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RESEARCH ARTICLE

EFFECTIVENESS OF VIDEO ASSISTED TEACHING ON SELF ASSESSMENT OF DAILY FETAL MOVEMENT COUNT (DFMC), AMONG PRIMIGRAVIDAE, IN SELECTED MATERNITY HOSPITALS AT BENGALURU.

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Abstract

Maternal perception of fetal movement is a valuable tool for early detection of fetal compromise. Fetal movement is a reliable sign of fetal well being. These early signs of fetal movement may at first be confused as simply gas, but actually growing baby is rocking and rolling inside the belly. Fetal movement counting often called 'kick counting' represents a maneuver whereby a mother can help monitor the movements of her unborn baby by counting the number of kicks in a given time period. This is an indicator of fetal health and the novice mothers can identify and prevent the complications before the child birth. In order to educate and encourage the primigravidae to improve their knowledge regarding fetal movement counting, the study was conducted to evaluate the Effectiveness of video assisted Teaching on knowledge regarding self assessment of daily fetal movement (DFMC), among primigravidae in selected maternity hospitals at, Bengaluru. **Methods:** Pre-experimental design, with non probability purposive sampling method was used. Information was collected from 50 primigravidae attending antenatal OPD regarding self assessment of daily fetal movement count (DFMC) using the structured knowledge questionnaire. VAT was implemented and post-test was conducted after 7 days to find the effectiveness.

Results: Regarding effectiveness of VAT, the overall mean knowledge score in the pre-test was 31.92 % and 83.58 % in the post test with enhancement of 51.66 % and it was significant at 5% level. Analysis of socio-demographic variables showed significant association between age in years, occupational status, with knowledge score at 5% level ($P > 0.05$).

Interpretation And Conclusion: Overall findings showed that pre-test knowledge scores were found to be 31.92 % and after VAT, knowledge of primigravidae was enhanced by 51.66 % regarding DFMC. Hence the result has proved that VAT was effective in improving the knowledge of primigravidae attending antenatal OPD regarding DFMC.

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Introduction:-

"Giving birth and being born brings us into the essence of creation, where the human spirit is courageous and bold and the body, a miracle of wisdom." -Harriette Hartigan

Pregnancy is considered as a very precious event in every woman's life. It is filled with happiness, joy and surprises. Every parents hopes for a healthy baby, but sometimes become sorrowful when danger sets in either to the mother or to the fetus. Pregnancy links mother and fetus together and is the basis for regenerating the generation. Most pregnancies end with work of a live baby to a healthy mother. In high risk pregnancies the mother may sometimes escape death but fetus and neonates often become the victim¹.

According to the recent statistics it estimates above 75% of the fetal death occur in the antepartum it is obvious that that limiting fetal surveillance to intrapartum period will not achieve optimal perinatal outcome. Yet for every 1000 birth the perinatal mortality is 37.7, varies from 24.8 in Kerala to 75.5/1000 in Orissa. It is higher in rural(54.4) and(20.3)in urban, which is lower. It is estimated that 7.3 million perinatal deaths occur annually in the world and most of these in the developing countries. In India alone about 8,90,000 perinatal deaths occur annually and that of Karnataka the stillbirth rate is 20/1000 deliveries, which is highest among all the other states².

Decreased fetal movement count are present in 5% to 15% of pregnancies and are associated with intrauterine fetal death and intra uterine growth restriction(Obstetrical and Gynecological survey-England,2008)³.

The current scientific research conference about decreased fetal movement count in Norway revealed that fetal deaths are not sudden; 50% of unexplained stillbirths are growth restricted and, suggesting that there is time window for intervention and prevention of deaths. In recently completed "MOMS STUDY"(Maternal Observations and Memories Of Stillbirths)data from 5000 women who had stillbirth is currently being analysed. The result reveals the following , 50% of the women reported gradual decreased fetal movement count, several days prior to the fetal death, 56% of women reported decreased fetal movement count as the first reason to believe that the baby was not doing well. Only about 50% of women were told to do fetal kick counts by their doctors⁴.

FEMINA(fetal movement intervention assessment) is an ongoing International Research Collaboration to improve the pregnancy outcome. The findings reveal that women still do not get enough information on importance of fetal activity to act in such a way to protect their baby. Public relation in Norway as well as in the U.S. are on the way educating the public regarding fetal movement count⁴.

In June 2014WHO, UNICEF and partners issued the first ever global plan to end stillbirths by 2035 by providing high quality affordable services to all women⁵.

A prospective observational study was conducted in St. Martha's Hospital Bengaluru, Karnataka over a period of 13 months. It included 50 pregnant women after 32 weeks of gestation and singleton pregnancies with < 12 fetal movements in 24 hours. They underwent a cardiotocogram(CTG) and biophysical profile test(BPP) and results were analysed statistically. A non -reactive CTG on admission was encountered in 2/50(04%) vs 21/50(42%); (p<0.001) of women with reduced fetal movements at delivery. Majority 20/50(40%) of the caesarean sections were emergency due to non reassuring CTG. Neonatal birth weight <2500 grams was recorded in 25/50(50%) and 10/26(38.46%) had meconium staining of liquor indicating an unfavorable intra uterine environment. The study concluded although, daily fetal movement counting is subjective, with onset of maternal perception of reduced fetal movements. It is prudent to advocate close fetal monitoring even in the presence of a reactive admission CTG. Hence a timely obstetric intervention is needed⁶.

Discussion with the experts and review of literature helped the investigator to realize that providing a effective education on the importance of daily fetal movement count is essential to reduce the perinatal mortality and morbidity rates. During the review literature the investigator found that studies related to this in India is less, which has shown the increasing need of the study. Investigator felt effective education provides the primigravidae to have a good time to be spent for the child before its born by the movements and have a healthy baby.

Objectives Of The Study:-

1. To assess the existing knowledge of primigravidae regarding self assessment of daily fetal movement count.
2. To evaluate the effectiveness of video assisted teaching on self assessment of daily fetal movement count.
3. To find the association between the post test knowledge scores and selected demographic variables.

Material and Method:-

The research design selected for the study was Pre-experimental, Single group pre-test and post-test design. The independent variable was video assisted Teaching on self assessment of daily fetal movement count (DFMC) and the dependent variable was post-test knowledge scores of primigravidae attending antenatal OPD.

The sample of this study comprised of 50 primigravidae attending antenatal OPD in Vanivilas Maternity hospital at, Bengaluru. Non probability purposive sampling technique was used to draw the samples of the study. The tool developed and used for the data collection was structured knowledge questionnaire. 11 experts validated the content validity of the tool and the tool was found to be reliable and feasible. The video assisted teaching consisted of various aspects on DFMC. The video assisted teaching was developed with a view to enhance the knowledge of primigravidae.

Pilot study was conducted at Jayanagar General Hospital, Bengaluru. As a part of the major study, tool proved to be comprehensible, feasible and acceptable. Data collection procedure for main study began after obtaining permission from the concerned authorities of Vanivilas maternity hospital, Bengaluru. The investigator personally explained the need to the respondents and assured them of confidentiality of their responses.

The pre-test was administered followed by a video assisted teaching; post-test was administered 7 days after teaching by using the same questionnaire used in the pre-test.

The data gathered were analysed and interpreted according to objectives. Descriptive statistics mean and standard deviation were used. And inferential statistics paired 't' test and chi-square were included to test the hypotheses at different levels of significance and the data obtained are presented in the graphical form.

Results:-

Section 1:- Aspect wise pre-test mean knowledge scores of respondents on self assessment of daily fetal movement count (dfmc)

Table 1:-**N=50**

SL. NO	Area wise	No. of items	Mean	S.D	Mean%
1	Perception of fetal movements	6	2.2200	0.76372	37.00
2	Importance of fetal movement counting	5	1.8400	0.79179	36.80
3	Conditions for decreased fetal movements	4	1.4600	0.76158	36.50
4	Self assessment of fetal movement	6	1.5000	0.76265	25.00
5	Home coping skills	5	1.2800	0.70102	25.60
	Overall knowledge	26	8.3000	1.78714	31.92

Table 1 : reveals that the aspect wise pre-test knowledge of respondents regarding self assessment of daily fetal movement count. The highest mean % was seen in the aspect perception of fetal movement counting 37 %, importance of fetal movement counting with 36.80, conditions for decreased fetal movements with 36.50 %, home coping skills with mean % of 25.60% and the lowest mean 25% was seen in the self assessment of fetal movement.

Section 1a:- Aspect wise post -test mean knowledge scores of respondents on self assessment of daily fetal movement count

Table 1 a:-

SL. NO	Area wise	No. of items	Mean	S.D	Mean%
1	Perception of fetal movements	6	4.8000	0.60609	80.00
2	Importance of fetal movement counting	5	4.2800	0.67128	85.60
3	Conditions for decreased fetal movements	4	3.3800	0.66670	84.50
4	Self assessment of fetal movement	6	4.9400	0.71171	82.33
5	Home coping skills	5	4.2800	0.67128	85.60
	Overall knowledge	26	21.6800	1.09619	83.38

Table 1a: reveals that the aspect wise post-test knowledge of respondents regarding self assessment of daily fetal movement count. The highest mean % was seen in the aspect of importance of fetal movement counting and home coping skills with 85.60%, followed by conditions for decreased fetal movements 84.50 % followed by self assessment of daily fetal movement with 82.33% and the lowest score mean in the aspect perception of fetal movements with 80% was seen in knowledge regarding self assessment of daily fetal movement count.

Section 2:- Over all pre -test and post- test mean knowledge on self assessment of daily fetal movement count

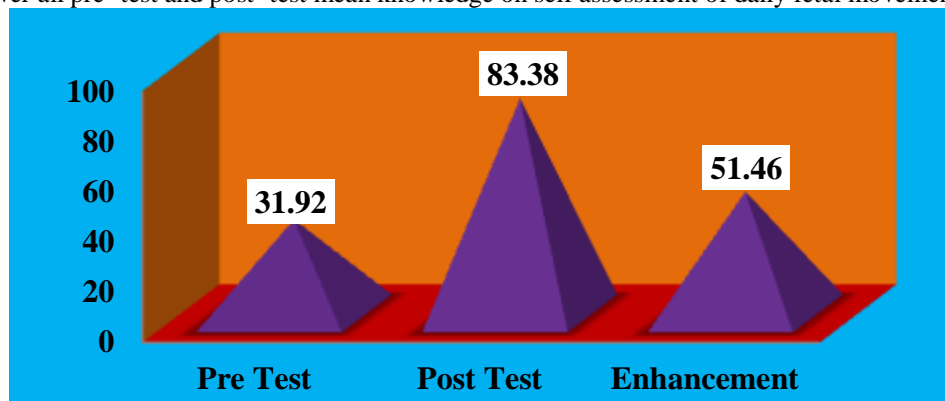


Figure 1:- Depicts that pre-test mean knowledge score was 31.92 % and post-test value was 83.38 % with enhancement of 51.46%, with paired “t” test value of 19.57*. It is significant at 5% level.

Section 3:- Aspect wise mean pre-test and post-test knowledge scores of respondents on self assessment of daily fetal movement count (dfmc) comparison of pre test and post test knowledge scores (paired t test).

Table 2

Aspects of knowledge	Pre test		Post test		t value	DF	P value Inference
	Mean	SD	Mean	SD			
Perception of fetal movements	37.00	0.76372	80.00	0.60609	17.349	49	P<0.05*
Importance of fetal movement counting	36.80	0.79179	85.60	0.67128	19.510	49	P<0.05*
Conditions for decreased fetal movements	36.50	0.76158	84.50	0.66670	17.444	49	P<0.05*
Self assessment of fetal movement	25.00	0.76265	82.33	0.71171	26.174	49	P<0.05*
Home coping skills	25.60	0.70102	85.60	0.67128	24.089	49	P<0.05*
Overall knowledge	31.92	1.78714	83.38	1.09619	48.853	49	P<0.05*

* is significant; ^{NS} is not significant

t (0.05, 49df) = 1.96

Table 2:- reveals overall mean score in the pre-test was 31.92 % and 83.38% in the post-test with an enhancement of 51.46%. The statistical paired ‘t’ test indicates the enhancement in the mean knowledge scores is found to be significant at 0.05 level for all the aspect under the study

Section 4:- Association between post knowledge with selected demographic variables**Table 3**

		Overall Knowledge				
		Median and below		Above median		Chi square
		N	%	N	%	
Age in years	19-23yrs	23	65.7	12	34.3	6.767*
	24-28yrs	15	100.0	0	0.0	DF=1
	29-33yrs	0	0.0	0	0.0	
	34-38yrs	0	0.0	0	0.0	
Educational status	No formal education	4	80.0	1	20.0	5.467 ^{NS}
	Primary school	9	69.2	4	30.8	DF=3
	High school	13	65.0	7	35.0	
	Secondary education	12	100.0	0	0.0	
	Graduation and above	0	0.0	0	0.0	
Occupation	Home maker	15	60.0	10	40.0	7.019*
	Coolie	12	92.3	1	7.7	DF=2
	Private employee	11	91.7	1	8.3	
	Government employee	0	0.0	0	0.0	
	Self employed / Business	0	0.0	0	0.0	
Monthly income in Rupees	5,000-10,000	24	68.6	11	31.4	3.530 ^{NS}
	10,001-15,000	14	93.3	1	6.7	DF=1
	15,001-20,000	0	0.0	0	0.0	
	20,001 and above	0	0.0	0	0.0	
Years of married life in years	00-05	38	76.0	12	24.0	-----
	06-10	0	0.0	0	0.0	
	11-15	0	0.0	0	0.0	
	16-20	0	0.0	0	0.0	
Gestational age in weeks	24-28 weeks	14	77.8	4	22.2	0.049 ^{NS}
	29-33 weeks	24	75.0	8	25.0	DF=1
	34-38 weeks	0	0.0	0	0.0	
Type of family	Nuclear	31	77.5	9	22.5	0.247 ^{NS}
	Joint	7	70.0	3	30.0	DF=1

Table 3:- Revealed there was significant association between post-test knowledge scores and selected socio-demographic variables such as age in years, occupational status at 0.05 levels. The findings of the study revealed that there was no significant association between post-test knowledge score and few selected socio-demographic variables such as educational status, monthly income, years of married life, gestational age in weeks, type of family and source of information at 0.05 levels.

Discussion:-

The pre-test knowledge score among majority of primigravidae were found to be moderate and post-test knowledge score is enhanced. There was significant enhancement in knowledge of primigravidae attending antenatal OPD after conducting video assisted Teaching on self assessment of daily fetal movement count (DFMC). There was significant association between post-test knowledge scores and selected socio-demographic variables such as age in years, occupational status at 0.05 levels. The findings of the study revealed that there was no significant association between post-test knowledge score and few selected socio-demographic variables such as educational status, monthly income, years of married life, gestational age in weeks, type of family and source of information at 0.05 levels.

Conclusion:-

The nursing implications are as follows.

Nursing Practice:-

The study shows various degree of deficiency in the knowledge regarding Self assessment of daily fetal movement count (DFMC), among primigravidae, for this nurses need to have adequate knowledge regarding Self assessment of daily fetal movement count (DFMC) to enhance the knowledge of primigravidae attending antenatal OPD. By providing adequate knowledge to Primigravidae the health care providers can motivate the mothers to count the daily fetal movement count to identify and prevent the fetal complications during the pregnancy.

Nursing Education: Nursing personnel should give education to the primigravidae attending the antenatal OPD regarding Self assessment of daily fetal movement count (DFMC). As a nurse educator, there are abundant opportunities for nursing professionals to educate the student nurses who are in the clinical posting, and primigravidae attending antenatal OPD regarding Self assessment of daily fetal movement count (DFMC). Nurse educators can use the findings of this study to upgrade her knowledge and find the other different strategies which are simple so that it will be easy to educate the student nurses as well as the pregnant mothers. As a nurse educator, there are abundant opportunities for nursing professionals to educate the student nurses, as well as common lay persons regarding Self assessment of daily fetal movement count (DFMC).

Nursing Administration:-

The nurse administrator should arrange induction programme for staff nurses working in the Obstetrics and Gynecological unit. This will help the nurse administrator to prepare adequate learning materials for giving health education in the colleges as well as in the hospitals. This will help the nurse administrator to emphasize and encourage the nurses to use different strategies to educate staff nurses, student nurses and pregnant mothers regarding Self assessment of daily fetal movement count (DFMC). Nursing personnel should be prepared to take leadership role in educating the student nurses, and the novice nurses regarding Self assessment of daily fetal movement count (DFMC) whereby they can educate the mothers in the clinical area or community when they encounter the pregnancy.

Nursing research:-

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

Limitations of the study:-

1. The study is limited only to primigravidae attending antenatal OPD in Vanivilas Maternity Hospital at Bengaluru.
2. The study did not use control group.
3. Only a single domain that is knowledge is considered in the present study.
4. The sample for the study was limited to 50 primigravidae attending antenatal OPD.

Recommendations:-

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

1. A replication of present study can be conducted with a larger population.
2. A similar study can be conducted in different settings at Hospitals in rural areas and urban areas and then due results can be compared.
3. Manuals and information booklets may be developed to enhance knowledge on Self assessment of daily fetal movement count (DFMC).
4. Videos can be pre installed if the facility of Televisions are available in the hospitals so that it enhances the knowledge on Self assessment of daily fetal movement count (DFMC).

Summary:-

This chapter deals with the findings, conclusion, nursing implication, limitation and recommendations of the study.

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