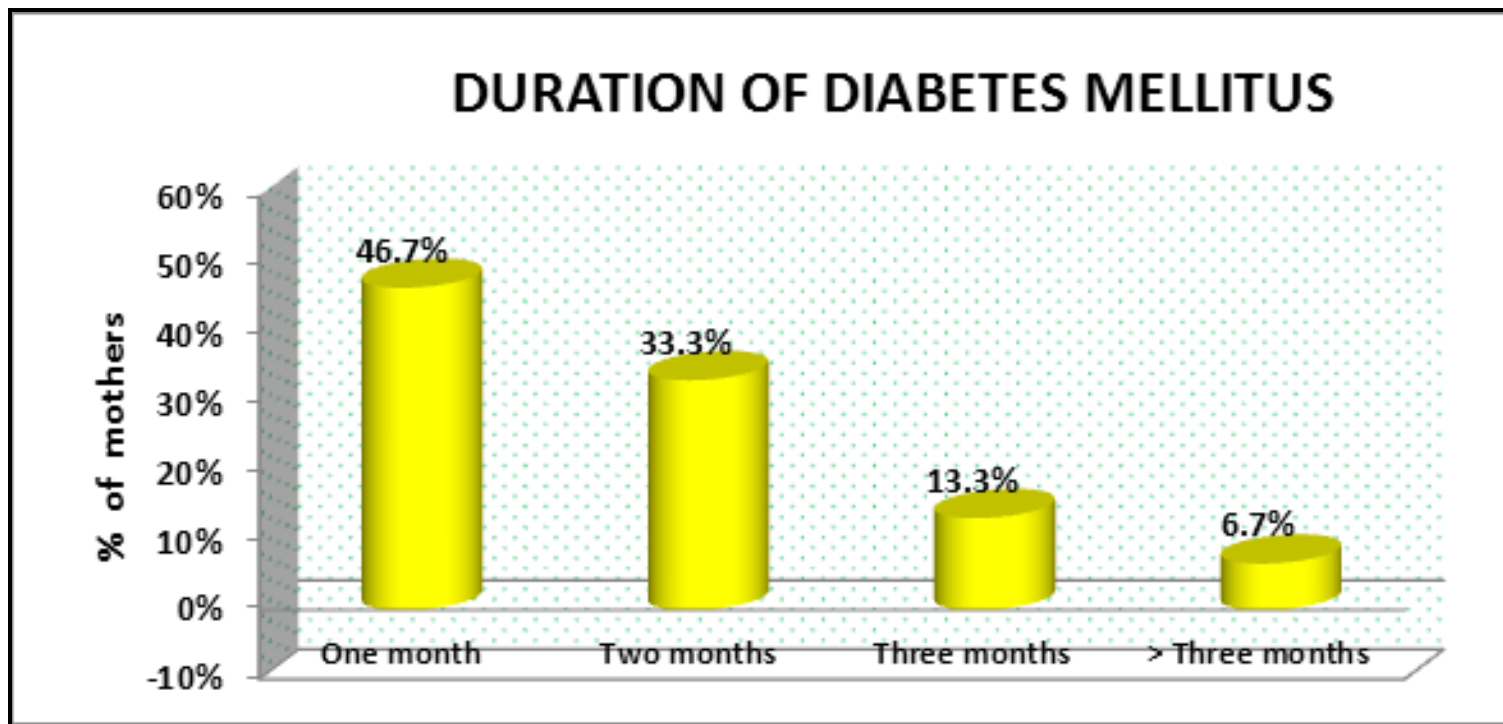


Fig:4.8 Duration of Diabetes mellitus wise Primigavida mothers shows the result of one month gestational diabetes mothers were 46.7%, Two month gestational diabetes mothers were 33.3%, Three month were 13.3.7%, > Three month were 6.7%.

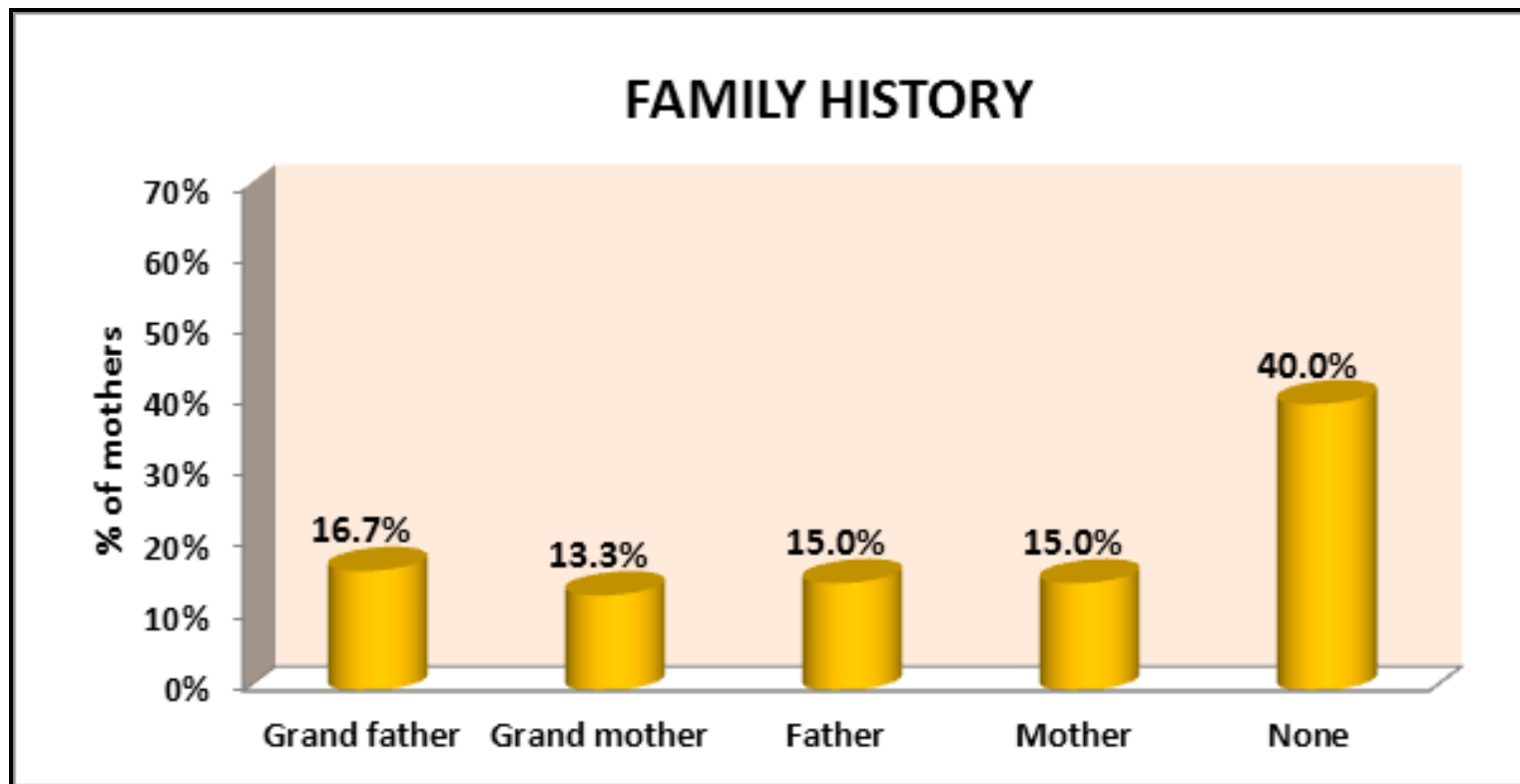


Fig: 4.9 Family history of Primigavida mothers shows the result of None gestational diabetes mothers were 40.0%, Grandfather diabetes mothers were 16.7%, Grandmother were 13.3.%, Father history were 15.0% mother history 15.0%.

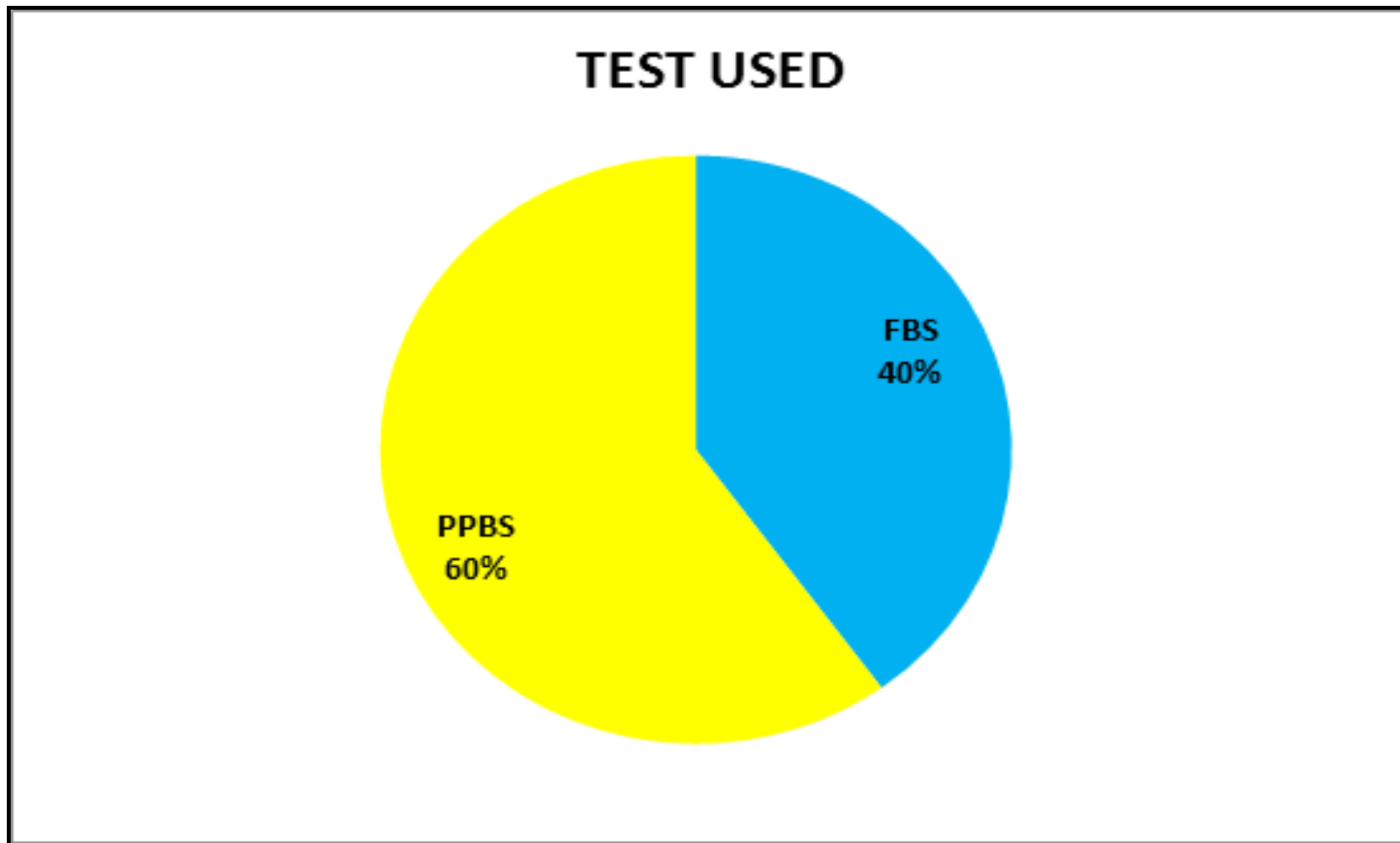


Fig: 4.10 Test used Primigravida mothers shows the result of PPBS diabetes mothers were 60 %, FBS diabetes mothers were 40.%.

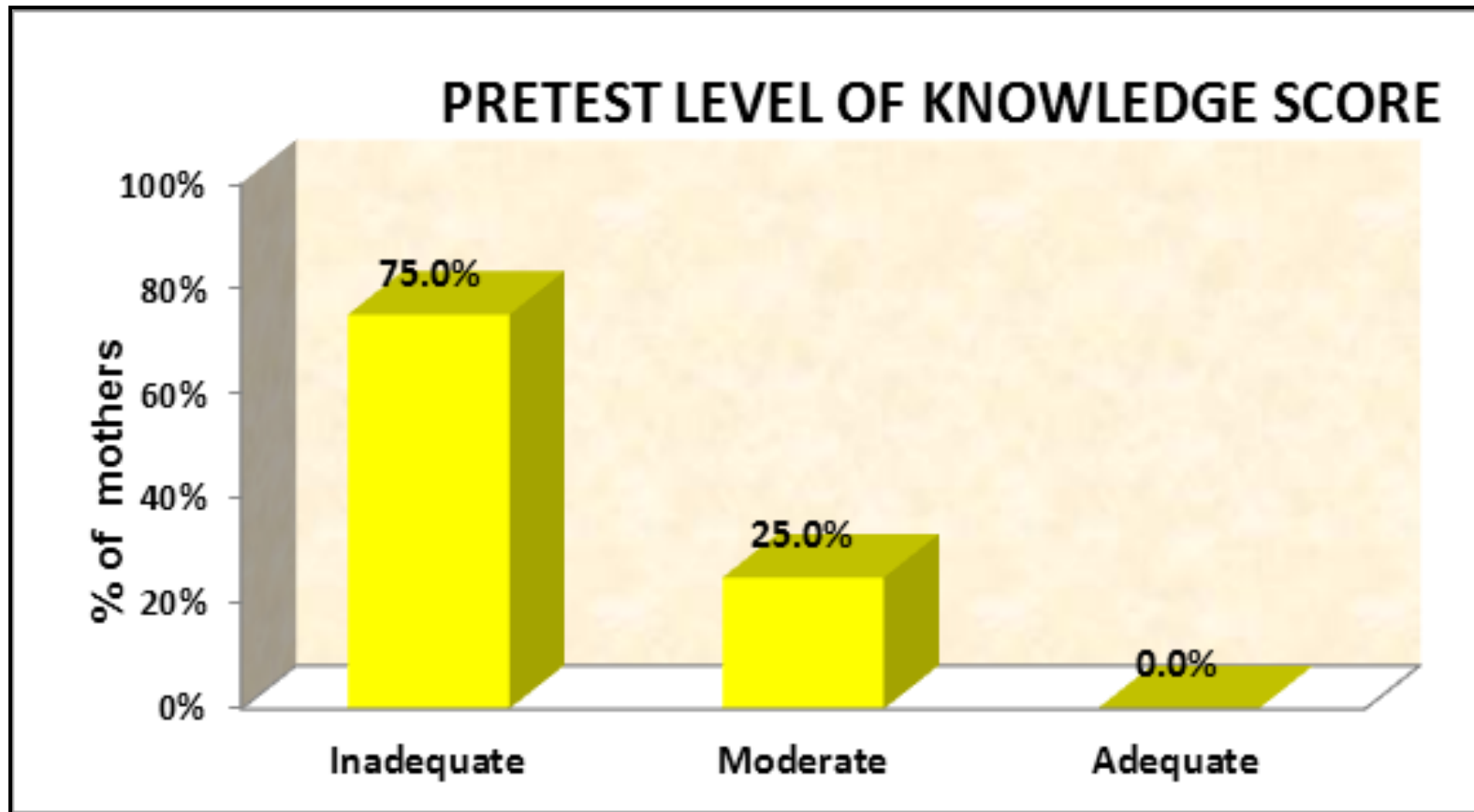


Fig: 4.11 Pre-test of mothers shows the result of Inadequat level mothers are 75.0%, Moderate level are 25.0%, adequate level are 0.0.%.

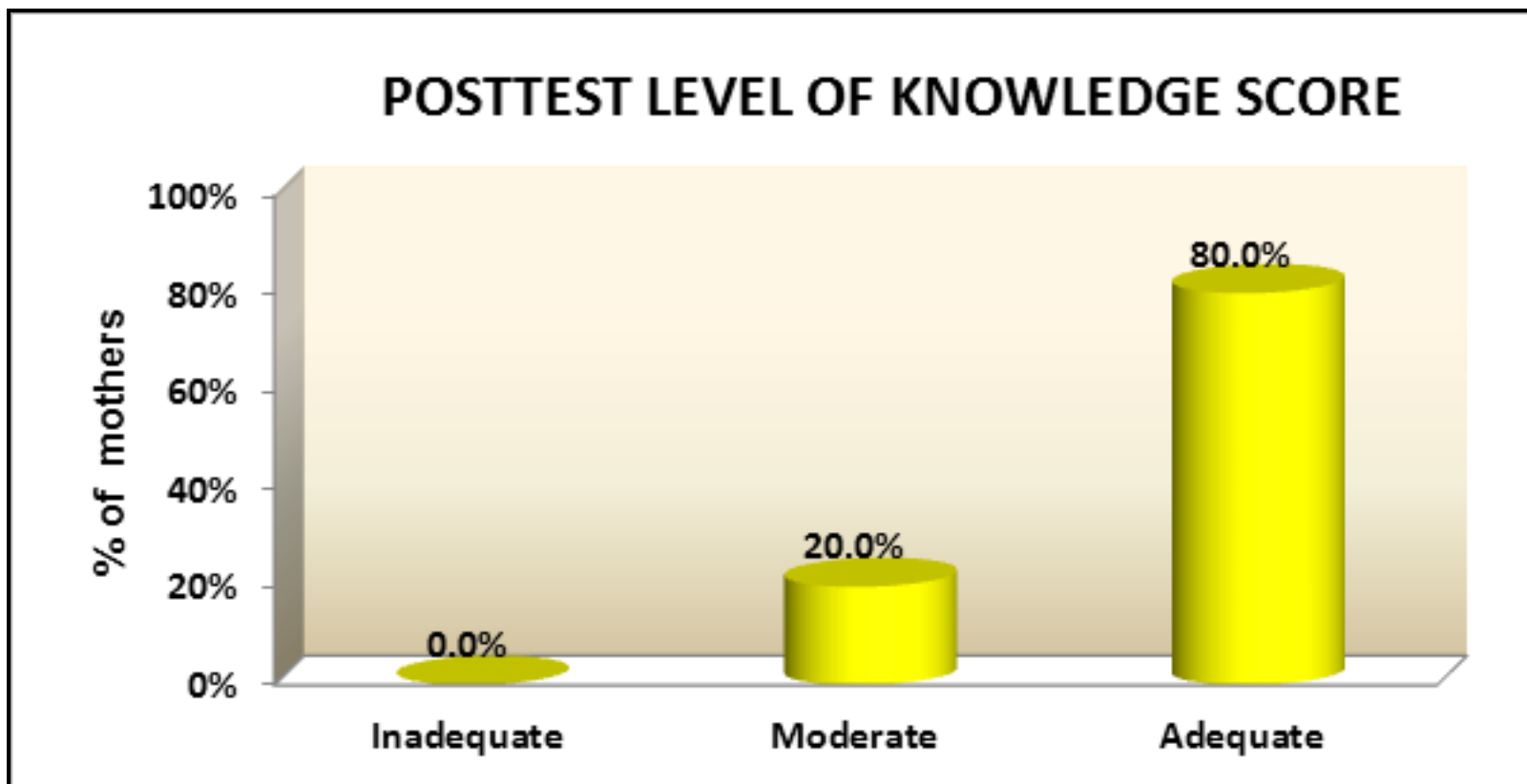


Fig: 4.12 Post-test of mothers shows the result of Inadequat level mothers were 80.0%, Moderate level were 20.0%, adequate level were 0.0.%.

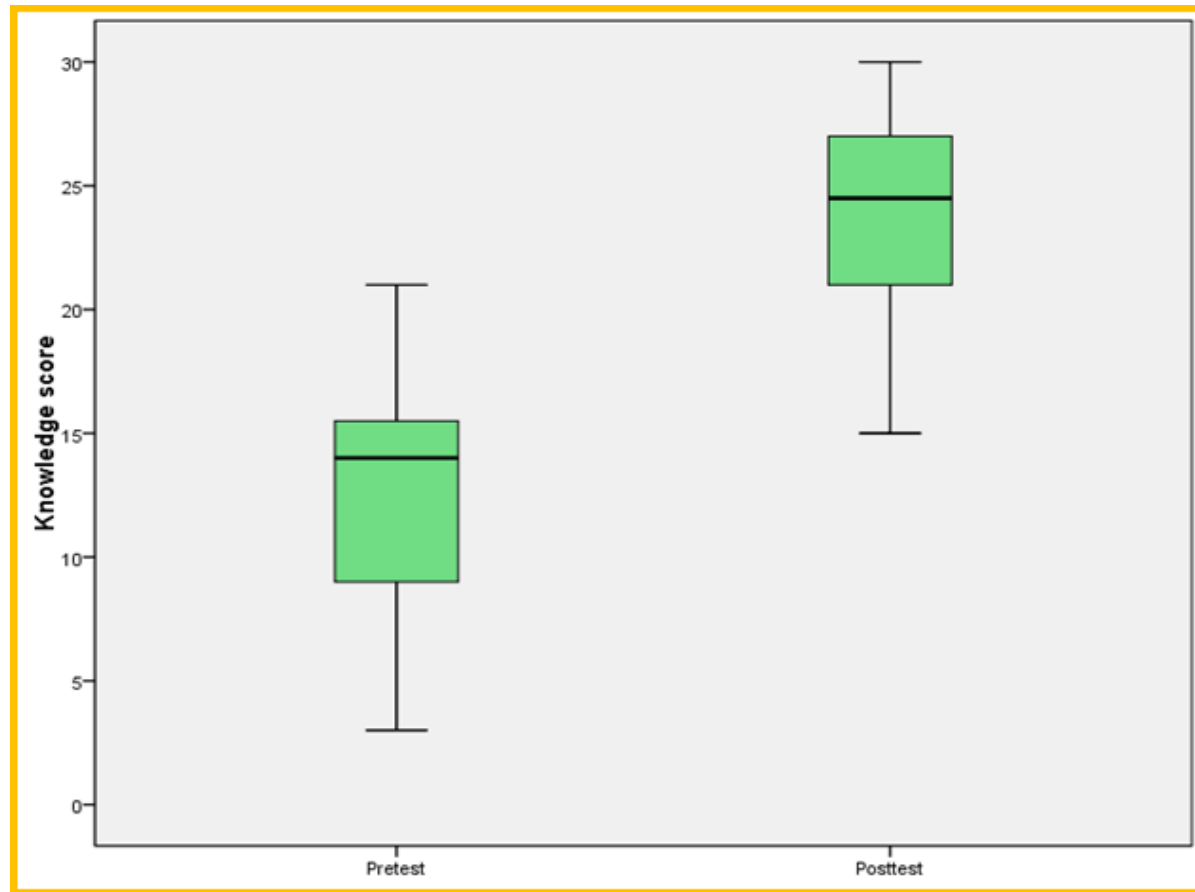


Fig 4.13: Box Plot Compares the primigravida mothers pretest and post test knowledge score

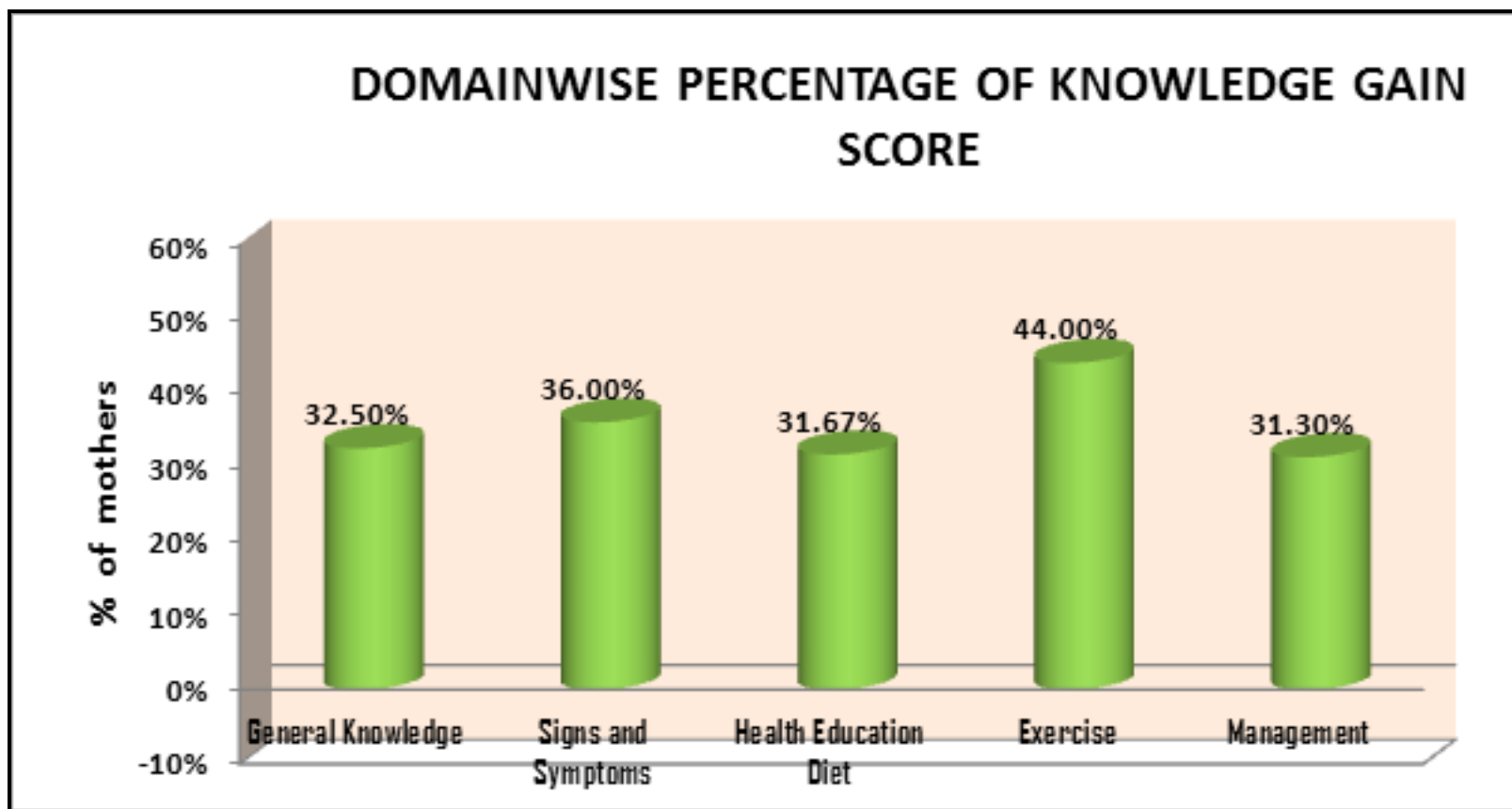


Fig:4.15 Percentage wise general knowledge 32.50%, Signs and symptoms 36.00%, Health education diet 31.67%, Exercise wise 44.00%, and Management wise 31.30%.

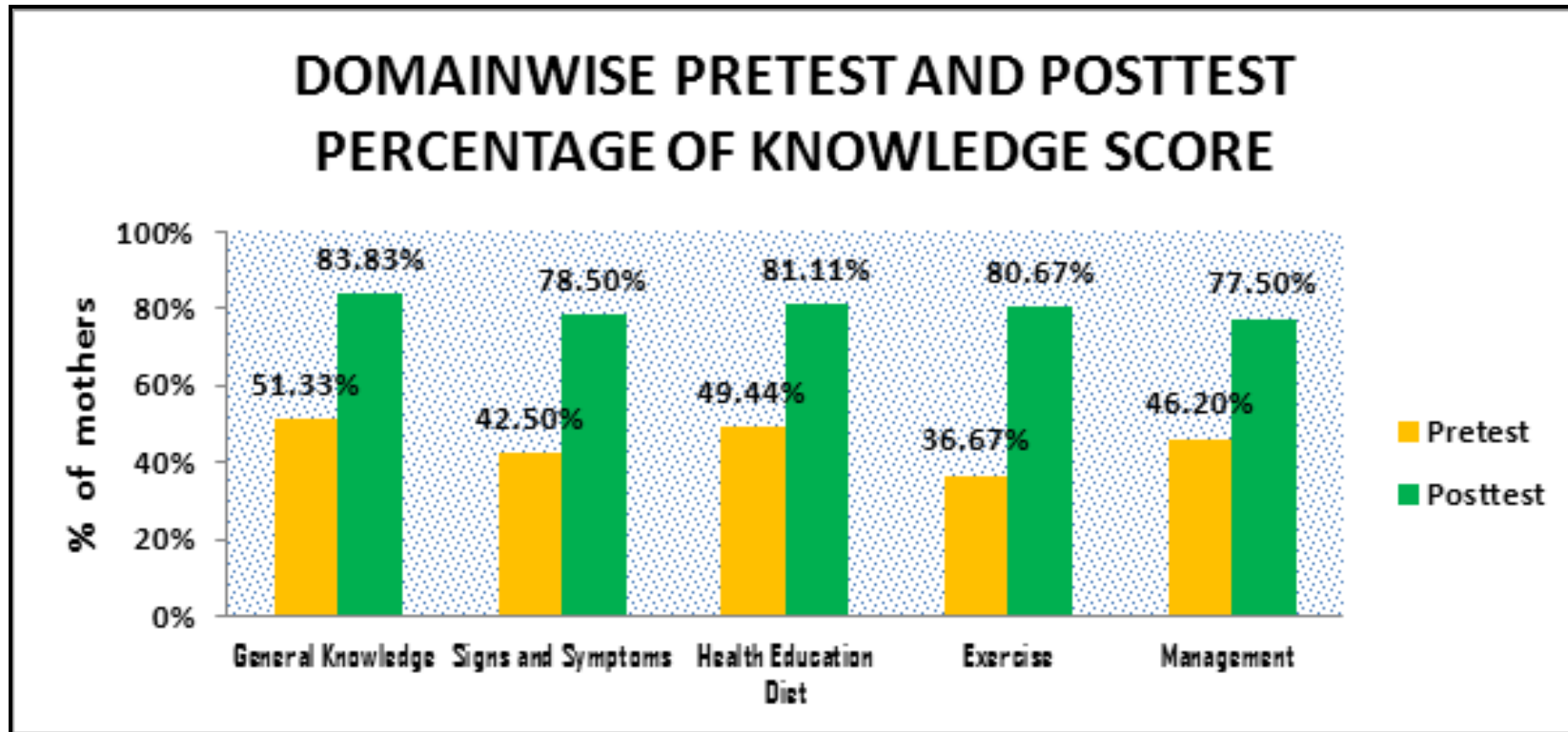


Fig: 4.14 Domain wise pre-test of general knowledge 51.33% and post-test general knowledge 83.83%, Signs and symptoms pre-test 42.44% post-test 78.50%, Health education diet for pre-test 49.44%, post test 81.11%, Exercise wise pre-test 36.67%, post-test 80.67%, and Management wise pre-test 46.20%, post-test 77.50%.

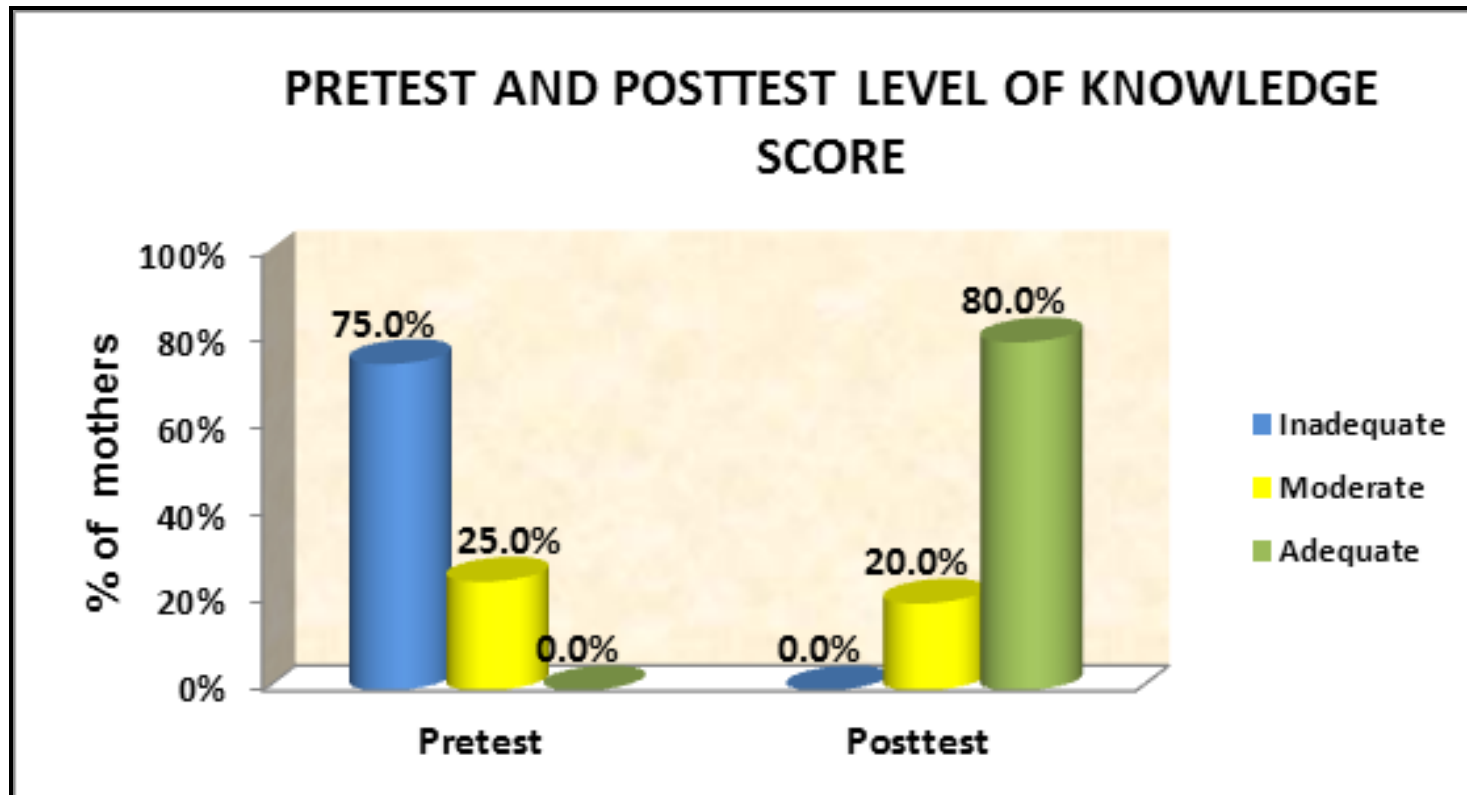


Fig: 4.16 Pre-test level of knowledge inadequate score 75.0%, Moderate score 25.0%, Adequate 0.0%, Post-test level of knowledge inadequate score 80.0%, Moderate score 20.0%, Adequate 0.0%.

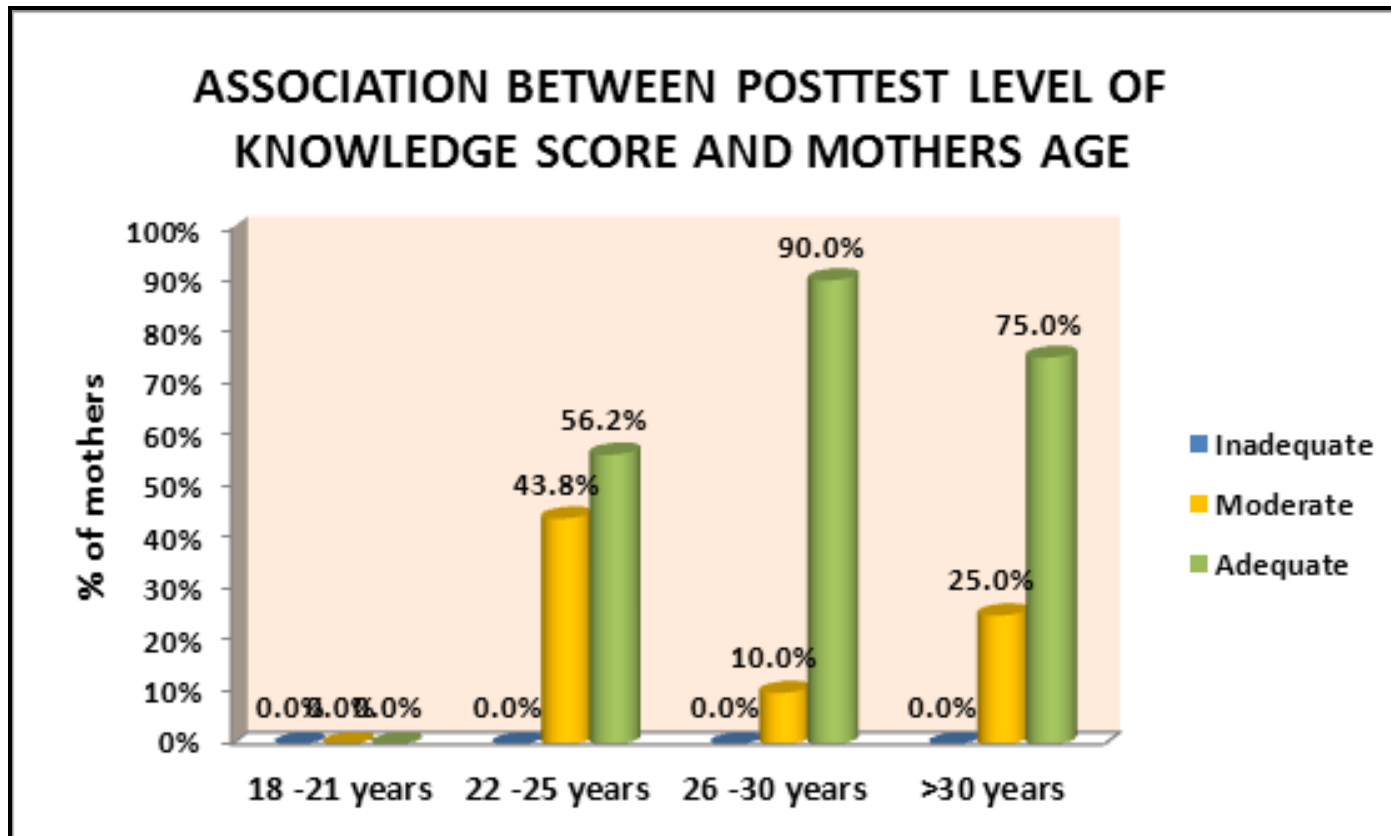


Fig: 4.17 Post-test level of knowledge of mothers age 26-30 inadequate score 0.0%, Moderate score 10.0% (30), Adequate 90.0%, mothers age >30 inadequate score 0.0%, Moderate score 22.0%, Adequate 75.0%, mothers age 22-25 inadequate score 0.0%, Moderate score 43.8%, Adequate 56.2%.

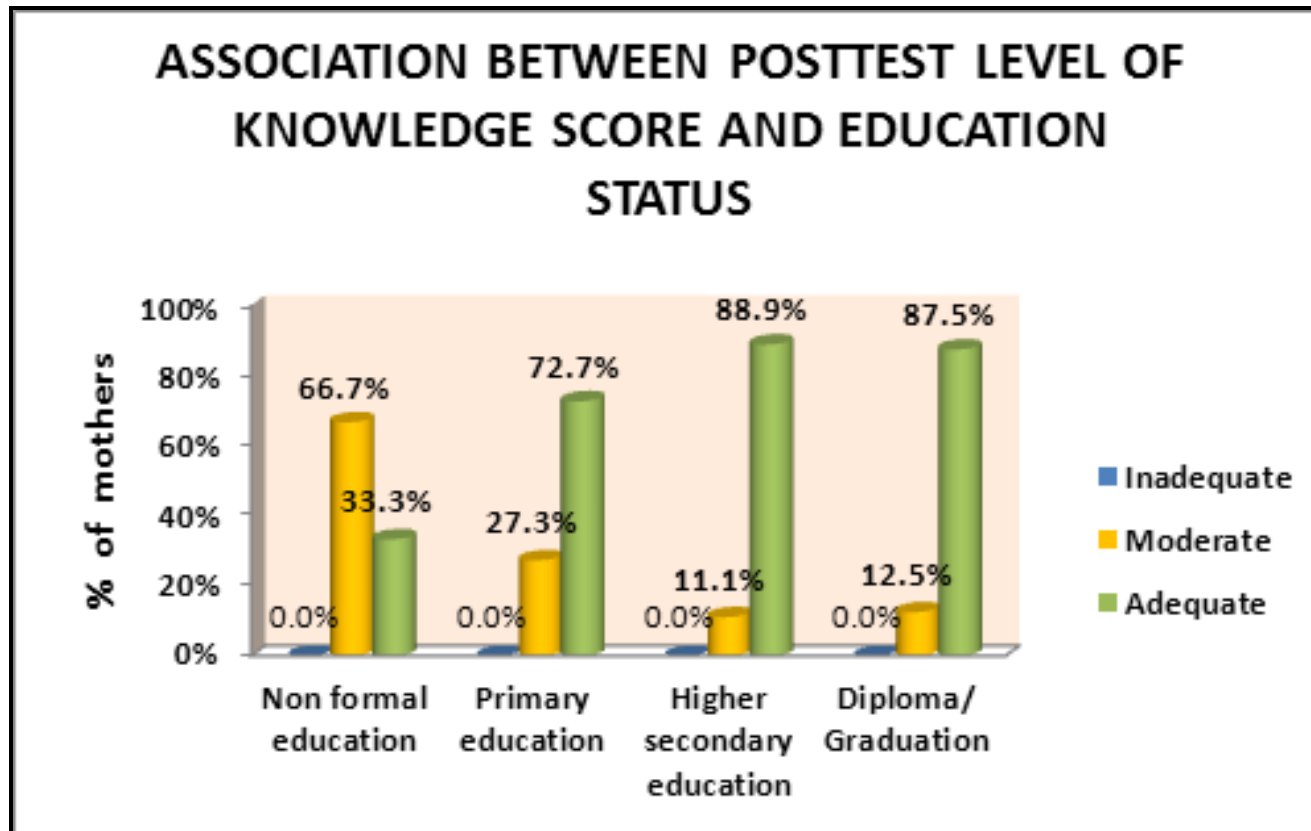


Fig:4.18 Post-test level of knowledge score in education of higher secondary inadequate score 0.0%, Moderate score 11.0%, Adequate 88.9%, Diploma / Graduation score inadequate score 0.0%, Moderate score 12.5%, Adequate 87.5%. Primary education inadequate score 0.0%, Moderate score 27.3%, Adequate 72.7%, non formal education inadequate score 0.0%, Moderate score 66.7%, Adequate 33.3%.

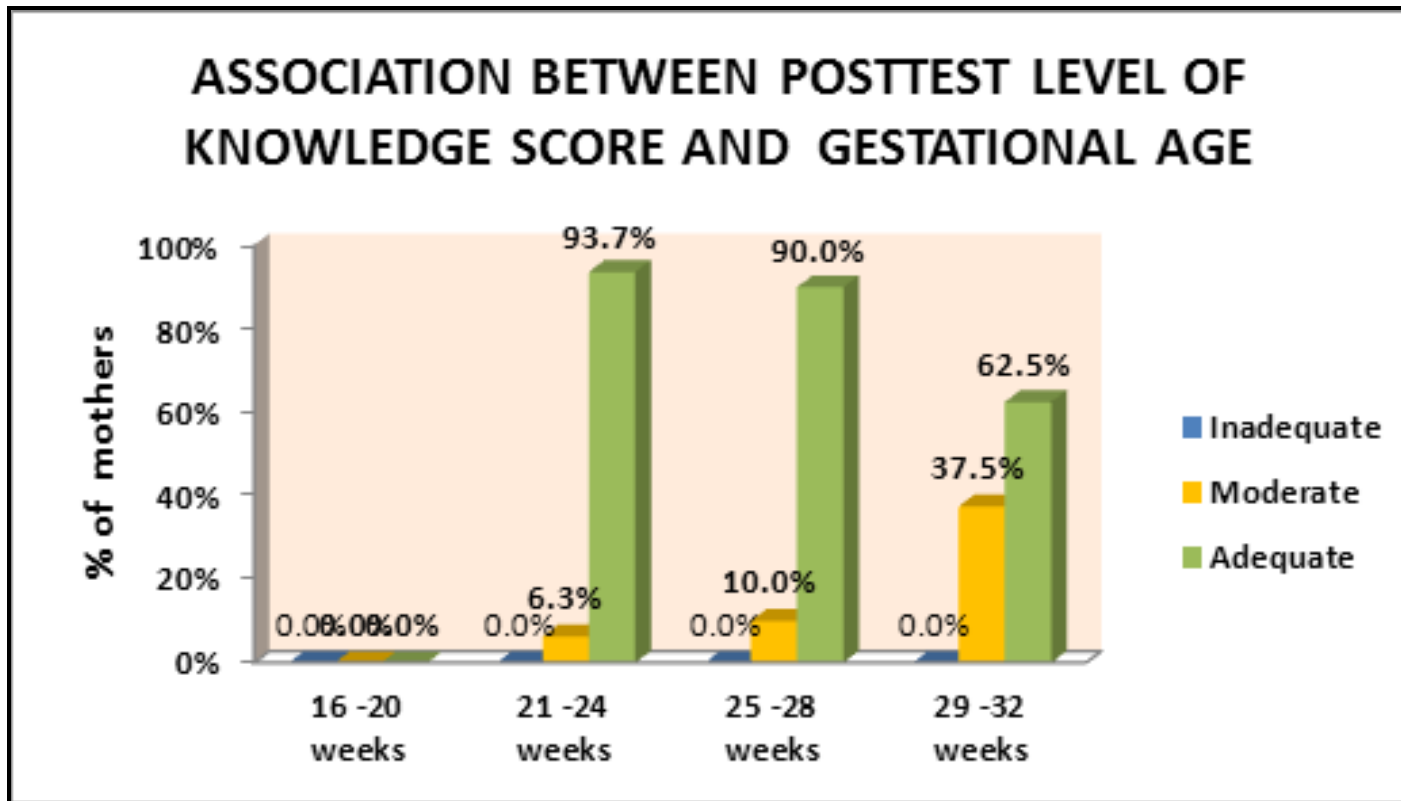


Fig:4.19 Post-test level of knowledge score in Gestation week of 21-24 inadequate score 0.0%, Moderate score 6.3%, Adequate 93.7%, 25-28 week score inadequate score 0.0%, Moderate score 10.0%, Adequate 90.0%. 29-32 week inadequate score 0.0%, Moderate score 37.5%, Adequate 62.5%, 16-20 week inadequate score 0.0%, Moderate score 0.0%, Adequate 0.0%.

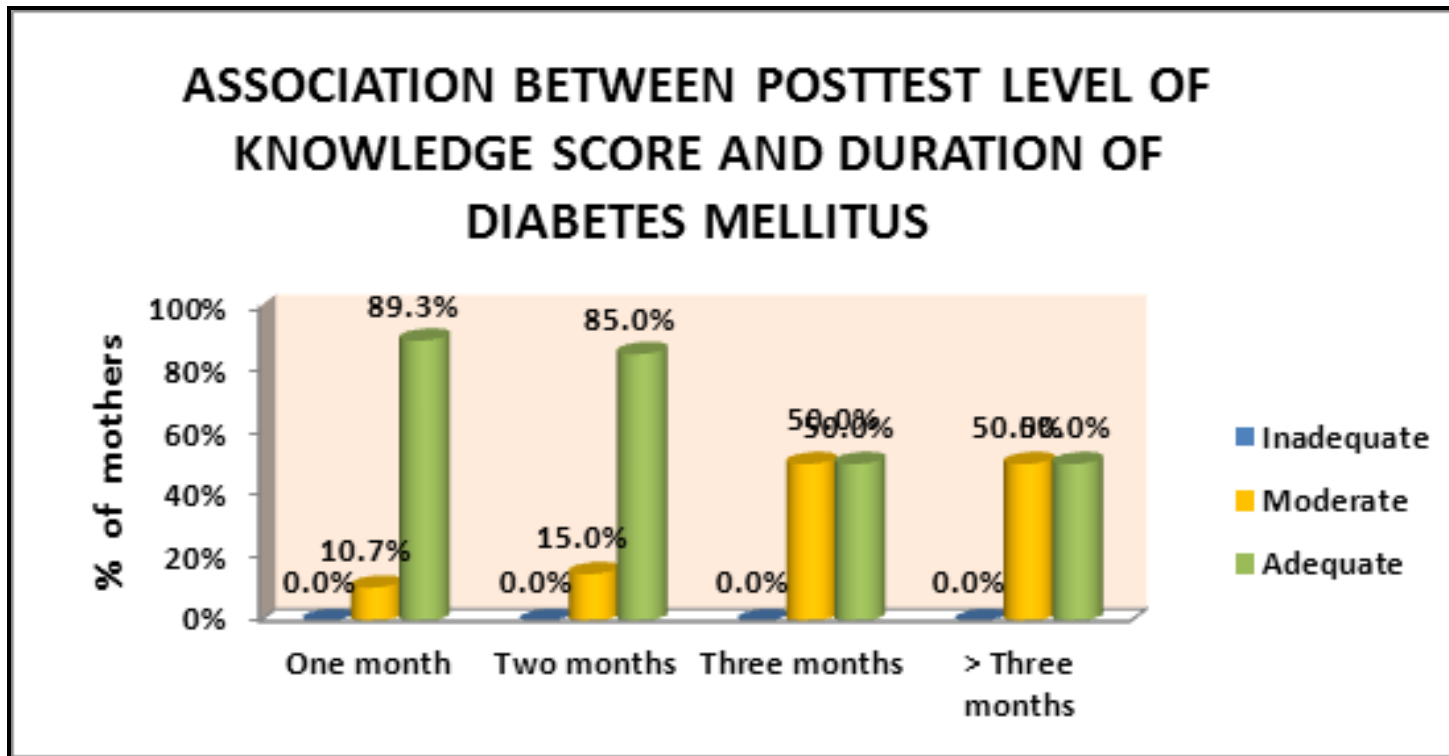


Fig:4.20 Post-test level of knowledge score of duration of Diabetes Mellitus One month inadequate score 0.0%, Moderate score 10.7%, Adequate 89.3%, Two month score inadequate score 0.0%, Moderate score 15.0%, Adequate 85.0%, Three month inadequate score 0.0%, Moderate score 50.0%, Adequate 50.0%, >3 month inadequate score 0.0%, Moderate score 50.0%, Adequate 50.0%.

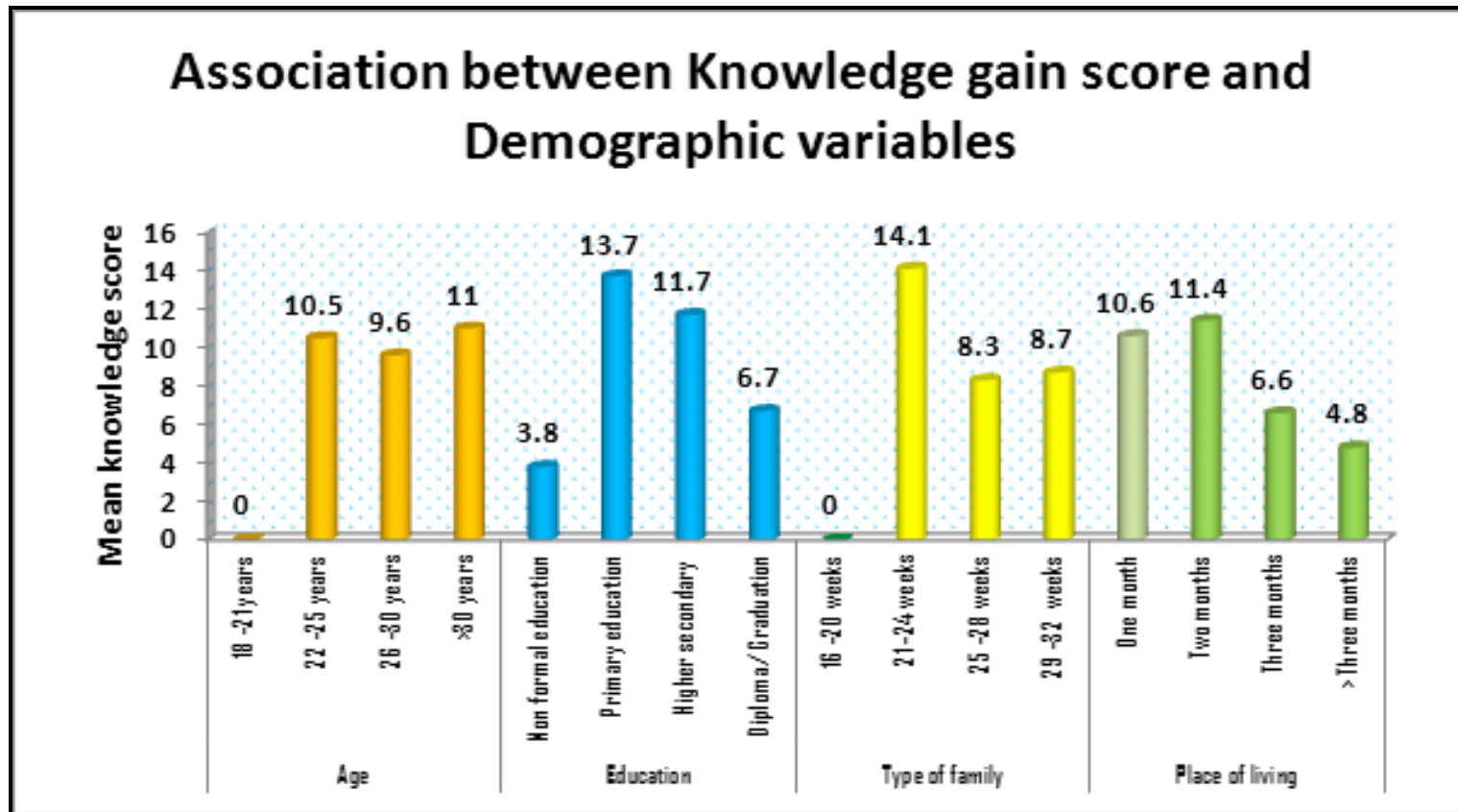


Fig:4.21 Association between knowledge gain score and Demographic variables in age >30 years high score 11%, Primary education level high score in 13.7%, Type of family level high score in 21-24 years 14.7%, and Place of living high score in Two months 11.4%.

**INSTITUTIONAL ETHICS COMMITTEE
MADRAS MEDICAL COLLEGE, CHENNAI 600 003**

EC Reg.No.ECR/270/Inst./TN/2013
Telephone No.044 25305301
Fax: 011 25363970

CERTIFICATE OF APPROVAL

To

Dhatshnamoorthy Parimalam
M.Sc. (N) I Year Student
College of Nursing
Madras Medical College
Chennai 600 003

Dear Dhatshnamoorthy Parimalam,

The Institutional Ethics Committee has considered your request and approved your study titled **"EVALUATE THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON KNOWLEDGE AMONG PRIMIGRAVIDA MOTHERS WITH GESTATIONAL DIABETES MELLITUS ATTENDING ANTENATAL OUT PATIENT DEPARTMENT AT INSTITUTE OF OBSTETRICS AND GYNAECOLOGY AND GOVERNMENT HOSPITAL FOR WOMEN AND CHILDREN, CHENNAI"** - NO.33072017

The following members of Ethics Committee were present in the meeting hold on **11.07.2017** conducted at Madras Medical College, Chennai 3

- | | |
|---|----------------------|
| 1. Prof.Dr.C.Rajendran, MD., | :Chairperson |
| 2. Prof.R.Narayana Babu,MD.,DCH.,Dean,MMC,Ch-3 | : Deputy Chairperson |
| 3. Prof.Sudha Seshayyan,MD., Vice Principal,MMC,Ch-3 | : Member Secretary |
| 4. Prof.S.Mayilvahanan,MD,Director,Inst. of Int.Med,MMC, Ch-3 | : Member |
| 5. Prof.A.Pandiya Raj,Director, Inst. of Gen.Surgery,MMC | : Member |
| 6. Prof.Rema Chandramohan,Prof.of Paediatrics,ICH,Chennai | : Member |
| 7. Prof. Susila, Director, Inst. of Pharmacology,MMC,Ch-3 | : Member |
| 8.Thiru S.Govindasamy, BA.,BL,High Court,Chennai | : Lawyer |
| 9.Tmt.Arnold Saulina, MA.,MSW., | :Social Scientist |
| 10.Tmt.J.Rajalakshmi, JAO,MMC, Ch-3 | : Lay Person |

We approve the proposal to be conducted in its presented form.

The Institutional Ethics Committee expects to be informed about the progress of the study and SAE occurring in the course of the study, any changes in the protocol and patients information/informed consent and asks to be provided a copy of the final report.

Member Secretary - Ethics Committee
MEMBER SECRETARY
INSTITUTIONAL ETHICS COMMITTEE
MADRAS MEDICAL COLLEGE
CHENNAI-600 003

copy

REQUISITION LETTER

From

Dhatshnamoorthy Parimalam,
M.sc (N) –II year student,
College of Nursing,
Madras Medical College, Chennai-3.

To

DIRECTOR AND SUPERINTENDENT
Institute of Obstetrics and Gynaecology and
Government Hospital for Women and Children,
Egmore, Chennai- 08.

Through,

PRINCIPAL,
College of Nursing, Madras Medical College,
Chennai – 03.

Respected Sir/Madam,

Sub: Requesting permission to conduct research for Dissertation as per requirement at Institute of Obstetrics and Gynaecology and Government Hospital for Women and Children Egmore, Chennai-08.

I M.Sc Nursing II- year student has to conduct the research study for the fulfillment of MSc (N) programme . My topic is "EVALUATE THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON KNOWLEDGE AMONG PRIMI GRAVIDA MOTHERS WITH GESTATIONAL DIABETES MELLITUS ATTENDING ANTENATAL OUT PATIENT DEPARTMENT AT INSTITUTE OF OBSTETRICS AND GYNAECOLOGY AND GOVERNMENT HOSPITAL FOR WOMEN AND CHILDREN, CHENNAI-08."The data collection period is from 02.01.2018 to 28.01.2018 between 8am -4pm at Antenatal Outpatient Department in Institute of Obstetric and Gynaecology and Government Hospital for Women and Children Egmore, Chennai-08.

I request you to permit me to conduct the above study and I assure that I will not disturb the routine activities of the Antenatal Outpatient Department.

Thanking You

Signature of H.O.D

V. Vijay
6-12-17

Permitted
BBB
21/12/17

Yours faithfully,

D. Parimalam
(Dhatshnamoorthy Parimalam)

Encl: Copy of Institutional Ethics Committee Approval Letter.

*Forwarded
to
6-12-17
for*

**PRINCIPAL
COLLEGE OF NURSING
MADRAS MEDICAL COLLEGE
CHENNAI - 600 003.**

LETTER SEEKING EXPERTS OPINION FOR CONTENT VALIDITY

From

Mrs. Dhatshnamoorthy Parimalam,
M.Sc., (N) II year,
College of Nursing,
Madras Medical College,
Chennai-3.

To

Dr. Roselin Rachal, **MSc(N), Ph.D.**
Principal,
College of Nursing,
Madras Medical Mission,
Anna Nagar,
Chennai.

Through

Principal
College of Nursing,
Madras Medical college
Chennai.

Sub: Requisition for expert opinion on suggestion for content validity of the tools.

Respected Madam,

I, Dhatshnamoorthy parimalam of M. Sc (Nursing) II year student at College of Nursing, Madras Medical College, Chennai -3, affiliated to Dr. M.G.R. Medical University, Chennai. As a partial fulfillment of the requirement in the M.Sc. (Nursing) Programme, I have to complete my dissertation and the topic I have selected is titled "EVALUATE THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON KNOWLEDGE AMONG PRIMIGRAVIDA MOTHERS WITH GESTATIONAL DIABATES MELLITUS ATTENDING ANTENATAL OUT PATIENT DEPARTMENT AT INSTITUTE OF OBSTETRIC AND GYNAECOLOGY AND GOVERNMENT HOSPITAL FOR WOMEN AND CHILDREN, CHENNAI." Herewith, I have enclosed the developed tool for content validity and for your expert opinion and valuable suggestions.

Thanking you,

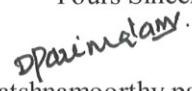
Yours Sincerely,


Signature of HOD

PRINCIPAL
COLLEGE OF NURSING
MADRAS MEDICAL COLLEGE
CHENNAI - 600 003.

Enclosures

1. Statement and objectives of the study
2. Blueprint of the tool
3. Content validity certificate


(Dhatshnamoorthy parimalam)

CERTIFICATE OF CONTENT VALIDITY

This is to certify that the tool constructed by Mrs. Dhatshnamoorthy Parimalam, (M.Sc Nursing) II year Student, College of Nursing, Madras Medical College which is to be used in her study titled, "EVALUATE THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON KNOWLEDGE AMONG PRIMIGRAVIDA MOTHERS WITH GESTATIONAL DIABETES MELLITUS ATTENDING ANTENATAL OUT PATIENT DEPARTMENT AT INSTITUTE OF OBSTETRIC AND GYNAECOLOGY AND GOVERNMENT HOSPITAL FOR WOMEN AND CHILDREN, CHENNAI" has been validated by the undersigned. The suggestions and modifications given by me will be incorporated by the investigator in concern with their respective guide. Then she can proceed to do the research.

Signature with seal

S. J. Nalini

Name : DR. Nalini Seeraban. MSc(N). Ph.D

Designation : Principal

College : College of Nursing,

Sri Ramachandra Medical College

Place

PRINCIPAL
Sri Ramachandra College of Nursing
SRI RAMACHANDRA MEDICAL COLLEGE & RI (DU)
Porur, Chennai-600 116.

Date

CERTIFICATE OF CONTENT VALIDITY

This is to certify that the tool constructed by Mrs. Dhatshnamoorthy Parimalam, (M.Sc Nursing) II year Student, College of Nursing, Madras Medical College which is to be used in her study titled, "EVALUATE THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON KNOWLEDGE AMONG PRIMIGRAVIDA MOTHERS WITH GESTATIONAL DIABATES MELLITUS ATTENDING ANTENATAL OUT PATIENT DEPARTMENT AT INSTITUTE OF OBSTETRIC AND GYNAECOLOGY AND GOVERNMENT HOSPITAL FOR WOMEN AND CHILDREN, CHENNAI" has been validated by the undersigned. The suggestions and modifications given by me will be incorporated by the investigator in concern with their respective guide .Then she can proceed to do the research.

Signature with seal

Name : DR. Rosalin Rachel

Designation : Principal

College : College of Nursing
Madras Medical Mission

PROF. Dr. ROSALINE RACHEL, M.Sc., (N), Ph.D., (N)

PRINCIPAL

MMM COLLEGE OF NURSING

No.131, SAKTHI NAGAR,

CHENNAI - 600 095.

Place :

Date :

CERTIFICATE FOR ENGLISH EDITING

This is to certify that the dissertation material adopted by **Mrs.Dhatshnamoorthy Parimalam**, II Year M.Sc (N) Student of College of Nursing, Madras Medical College, Chennai-3 for the dissertation on **“EVALUATE THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON GESTATIONAL DIABETES MELLITUS AMONG PRIMI GRAVIDA MOTHERS ATTENDING ANTENATAL OUTPATIENT DEPARTMENT AT INSTITUTE OF OBSTETRICS & GYNAECOLOGY HOSPITAL FOR WOMEN AND CHILDREN, EGMORE, CHANNAI-08”** edited for English Language appropriateness.

Signature



Seal

Mrs.S.USHA NANDHINI,M.A.,
HOD, Dept. of English,
SRI SANTHOSHI GROUP OF INSTITUTIONS,
Paiyambadi, Madurantakam Taluk,
Kanchipuram District - 603309.

CERTIFICATE FOR TAMIL EDITING

This is to certify that the dissertation material adopted by **Mrs.Dhatshnamoorthy Parimalam**, II Year M.Sc (N) Student of College of Nursing, Madras Medical College, Chennai-3 for the dissertation on **“EVALUATE THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON GESTATIONAL DIABETES MELLITUS AMONG PRIMI GRAVIDA MOTHERS ATTENDING ANTENATAL OUTPATIENT DEPARTMENT AT INSTITUTE OF OBSTETRICS & GYNAECOLOGY HOSPITAL FOR WOMEN AND CHILDREN, EGMORE, CHANNAI-08”** edited for Tamil Language appropriateness.

S. Maheswari

S. MAHESWARI M.A.B.Ed (Tamil)

Name:

HEAD MASTER
CHENNAI MIDDLE SCHOOL
Maduma Nagar, Perambur,
Chennai - 600 011.

Seal :

CERTIFICATE OF CONTENT VALIDITY

This is to certify that the tool constructed by **Mrs.Dhatshnamoorthy Parimalam**, II Year M.Sc (N) Student of College of Nursing, Madras Medical College, Chennai-3 which is to be used in her study titled **“EVALUATE THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON GESTATIONAL DIABETES MELLITUS AMONG PRIMI GRAVIDA MOTHERS ATTENDING ANTENATAL OUTPATIENT DEPARTMENT AT INSTITUTE OF OBSTETRICS & GYNAECOLOGY HOSPITAL FOR WOMEN AND CHILDREN, EGMORE, CHANNAI-08”** has been validated by the undersigned. The suggestions and modifications given by me will be incorporated by the investigator in concern with their respective guide. Then she can proceed to do the research.

Signature :

Name :

Designation :

Seal :

