



A Study To Assess The Effectiveness Of Structured Teaching Programme On Knowledge Regarding Gestational Diabetes Mellitus Among Bsc. Nursing Fourth Year Students Of Bibi Halima College Of Nursing, Kathidarwaza, Rainawari, Srinagar Kashmir

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ABSTRACT

Background: Pregnancy is a period in which lot of metabolic and hormonal changes takes place. Individual women will vary in their expectations and needs during the childbearing process. Pregnancy and child birth are special events in women's lives and indeed in the lives of their families. This can be a time of great hope and joyful anticipation. It can also be time of fear, suffering and even death. Although pregnancy is not a disease, but a normal physiological process, it is associated with certain risks to health and survival both for the women and for the fetus she bears. These risks represent in every society and in every setting. In developed countries they have been largely over come because every pregnant woman has access to special care during pregnancy and child birth. Such is not the case in many developing countries, where each pregnancy represents a journey into the unknown from which, too many women never return. Gestational diabetes mellitus (GDM) is a condition in which a hormone made by the placenta prevents the body from using insulin effectively. Glucose builds up in the blood instead of being absorbed by the cells. The aim of this study was to assess the effectiveness of structured teaching programme on knowledge regarding gestational diabetes mellitus among Bsc. Nursing fourth year students of Bibi Halima College of nursing, Kathidarwaza, Rainawari, Srinagar Kashmir. A quantitative, one group pre-test post-test research design was used to assess the effectiveness of structured teaching programme on knowledge of 60 BSc. Nursing students regarding gestational diabetes mellitus. After seeking ethical clearance from Institutional Ethical Committee and proper permission from concerned authorities, the study subjects were selected by using purposive sampling technique. A structured knowledge questionnaire was used to assess the pre-interventional and post-interventional knowledge of study subjects. After establishing validity and reliability ($r=0.80$) of the tool, pre-intervention was carried out on 1st day and on the same day structured teaching programme was given. Post intervention was carried out on 7th day. The data obtained was analysed by using descriptive and inferential statistics. **Results:** Maximum of students 42 are of 20-22 years of age, comprising 70%, followed by 18 students of 23-25 years of age, comprising 30% from the given sample. Among the sample majority of students 45(75%) are females followed by males as 15(25%). Among the sample majority of students 38(63.3%) have <30000 Rs as their monthly family income, followed by 16(26.7%) students family income lies between 30001-40000.6(10%) family income lies between Rs 40001-50000. Among the sample majority of students 33(55%) are from urban area, 27(45%) students are from rural area. 29(48.3%) fathers were having 10th standard as their educational qualification, followed by above 12th as 14(23.3%), followed by 12th pass as 12(20%), and 5(8.3%) students were Illiterate as is clear from the above table. 41(68.3%) mothers were illiterate, followed by 10th pass as 13(21.7%), followed by 12th pass as 5(8.3%), and 1(1.7%)

mother were having above 12th pass as their educational qualification. The study revealed that there is a difference in the mean pre-test (15.86 ± 4.24) and post-test (37.366 ± 1.81) knowledge scores regarding gestational diabetes mellitus among B.Sc nursing final year students. The said table also indicates the effectiveness of structured teaching programme ($p=0.000$) on knowledge regarding gestational diabetes mellitus. The study revealed no significant association between pre-test knowledge score with all selected demographic variables (age in years, gender, family income, residence, educational status of father, educational status of mother).

Conclusion: The study concluded that the knowledge scores regarding gestational diabetes mellitus among BSc. students improved after the administration of structured teaching programme and structured teaching programme was found to be effective.

Key words: Structured teaching programme, knowledge, students.

INTRODUCTION

Gestational diabetes mellitus (GDM) is a condition in which a hormone made by the placenta prevents the body from using insulin effectively. Glucose builds up in the blood instead of being absorbed by the cells. Pregnancy is a period in which lot of metabolic and hormonal changes takes place. Individual women will vary in their expectations and needs during the childbearing process. Pregnancy and child birth are special events in women's lives and indeed in the lives of their families. This can be a time of great hope and joyful anticipation. It can also be time of fear, suffering and even death. Although pregnancy is not a disease, but a normal physiological process, it is associated with certain risks to health and survival both for the women and for the fetus she bears. These risks represent in every society and in every setting. In developed countries they have been largely overcome because every pregnant woman has access to special care during pregnancy and child birth. Such is not the case in many developing countries, where each pregnancy represents a journey into the unknown from which, too many women never return. **Lowdermilk Leonard, (1994)**

Need for the study

Gestational diabetes is common in pregnancy and is associated with adverse pregnancy and foetal outcomes. GD is a global health concern and in India, the condition affects as many as 5 million women annually. Recent studies suggest that GD has increased in the past decade and that rates may be higher in specific ethnic or racial subgroups. There is a wide variability in reported prevalence estimates for GD in India, varying from less than 4% to nearly 18%. Despite a government mandate to screen all pregnant women for GD, to date there has been incomplete implementation and uptake of screening programs. The overall prevalence is approximately 7% higher in urban vs rural areas, among older age groups and among higher socioeconomic status groups. The prevalence of diabetes is increasing globally and India is no exception. The "fetal origin of disease" hypothesis proposes that gestational programming may cortically influence adult health & disease. In March 2007, the Tamil Nadu Government issued an order making screening for gestational diabetes during pregnancy mandatory. Awareness has been created among the public, particularly women groups, medical, para medical, non-medical and public health professionals on the implications of abnormal glucose tolerance during pregnancy and about the preventive and control measures to be followed.

Objectives

- A. To assess the pretest knowledge of Bsc. Nursing fourth year students regarding gestational diabetes mellitus.
- B. To assess the post-test knowledge of Bsc. Nursing fourth year students regarding gestational diabetes mellitus.
- C. To compare the pretest and post-test knowledge of Bsc. Nursing fourth year students regarding management of gestational diabetes mellitus.
- D. To find the association between pretest knowledge score of Bsc. Nursing fourth year students regarding gestational diabetes mellitus with selected demographic variables i.e (age (in years), gender, family income, residence, educational status of father, educational status of mother).

METHODOLOGY

The research approach used for the present study was quantitative. The research design used for the present study is quantitative descriptive design. In this study, structured teaching programme on gestational diabetes is the independent variable. In this study, the dependent variable refers to the knowledge regarding gestational diabetes among Bsc. Nursing fourth year students. Attributed or demographic variables are the characteristics of the subjects that are collected to describe the samples such as age, gender, family income father's education, mother's education, area of residence. The study will be conducted in Bibi Halima College of Nursing and Medical

Technology, Rainawari Srinagar..The population for the present study is Bsc. Nursing fourth year students of Bibi Halima College of Nursing and Medical Technology, Rainawari Srinagar. The target populations for the present study is Bsc. Nursing fourth year students of Bibi Halima College of Nursing and Medical Technology, Kathidarwaza, Rainawari Srinagar The accessible population for the present study includes Bsc. Nursing fourth year students who meets the inclusive criteria. Sample for this study comprises of 60 Bsc. Nursing fourth year students of Bibi-Halima college of nursing and medical technology, Rainawari Srinagar .The tool used for the study comprised of: structured Knowledge Questionnaire, Structured teaching programme on gestational diabetes

SCORING PROCEDURE: -

The questionnaire contains 40 multiple choice question to evaluate the knowledge regarding gestational diabetes. For each right answer the score "ONE" is given and for wrong answer the score "ZERO" is given.

Scoring for level of knowledge

Level of knowledge Percentage of score Actual score

Level of Knowledge	Percentage of score	Actual score
Inadequate Knowledge	0-50 %	0-13
Moderate Knowledge	51-75%	14-27
Adequate Knowledge	76-100%	28-40

Results And Interpretation

Table1: Frequency and Percentage distribution of study subjects according to their demographic variables.

N=60

Characteristics	Frequency and Percentage distribution of Socio-demographic Variables		
Age of student (in years)	Content	Frequency	Percentage
	20-22	42	70
	23-25	18	30
	26-28	0	0
	>28	0	0
Gender			
	Male	15	25
	Female	45	75
Family income			

	<30,000	38	63.3
	30001-40000	16	26.7
	40001-50000	6	10
	>50000	0	0
<i>Residence</i>			
	Rural	27	45
	Urban	33	55
<i>Educational Status of father</i>			
	Illiterate	5	8.3
	10 th pass	29	48.3
	12 th pass	12	20
	Above 12th	14	23.3
<i>Educational Status of mother</i>			
	Illiterate	41	68.3
	10 th pass	13	21.7
	12 th pass	5	8.3
	Above 12th	1	1.7

Table 2: Frequency and percentage distribution of pre-test level of knowledge regarding gestational diabetes mellitus among B.SC nursing final year students

N=60

Pre- test level of knowledge	Frequency	Percentage
Inadequate knowledge (0-13)	21	35
Moderately adequate knowledge (14-27)	39	65
Adequate knowledge (28-40)	0	0

Minimum Score: 0

Maximum Score: 40

Table 3: Descriptive statistics of pre-test level of knowledge scores regarding gestational diabetes mellitus among B.SC nursing final year students

(Mean ± SD)	Mode	Median	Minimum	Maximum	Range
(15.86±4.24)	13	15	7	28	21

Table 4: Frequency and percentage distribution of post-test level of knowledge regarding gestational diabetes mellitus among B.SC nursing final year students

N=60

Post- test level of knowledge	Frequency	Percentage
Inadequate knowledge (0-13)	0	0
Moderately adequate knowledge (14-27)	0	0
Adequate knowledge (28-40)	60	100

Minimum Score: 0**Maximum Score: 40**

The frequency and percentage distribution of post-test level of knowledge scores regarding gestational diabetes mellitus among B.SC nursing final year students is displayed above. All of the students in the give sample i.e 60(100%) have adequate knowledge while as none of students have inadequate and adequate knowledge as is evident from the above table. This suggests a significant improvement compared to the pre-test results.

Table 5: Comparison between pre-test and post-test knowledge of students regarding gestational diabetes mellitus among B.SC nursing final year students

Knowledge categories	Pre-test knowledge score		Post-test knowledge score	
	Frequency	percentage	Frequency	Percentage
Inadequate Knowledge (0-13)	21	35	0	0
Moderate Knowledge (14-27)	39	65	0	0
Adequate Knowledge (28-40)	0	0	60	100

Table 6: Comparison of Mean Pre-test and Post-test Knowledge Scores and SD of Study Subjects.

Knowledge	(Mean±SD)	Mode	Median	df	t Value	p value
Pretest Knowledge	(15.86±4.24)	13	15	59	34.958	0.000 ^S
Post-test Knowledge	(37.366±1.81)	37	37			

Highly significant at 0.05 level of significance

Table 7: Association between knowledge of students with selected Demographic Variables.**N=60**

Association between knowledge scores of study subjects regarding gestational diabetes mellitus among B.SC nursing final year students with selected Demographic Variables.									
Variables	Opts	Inadequate knowledge	Moderately adequate	Adequate knowledge	χ^2 Test	χ^2 table Value	df	P value	Interpretation
Age	20-22	15	27	0	0.0	3.841	1	0.85	NS
	23-25	6	12	0	31			9	
	26-28	0	0	0					
	>28	0	0	0					
Gender	Male	3	12	0	1.9	3.841	1	0.16	NS
	Female	18	17	0	78			0	
Family income	<30,000	15	23	0	1.3	5.991	2	0.51	NS
	30001-40000	5	11	0	20			7	
	40001-50000	1	5	0					
	>50000	0	0	0					
Residence	Rural	10	17	0	0.0	3.841	1	0.76	NS
	Urban	11	22	0	90			5	
Educational status of father	Illiterate	0	5	0	5.2	7.815	3	0.15	NS
	10 th pass	13	16	0	91			2	
	12 th pass	5	7	0					
	Above 12th	3	11	0					
Educational status of mother	Illiterate	11	30	0	5.1	7.815	3	0.16	NS
	10 th pass	6	7	0	45			1	
	12 th pass	3	2	0					
	Above 12th	1	0	0					

The analysis reveals no significant association between pre-test knowledge score with all selected demographic variables (age(in years) gender, family income ,residence, educational status of father, educational status of mother) with p value >0.05 in all the four cases

Major Findings of The Study

Distribution of demographic variables

Maximum of students 42 are of 20-22 years of age, comprising 70%, followed by 18 students of 23-25 years of age, comprising 30% from the given sample Among the sample majority of students 45(75%) are females followed by males as 15(25%). Among the sample majority of students 38(63.3%) have <30000 Rs as their monthly family income, followed by 16(26.7%) students family income lies between 30001-40000.6(10%) family income lies between Rs 40001-50000 Among the sample majority of students 33(55%) are from urban area, 27(45%) students are from rural area 29(48.3%) fathers were having 10th standard as their educational qualification, followed by above 12th as 14(23.3%), followed by 12th pass as 12(20%), and 5(8.3%) students were Illiterate as is clear from the above table. 41(68.3%) mothers were illiterate, followed by 10th pass as 13(21.7%), followed by 12th pass as 5(8.3%), and 1(1.7%) mother were having above 12th pass as their educational standard.

Major Findings based on objectives

The frequency and percentage distribution of pre-test level of knowledge scores regarding gestational diabetes mellitus among B.SC nursing final year students is that. Majority of students among sample that is 35(35%) have moderately adequate knowledge. The frequency and percentage distribution of post-test level of knowledge scores regarding gestational diabetes mellitus among B.SC nursing final year students is that all of the students in the give sample i.e 60(100%) had adequate knowledge Results revealed that there is a difference in the mean pre-test (15.86 ± 4.24) and post-test (37.366 ± 1.81) knowledge scores regarding gestational diabetes mellitus among B.SC nursing final year students which indicates the effectiveness of structured teaching programme ($p=0.000$) on knowledge regarding gestational diabetes mellitus The analysis reveals no significant association between pre-test knowledge score with all selected demographic variables (age, gender, family income residence, educational status of father, educational status of mother) with p value >0.05 in all the four cases

CONCLUSION

The present study assess the knowledge regarding gestational diabetes among B.SC nursing final year students. The results revealed that there was a significant difference in pre test and post test scores of knowledge and no significant association between post test knowledge with selected demographic variables expect the education status. The present study shows that majority of them 60(100%) had adequate knowledge had adequate knowledge regarding gestational diabetes. . This shows that the structured teaching programme on gestational diabetes among among B.SC nursing final year students is effective.

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