"A COMPARATIVE STUDY ON MATERNAL COMPLIANCE OF CARDIFF COUNT TO 10 CHARTS VERSUS DFMC CHART ON ASSESSMEMT OF FETAL MOVEMENT AMONG ANTENATAL MOTHERS IN SELECTED HOSPITALS, KANPUR"

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ABSTRACT

Fetal movement counting is a way to check the health of a woman's unborn baby (fetus). It's often called kick counting. It's done by counting the number of kicks you feel from your baby in the uterus in a certain time period. The objective of the study were to assess the maternal compliance among experimental group 1 of antenatal mother   after Cardiff count 10 chart on assessment of fetal movement, assess the maternal compliance among experimental group 2 of antenatal mother after DFMC chart on assessment of fetal movement, determine the effectiveness maternal compliance of Cardiff count 10 chart versus DFMC chart on assessment of fetal movement among antenatal mother and find out the association on between posts tests score on maternal compliance experiment group I and II with selected hospital Kanpur. A experimental multi factorial design was used for this study, simple random sampling techniques was used and Sample size was 60. The result of the study showed that the overall mean score during Cardiff count ten chart (65.83) and overall mean score during DFMC chart (50.90).Highly significant difference was found between DFMC chart and Cardiff count ten chart fetal movement score. Highly significant between fetal movement score of antenatal mother in Cardiff count ten chart versus DFMC chart and their age, education, occupation , type of family, food habit, source of information, the obtained value was more the table value . So it was proven that there was association between variables with the overall Cardiff count ten chart versus DFMC chart assessment of fetal movement.

KEY WORDs:- Daily fetal movement count, Cardiff count ten chart, Effectiveness, Compliance, Antenatal mother, fetal movement.

INTRODUCTION

Pregnancy is considered as a very precious event in every women`s life. It is filled with happiness, joy and surprises. Daily fatal movement count (DFMC) is a method by which a woman quantifies the three counts each of one hour duration (morning, noon and evening) are recommended. The total multiplied by four gives daily (12 hour) fetal movement count (DFMC). If there is diminution of the number of kicks to less than 10 in 12 hours (or less than 3 in each hour), it indicates fetal compromise.Cardiff' counts 10' formula is a method by which the patient fetal movement starting at 9 am. The counting comes to an end as soon as 10 movements are perceived. She is instructed to report the physician if less than 10 movement

occur during 12 hour on 2 successive days or no movement is perceived even after 12 hour in a single day.

NEED FOR STUDY

Daily fetal movement counting, such as the Cardiff "count-to-ten" method using kick charts, is a way of screening for fetal well-being, by which a woman counts daily fetal movements to assess the condition of her baby. The aim of this is to try to reduce perinatal mortality by alerting health workers when the baby might be compromised. Daily fetal movement counting may be used routinely in all pregnant women or only in women who are considered to be at increased risk of adverse perinatal outcomes. Early detection of fetal compromise could lead to timely clinical interventions to reduce poor perinatal outcomes but might lead to maternal anxiety or unnecessary clinical interventions. It is also possible that the period between decreased fetal movements and fetal death might be too short to allow effective action to be taken.

OBJECTIVES

1. To assess the maternal compliance among experimental group 1 of antenatal mother   after Cardiff count 10 chart on assessment of fetal movement.
2. To assess the maternal compliance among experimental group 2 of antenatal mother after DFMC chart on assessment of fetal movement.
3. To determine the effectiveness maternal compliance of Cardiff count 10 chart versus DFMC chart on assessment of fetal movement among antenatal mother.
4. To find out the association on between posts tests score on maternal compliance experiment group I and II with selected hospital Kanpur.

Hypothesis

H1:-There is a significant difference in maternal compliance to DFMC chart and Cardiff count ten chart.

H2:-There is a significant association between selected demographic variable and maternal compliance.

METHODS

A quantitative comparative evaluatory research approach chosen for this study and true experimental multi factorial research design adopted by the researcher to assess the comparative study on maternal compliance of cardiff count to 10 charts versus DFMC chart on assessment of fetal movement among antenatal mothers. The study was conducted at GSVM, Dufferine AHM Female hospital at Kanpur**.** Population of the study was antenatal mothers beyond 32 week admitted in selected hospitals at Kanpur. The sample of the study was antenatal mothers in selected hospitals Kanpur. A total of 60 antenatal mothers were selected by simple random techniques.

Description of tool

The tool consist of three section

Section A:- demographic and baseline data of mother

Section B:- Cardiff count ten chart.

Section C:- DFMC chart .

Section A:- Demographic variable which include age in year, education, occupation, religion, type of family, food habit have the mothers thought a method to count and keep track of your babies movement in this pregnancy or previous knowledge about fetal monitoring.

Section B:- It include Cardiff count ten chart. In count ten chart the mother the record the fetal movement in 8-12 hour's period. It should be at least movement.

Section C:- It include DFMC chart. In this the antenatal mothers used to record the number of fetal movement perceived by mother one hour after food (breakfast, lunch, dinner)

Scoring of the items

Table: 1 Grading of fetal movement score

DFMC chart	Scoring
Poor	0-6
Good	7-10
Very good	10-20

Cardiff count ten chart	Scoring
Poor	0-6
Good	7-10
Very good	10-20

Data collection procedure

Data collection was done in GSVM, and Dufferine AHM Female hospital at Kanpur. Formal approved was obtained from medical superintendent of GSVM, and Dufferine AHM female hospital at Kanpur and data collection was done for a month. The data were collected from the antenatal mother by using DFMC chart and Cardiff count ten chart method. Based on selected criteria, the samples were selected by random sampling technique. The first day researcher went to the selected setting. Here researcher got 10 samples they were in the ward. Researcher introduces about herself and explained the information regarding the nature of the study. Researcher collects of one by one in both hospitals. Researcher was given a DFMC chart antenatal mother who is in antenatal ward Dufferine AHM Female hospital at Kanpur. The mother who got DFMC chart was the instructed to record the number of fetal movement perceived by mother one hour after food (breakfast, lunch, dinner). Researcher was given Cardiff count ten chart antenatal mother who is in antenatal ward GSVM Kanpur and who Cardiff count ten chart were instructed to record the fetal movement for a period of 8-12 hours.

Daily the researcher goes to the selected setting (GSVM, Dufferine AHM female hospital at Kanpur) for the sample collection. Both the chart were collected during her next visit and asked the mothers to fill the DFMC chart and Cardiff count ten chart for assessing the fetal wellbeing about fetal movement chart

Ethical consideration

A ethical clearance certificate was obtained from the research ethical committee of Rama College of Nursing, Mandhana, Kanpur after presenting the research proposal with condition not to violate the right of human being/ animals, formal permission was also obtained from GSVM, Ursula hospital at Kanpur before conducting the study. Informal consent was taken from the study participants after explaining the purpose of the study to them.

RESULTS

Antenatal mother according DFMC Chart and Cardiff count ten chart shows that in DFMC Chart highest percentage of mothers obtained (46.67%) good fetal movement count, (33.33) antenatal mother got poor fetal movement and whereas lowest frequency was obtained by (20) who are very good fetal movement count . Cardiff count ten chart shows that highest frequency of very good fetal movement (60%) obtained by antenatal mother, and (26.67%) antenatal mother who are good fetal movement. Whereas lowest fetal movement (13.33) antenatal mother good poor fetal movement.

Table No.2 **Frequency and percentage distribution of mothers in Cardiff count ten charts and DFMC chart according to area wise distribution experimental group I and II**
N=60

Category	DFMC CHART				CARDIFF COUNT TEN CHART			
	No of antenatal Mother	%	Mean	SD	No of antenatal	%	Mean	SD
Poor	10	33.33	29.00	1.70	04	13.33	29.00	1.83
Good	14	46.67	53.36	2.37	08	26.67	52.38	1.41
V. good	6	20	77.67	1.03	18	60	80.00	2.47
Total	**30**	**100**	**50.90**	**17.87**	**30**	**100**	**65.83**	**19.13**

Table shows that unpaired't' test value is 11.14 that there is significant difference between Cardiff count ten chart and DFMC chart among Group I and Group II assessing fetal movement. Hence the intervention i.e. effectiveness of Cardiff count ten chart versus DFMC chart assessment of fetal wellbeing among antenatal mothers which was adopted by the researcher was found to be effective. Hence H_1 is accepted.

Frequency and percentage distribution of mothers in Cardiff count ten charts and DFMC chart according to days wise distribution experimental group I and II   N=60

Table No.3: Days wise Comparison between DFMC chart and Cardiff count ten chart
Mean and SD of Group I and Group II

	MEAN	SD
Cardiff count ten chart	329.17	8.61
DFMC chart	250.50	7.82

*Table No.4***Association of maternal compliance with their selected demographic variable in mother using Cardiff count ten charts**.
N=30

Demographic Variable	Category	Poor	Good	Very good	Chi- square Test	Significant /non significant
AGE	19-22	2	4	4	X^2=14.1	S[*]
	23-26	0	3	14	Df=6	
	27-30	2	1	0	T=12.59	
	31-34	0	0	0	P=0.05	
RELIGION	Hindu	2	3	12	X^2= 10.95	NS
	Muslim	1	2	3	Df= 6	
	Christian	0	3	2	T=12.59	
	Other	1	0	1	P=0.05	
EDUCATION	Primary	2	0	0		
	Higher secondary	1	3	10	X^2= 26.14	S**
	Graduate	1	4	8	Df=8	
	Post graduate	0	1	0	T=15.51	
	Illiterate	0	0	0	P=0.05	
OCCUPATION	House wife	2	3	18	X^2=20.58	
	Government	1	2	0	Df=8	S**
	Private	1	2	0	T=15.51	
	Entrepreneurs	0	0	0	P=0.05	
	Former	0	1	0		
					X=10.01	

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TYPE OF FAMILY	Nuclear	2	2	9	Df=4	S*
	Joint	2	4	9	T=9.49	
	Extended	0	2	0	P=0.05	
FOOD HABIT	Vegeterian	2	4	2	X^2=5.82	NS
	Non vegetarian	1	2	9	Df=4	
	Ovo vegetarian	1	2	7	T=9.49	
					P=0.05	
SOURCE OF INFORM-ATION	Media	1	3	1	X^2=17.12	S**
	Family and Friend	2	2	9	Df=`6	
	Health education Program	0	2	8	T=12.59	
	Other	1	1	0	P=0.05	

There was no association DFMC chart with of experimental group II with demographic variable religion, education, occupation, type of family, food habit, source of information except age. H_2 is retained.

Table No.5 **Association of maternal compliance with their selected demographic variable in mother using DFMC charts**.

N=30

Demographic Variable	Category	Poor	Good	Very good	Chi- square Test	Significant /non significant
AGE	19-22	4	9	4	X^2=17.91	S*
	23-26	5	4	1	Df=6	
	27-30	1	1	1	T=12.59	
	31-34	0	0	0	P=0.05	
RELIGION	Hindu	7	9	2	X^2= 9.62	
	Muslim	2	2	4	Df= 6	NS
	Christian	1	3	0	T=12.59	
	Other	0	0	0	P=0.05	

EDUCATION	Primary	5	3	2	$X^2= 4.53$	
	Higher secondary	4	8	2	Df=8	NS
					T=15.51	
	Graduate	1	3	2	P=0.05	
	Post graduate	0	0	0		
	Illiterate	0	0	0		
OCCUPATION	House wife	6	11	5	X^2=6.48	
	Government	0	1	0	Df=8	NS
	Private	3	1	1	T=15.51	
	Entrepreneurs	1	1	0	P=0.05	
	Former	0	0	0		
TYPE OF FAMILY	Nuclear	5	10	6	X^2=4.4	
	Joint	5	4	0	Df=4	NS
	Extended	0	0	0	T=9.49	
					P=0.05	
FOOD HABIT	Vegetarian	3	1	1	X^2=6.1 Df=4	NS
	Non vegetarian	4	8	3	T=9.49	
	Ovo vegetarian	3	5	2	P=0.05	
SOURCE OF INFORM-ATION	Media	3	2	2	X=8.68	NS
	Family and Friend	2	10	2	Df=`6	
					T=12.59	
	Health education Program	2	1	1	P=0.05	
	Other	3	1	1		

NS=Not Significant, S*=Significant

There was no association DFMC chart with of experimental group II with demographic variable religion, education, occupation, type of family, food habit, source of information except age. H_2 is retained.

CONCLUSION

From the finding of the present study it is concluded that Cardiff count ten chart versus DFMC chart was effective to improve the antenatal mothers assessment of fetal movement count. After implementation of the DFMC chart antenatal mothers had total mean score 50.90. Whereas After implementation of the Cardiff count ten chart antenatal mothers had mean 65.83 total score which reveals good fetal movement count.

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