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"ASSESS THE KNOWLEDGE REGARDING IDENTIFICATION OF WARNING SIGNALS OF GESTATIONAL DIABETES AMONG PRIMIGRAVIDAE IN SELECTED MATERNITY HOSPITALS AT BENGALURU WITH A VIEW TO DEVELOP PAMPHLET"

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ABSTRACT

Background and Objectives: The gestational diabetes is defined as carbohydrate intolerance resulting in hyperglycemia of variable severity with its onset of first recognition during pregnancy. Recognizing gestational diabetes symptoms can be tricky because symptoms are often mild or nonexistent. The detection of GDM during pregnancy provides an opportunity to identify women at risk of short term and long term complications. Early diagnosis and intervention can reduce the adverse perinatal outcomes. there fore early identification and control of gestational diabetes can be achieved by appropriate education programmes, so this study was conducted to assess the knowledge regarding identification of warning signals of gestational diabetes among primigravidae in selected maternity hospitals at bengaluru with a view to develop pamphlet. Objective of the study are: (1) To assess the existing knowledge on warning signals of gestational diabetes among primigravidea. (2) To find the association between the knowledge score regarding warning signals of gestational diabetes with selected demographical variables. (3) To develop and provide pamphlet regarding warning signals of gestational diabetes for primigravidae. **Methods:** Descriptive survey approach, with non probability, purposive sampling techniques was used draw the sample.the size of the sample is 100 primigravidea with and selection of the sample were done with following inclusion and exclusion criteria. **Results:** Analysis of socio-demographic variables showed significant association between Educational statuses of the mother, Occupation, Place of residence, Previous Source of information, Family Income per month in Rs with knowledge score at 5% (P>0.05). **Interpretation and Conclusion:** Overall findings of the study clearly showed that the primigravidae had inadequate knowledge score (64 .0%) and none of the Respondents has adequate level of knowledge regarding identification of warning signals of gestational diabetes.it reveals that if the primigravidae are provided with sort of educational interventions such as pamphlets,information guide sheets,teaching programmes and self instructional modules on warning signals of gestational diabetes,which can increasing the knowledge of the primigravidae to promote the health and prevent the complication.

INTRODUCTION

"Pregnancy is special, let us make it safe"
WHO, 1998.

Pregnancy is indisputably the most exciting time in a woman's life. And just as with any exciting event, there's also the thrill of uncertainty and pregnancy is the carrying of one or more offspring, known as a fetus or embryo, inside the uterus of a female. In a pregnancy, there can be multiple gestations, as in the case of twins or triplets. Human pregnancy is the most studied of all mammalian pregnancies

Pregnancy is a state of natural insulin resistance, which is due to placental production of human placental lactogen, an insulin antagonizing hormone, leading to a remarkable increase of insulin requirement in pregnant diabetics in the second and third trimester.[1]

Need for the Study

In India the prevalence of GDM varied from 3.8 to 21% across the different regions.[11] it has an adverse effect on both mother and the fetus. Maternal complications include hypertension, post partum hemorrhage and finally leading to the need of caesarean section delivery. [12] Also, they have increased risk for the later development of diabetes and cardiovascular disease.[13] Foetal complications include the risk of anomalies and macrosomia which is prone for trauma during delivery.

OBJECTIVES OF THE STUDY

Objective of the study are

1. To assess the existing knowledge on warning signals of gestational diabetes among primigravidea.
2. To find the association between the knowledge score regarding warning signals of gestational diabetes with selected demographical variables
3. To develop and provide pamphlet regarding warning signals of gestational diabetes for primigravidae.

METHODOLOGY

Methods

Descriptive survey approach, with non probability, purposive sampling techniques was used draw the sample.the size of the sample is 100 primigravidea with and selection of the sample were done with following inclusion and exclusion criteria. The results were described by using descriptive and inferential stastics.

RESULTS

Section I: Socio Demographic Charecterisics Of Respondents

Table 1: Classification of Respondents By Age N=100.

Characteristics	Category	Respondents	
		Number	Percent
Age	19-23 years	50	50.0%
	24-28 years	46	46.0%
	29-33 years	3	3.0%
	34 years And above	1	1.0%
Total		**100**	**100.0%**

The data from the above table no 1 and figure 1: shows that majority of 50% of the respondent's falls between the age of 19-23 years, 46% of the respondent's falls between the age of 24-28 years, 3% of the respondent's falls between the age of 29-33 years, 1% of the respondent's falls between the age of 34 years and above.

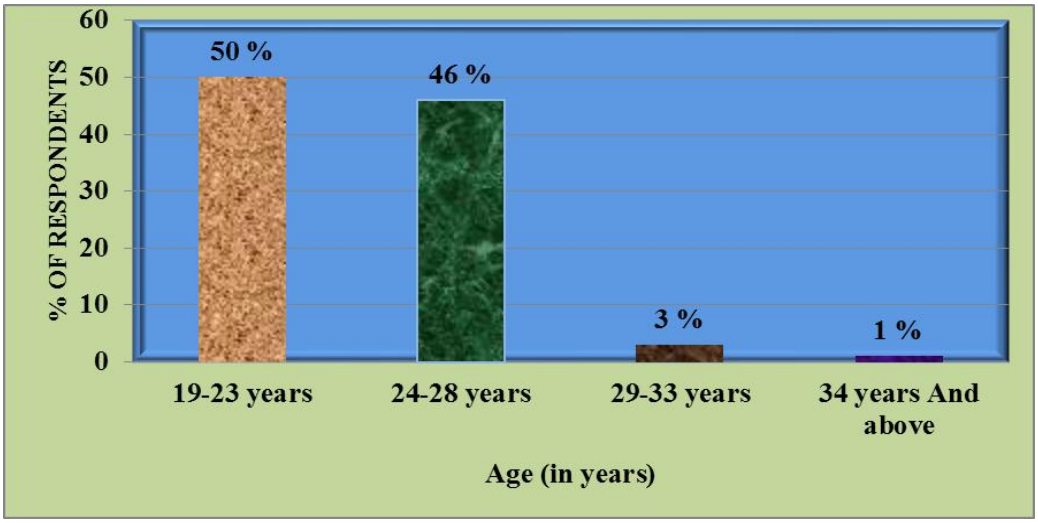

Figure 1: Classification of Respondents by Age.

Table 2*:* Classification of Respondents By Age At Marriage N=100.

Characteristics	Category	Respondents	
		Number	Percent
Age At marriage	19-23 years	68	68.0%
	24-28 years	30	30.0%
	29-33 years	2	2.0%
	34 years And above	0	0.0%
Total		**100**	**100.0%**

The data from the above table No 2 and figure 2: shows that majority of 68% of the respondent's married at the age between 19-23 years,30% of the respondent's married at age of 24-28 years, 2% of the respondent's married at age of 29-33 years, None of the respondent's married at age of 34 years and above.

Figure 2: Classification of Respondents by Age at marriage.

Table 3: Classification of Respondents According to Religion N=100.

Characteristics	Category	Respondents	
		Number	Percent
Religion	Hindu	65	65.0%
	Muslim	29	29.0%
	Christian	4	4.0%
	Others	2	2.0%
Total		**100**	**100.0**%

The data from the above table No 3 and figure 3: shows that majority of 65% of the samples are Hindus, 29% of the samples are Muslims, 4% of the samples are Christians, and 2% of the samples are other religion.

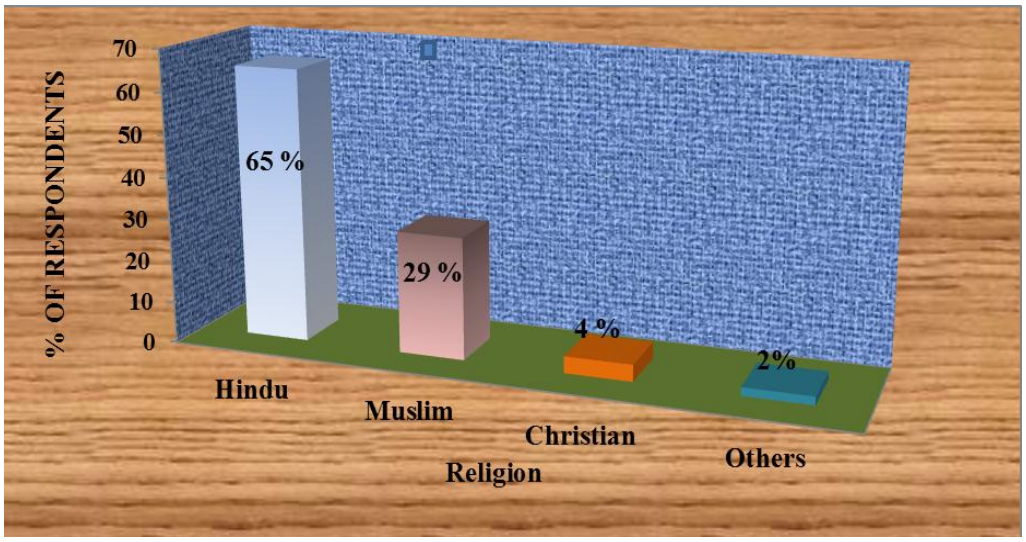

Figure 3: Classification of Respondents according to religion.

Table 4*:* Classification of Respondents According To Educational Status of The Mother N=100.

Characteristics	Category	Respondents	
		Number	Percent
Educational Status of the Mother	No formal education	4	4.0%
	Primary education	18	18.0%
	Secondary education	25	25.0%
	P.U.C	37	37.0%
	Graduation	16	16.0%
	Post graduation	0	0.0%
Total		**100**	**100.0**%

The Data from the above Table No 4 and Figure 4: shows that majority educational status of the mother is 37.0% of the respondents are P.U.C primary and remaining 25.0 % are secondary education .18.0% respondents are belongs to primary eduation,16% of the respondents are Graduates .4.0% of respondents are not undergone any education. None of them are postgraduate.

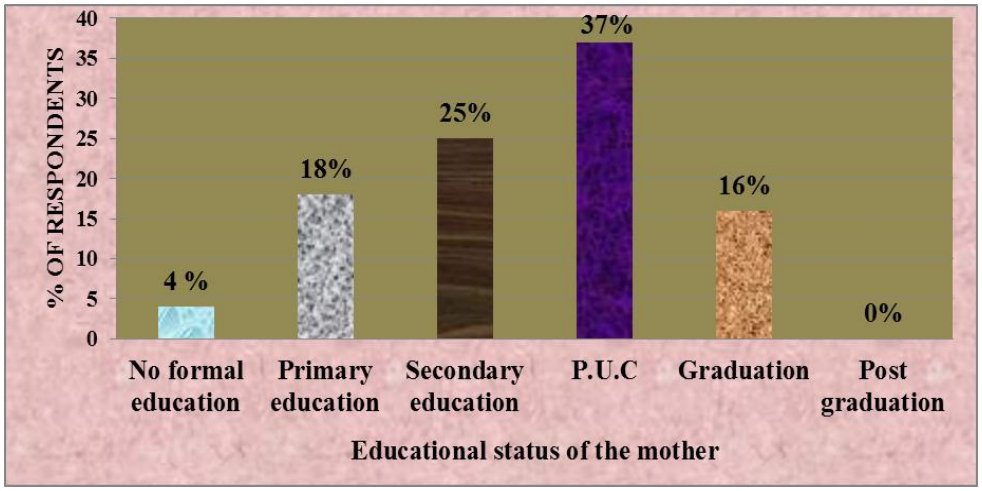

Figure 4: Classification of samples according to educational status of the mother.

Table 5: Classification of Respondents According to Type of Food N=100.

Characteristics	Category	Respondents	
		Number	Percent
Type of Food	Vegetarian	18	18.0%
	Mixed	82	82.0%
Total		**100**	**100.0%**

The Data from the above Table No 5 and Figure 5: shows that majority of Respondents 82.0% are taking mixed diet and 18.0% samples are vegetarians.

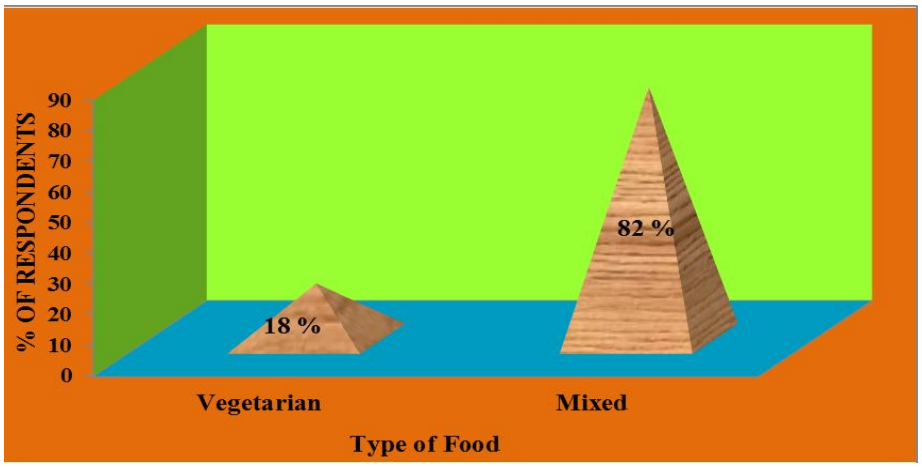

Figure 5: Classification of samples according to type of food.

Table 6: Classification of Knowledge Level on Identification of Warning Signals of Gestational Diabetes Among Primigravidae N=100.

Knowledge Level	Category	Respondents	
		Number	Percent
Inadequate	Below 50%	64	64.0 %
Moderate	50-74%	36	36.0%
Adequate	Above 75%	0	0.0%
Total		**100**	**100.0%**

The Data from the above Table No 6 and Figure 6: Reveals that 64 .0% of the Respondents had inadequate knowledge, 36.0% of the Respondents had moderate knowledge, and none of the Respondents has adequate level of knowledge regarding identification of warning signals of gestational diabetes.

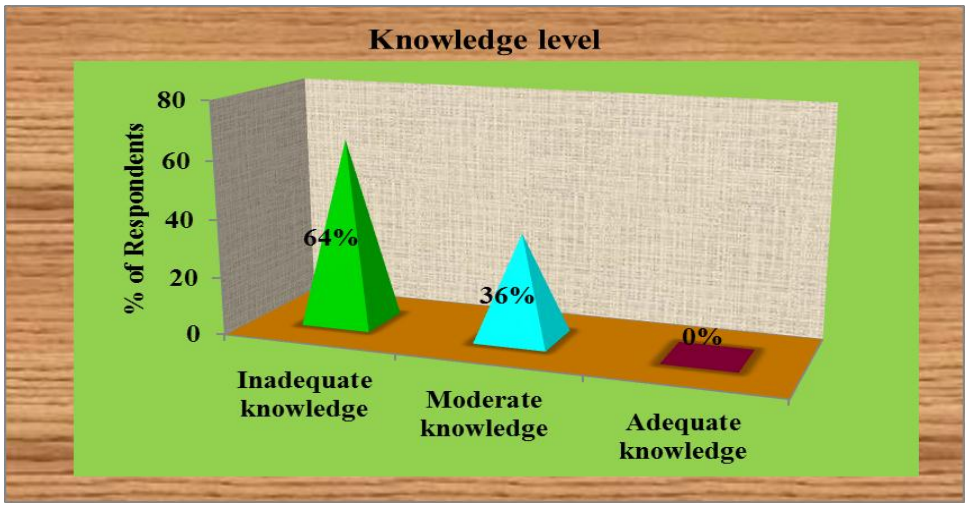

Figure 6: classification of respondents according to over all knowledge.

Table 7: Aspect Wise Mean Knowledge Score of Respondents on Warning Signals Of Gestational Diabetes N=100.

Sl. No.	Knowledge Aspects	No. of items	Mean score	S.D	Mean%
1	General information about gestational diabetes	8	3.5500	1.35866	44.38
2	Warning signals of gestational diabetes	19	8.4600	2.20385	44.53
3	complication and Prevention of gestational diabetes	7	3.2300	1.12685	46.14
	Overall knowledge	34	15.2400	3.13056	44.82

Association Between Selected Demographi Variables And Knowledge Of Warning Signals Of Gestational Diabetes N=100.

Demographic variables	Category	Knowledge level				Chi square	P Value
		Inadequate		Moderate			
		N	%	N	%		
Age (in years)	19-23 years	34	68.0	16	32.0	6.059^{NS} DF=3	p > 0.05
	24-28 years	22	47.8	24	52.2		
	29-33 years	1	33.3	2	66.7		
	34 years and above	0	0.0	1	100.0		
Age at marriage	19-23 years	43	63.2	25	36.8	3.045^{NS} DF=2	p > 0.05
	24-28 years	13	43.3	17	56.7		
	29-33 years	1	50.0	1	50.0		
	34 years and above	0	0.0	0	0.0		
Religion	Hindu	39	60.0	26	40.0	7.089^{NS} DF=3	p > 0.05
	Muslim	16	55.2	13	44.8		
	Christian	0	0.0	4	100.0		
	Others	2	100.0	0	0.0		
Educational status of the mother	No formal education	3	75.0	1	25.0	35.655* DF=4	p<0.05
	Primary education	16	88.9	2	11.1		
	Secondary education	20	80.0	5	20.0		
	P.U.C	18	48.6	19	51.4		
	Graduation	0	0.0	16	100.0		
	Post graduation	0	0.0	0	0.0		
Types of family	Nuclear	52	58.4	37	41.6	1.599^{NS} DF=2	p > 0.05
	Joint	5	50.0	5	50.0		
	Extended	0	0.0	1	100.0		
Occupation	Home maker	45	65.2	24	34.8	24.92* DF=4	p<0.05
	Coolie/Daily wages	7	100.0	0	0.0		

	Govt. Employee	1	25.0	3	75.0		
	Pvt. Employee	0	0.0	12	100.0		
	Self employment	4	50.0	4	50.0		
Type of Food	Vegetarian	10	55.6	8	44.4	0.019^{NS} DF=1	p > 0.05
	Mixed	47	57.3	35	42.7		
Place of residence	Urban	24	42.9	32	57.1	10.386* DF=2	p<0.05
	Rural	27	75.0	9	25.0		
	Semi urban	6	75.0	2	25.0		
Previous Source of information	Mass media	9	31.0	20	69.0	19.799* DF=3	p<0.05
	Health personnel	5	55.6	4	44.4		
	Family members, Relatives, Friends, neighbors	21	55.3	17	44.7		
	No previous information	22	91.7	2	8.3		
Family Income per month in Rs	5,000 -10,000	27	79.4	7	20.6	18.244* DF=3	p<0.05
	10,001-15,000	27	55.1	22	44.9		
	15,001-20,000	3	21.4	11	78.6		
	20,001 and above	0	0.0	3	100.0		

*is significant at 5% level
^{NS} is not significant.

The above table shows that the demographic variables like Educational status of the mother (X^2 = 35.655*), occupation (X^2 = 24.92), previous source of information (X^2=19.799) and family income per month (X^2 = 18.244) is greater than the tabled value at 0.05 level of significance. Hence it is inferred that there is a significant association between knowledge score with Educational status of the mother (X^2 = 35.655*), occupation (X^2 = 24.92), previous source of information (X^2=19.799) and family income per month(X^2 = 18.244)

6. DISCUSSION

Present research study has been discussed under following headings

Part I: Socio-demographic characteristics of respondents.

Part II: Assessment of existing knowledge of identification of warning signals of gestational diabetes among primigravidae.

Part- III: To find out the Association between knowledge scores with selected socio-demographic variables.

Part- IV: Development of pamphlet regarding warning signals of gestational diabetes.

Assessment of existing knowledge of identification of warning signals of gestational diabetes among primigravidae

The present study confirms that the overall knowledge score was 44.82 %, which is inadequate. This shows that there is lack of information on identification of warning signals of gestational diabetes among primigravidae. Although some primigravidae had moderate knowledge (36%), and majority of them had inadequate knowledge (64%) regarding identification of warning signals of gestational diabetes. Hence it is necessary to provide information in order to enhance knowledge on warning signals of gestational diabetes.

Findings are similar with the study conducted by **Dr.Mahalakshmi.B, Dr. Meriton Stanly. A, Dr. Vanishree conducted on** Awareness about Gestational Diabetes Mellitus among Antenatal Women Attending tertiary Care Hospital.[60]

Findings are similar with the study conducted by **Vanishree Shriraam, Anitha Rani M, Sathiyasekaran BWC, Shriraam Mahadevan.** Awareness of gestational diabetes mellitus among antenatal women in a primary health center in South India. Results shows 56.7% had poor knowledge and major sorce of information by television/radio, neighbors/friends, and family members.[20]

CONCLUSION

Implications of the Study

Nursing Practice

- It helps the health care professionals to gain an insight into the problem faced by gestational diabetes mother
- Nursing professionals can motivate the significant others and family member regarding prevention and control of gestational diabetes
- Education programme with various teaching strategies can be used to improve the knowledge on Warning signals of gestational diabetes in ordered to prevent the fatal complication and helps promote the health of the pregnant mothers.

Nursing education

- As a nurse educator, there are abundant opportunities for nursing professionals to educate the students regarding warning signals of gestational diabetes.
- The study can be extended for educating the family members or care givers.

- This study stress the need for in-service education for the nursing personnel in ordered to prevent such diseases during pregnancy
- Nurses at post graduate level need to develop skills in preparing health teaching material in various health aspects of gestational diabetes, newer technique have to be used for motivating the staff participation

Nursing Administration

- The nursing administrator can take part in developing protocols, standing order in teaching measures of warning signals of gestational diabetes.
- This will help the nursing administrator to prepare the adequate learning materials for giving health education in ward and OPD.
- This will help the nursing administrator to emphasis and encourage the nurses to use different strategies to educate the pregnant mothers regarding warning signals of gestational diabetes.
- The nursing administrator should arrange continuing education programme for nursing personnel regarding warning signals of gestational diabetes**.**
- The nurse administrator should explore their potential and courage innovative ideas in preparation of appropriate teaching materials. She/he should organize to see that sufficient manpower, money and material for disseminating health information.

Nursing Research

Various studies conducted by researcher showed that the gestational diabetes is increasing through the world .there is need for extensive research towards the early identification of gestational diabetes.Research should focus on improvement of knowledge regarding identification of warning signals ,prevention and management of gestational diabetes. The research should be done on new method of teaching to enable primigravidae to improve the knowledge on warning signals gestational diabetes.

The study will motivate the beginning researcher to conduct same study with different variables on a large scale. Nurse should come forward to take up unsolved questions in the field of nursing .the public and private agencies should also encourage the nurse researcher through materials and funds.

Thus, the present investigation offers infinity scope and potential implications for nursing practice, training and research aspects of gestational diabetes.

LIMITATIONS OF THE STUDY

- The samples were drawn from specific geographic area and small number of respondents limits the generalization of the study.
- The Study is limited only to those who were willing to participate in the study.
- The samples was limited to 100 only.
- The study did not use control group.
- There were time limitations to complete the study.
- The Study did not assess the attitude and practice of primigravidae.
- The study limited to assessment of knowledge and develop pamphlet.
- The study did not attempt at evaluating its effectiveness.

Recommendations of the Study

On the basis of the findings of the study, the following recommendations have been made:

- A similar study can be conducted on larger samples, thereby findings can be generalized.
- An experimental study can be undertaken by having a control group.
- A comparative study can be conducted in different settings or between rich and poor socioeconomic status respondents or between educational status of the samples.
- A study can be conducted by including knowledge and attitude and also knowledge and practice of primigravidae on warning signals gestational diabetes.
- Manuals, information guide sheets and self – instruction module may be developed in areas of warning signals gestational diabetes.
- A study can be carried out to evaluate the efficiency various teaching strategies like structured teaching progamme, video assisted teaching and computer assisted instruction on gestational diabetes.
- Follow up study can be conducted to evaluate the effectiveness of information guide sheet.

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