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Comparative study on DFMC chart vs Cardiff count ten chart on assessment of fetal movement among antenatal mothers at NMCH, Nellore

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Abstract

Background: Decreased fetal movements are present in 5% to 15% of pregnancies and are associated with uterine foetal death and uterine growth restriction. Preterm birth and foetal death studies have shown that foetal movement counts are an effective screening monitoring. Foetal movement serves as an indirect measure of central nervous system integrity and function with reported reduction foetal mortality.

Aim: The aim of the study was to compare the fetal movements based of DFMC count and Cardiff count.

Objectives: 1. To assess the fetal movement using DFMC chart among antenatal mothers. 2. To assess the fetal movement using Cardiff count ten chart among antenatal mothers. 3. To find out the association between fetal movement with the socio demographic variables among antenatal mothers.

Methodology: 100 antenatal mothers from NMCH, Nellore were selected by using convenience sampling method.

Results: Regard to fetal movement based on DFMC, 25(25%) had poor fetal movements, 59(59%) are had good fetal movement and16 (16%) had very good Fetal movements. Regard to fetal movement based on Cardiff count, 5(5%) had poor fetal movement, 8(8%) had good fetal movement and 87(87%) had very good fetal movements.

Keywords: DFMC chart, CARDIFF count ten chart, fetal movements, antenatal mothers

Introduction

The predominant goal of ante partum foetal monitoring is to reduce prenatal morbidity and mortality rates. Most of the investigators have reported excellent correlation between mother perceiving foetal motion and movement documented by instrumentation fetal movement counting is a method by which a woman quantifies of the baby. The purpose is to reduce perinatal mortality by alerting care givers when the baby might has become compromised [2]. The fetal movements can be assessed by DFMC and Cardiff Count Ten Chart. The counting is done three times a day, that is, morning after breakfast, afternoon after lunch and evening after dinner for 1hr. More than 3 foetal movements per hour or more than 10 foetal movements in 12 hours is considered normal. A pregnant woman usually starts perceiving fetal movements at approximately 20 weeks gestation [3].

A multigravida may perceive movements at an earlier gestational age in the presence of fetal hypoxia and placental dysfunction. The fetus decreases gross body movements to conserve oxygen. Decreased fetal movements may precede intrauterine fetal death. Early recognition of decreased fetal movements makes it possible to initiate intervention at a stage when the fetus is still compensated, and thus prevent progression of fetal death [4].

Need for the study

The infant mortality rate in India is 39.12/1000 live births. (National Family Health Survey (2016-2017) [5]. Still birth is high global burden and the estimated still birth rate in India is 9/1000 and that of Andhra Pradesh (A.P) is 19/1000 deliveries which is the highest among all other states [6]. Still births are unexplained and some are avoidable. But in some cases still births and intro uterine deaths can be preventive if the mother is highly aware of her foetal movements [7].

Singh. G & Maj K. Sindhu (2016) in the recently completed "Moms Study" (Maternal Observations and Memories of still birth) Data for 5000 women who had still birth is currently being analyzed. The result reveals that 50% of women perceived gradual decreased foetal movement.

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Several days prior to foetal death 56% of the women reported decreased fetal movement as the first reason to believe that the baby was not doing well. Only about 50% of moms were told to do foetal kick count by the doctors [8].

Problem statement
"A Comparative Study on DFMC Chart Vs Cardiff Count Ten Chart on Assessment of Fetal Movements among Antenatal Mothers at NMCH, Nellore".

Objectives
- To assess the fetal movement using DFMC chart among antenatal mothers.
- To assess the fetal movement using Cardiff count ten chart among antenatal mothers.
- To find out the association between fetal movement with the socio demographic variables among antenatal mothers.

Delimitations
- Antenatal mothers beyond 32 weeks of pregnancy
- Antenatal mothers attending maternal OPD, NMCH
- Sample size of 100,

Methodology
Research Approach
A quantitative approach was adopted to determine the research study.

Research design
The present study was conducted by using descriptive research design

Setting of the study
The setting of the study is Narayana Medical College Hospital, Chinthareddy palem, Nellore.

Population
Target Population
The target population for this present study includes the all antenatal mothers.

Accessible Population
The accessible population for the present study includes in antenatal mothers ward in NMCH and who fulfils the inclusion criteria.

Sample
The sample for the present study selected antenatal mothers admitted antenatal ward in Narayana Medical Hospital, Nellore.

Sample Size
The sample for the present selected from 100 antenatal mothers in NMCH, Nellore.

Sampling Technique
Non probability convenience sampling technique was adopted for this study.

Criteria for Sampling Selection
Inclusion criteria
- Antenatal mothers available at the time of data collection,
- who are willing to participate
- A sample size of 100 only

Exclusion criteria
Who are not available at the time of data collection?

Description of thetool
Part-I: It deals with socio demographic variables: age, religion, education, occupation, type of family, food habits, duration of marriage, obstetric score, source of information.
Part-II: It deals with DFMC chart scoring scale consists of 1-20 and Cardiff Count scoring scale consists 1-40.

Data Analysis

Table 1: Frequency and Percentage distribution of fetal movement based on DFMC chart. (N=100)

DFMC Chart	Frequency(F)	Percentage (%)
Poor	25	25
Good	59	59
Very Good	16	16
Total	100	100%

Table – 1: shows that with regard to fetal movement, 25(25%) had poor fetal movements, 59(59%) are had good fetal movement and16 (16%) had very good Fetal movements.
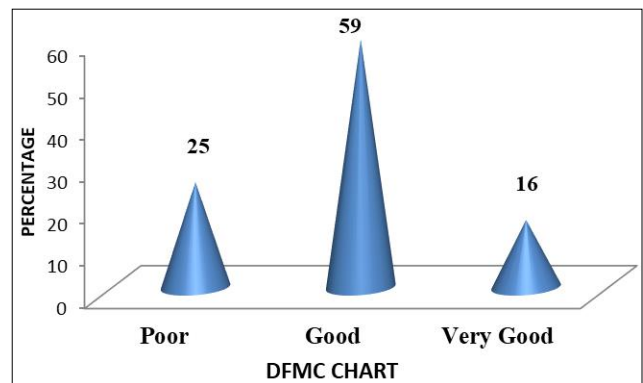

Fig 1: Percentage distribution of antenatal mothers based on DFMC chart

Table 2: Frequency and Percentage distribution of fetal movements based on Cardiff count. (N=100)

Cardiff count	Frequency(F)	Percentage (%)
Poor	5	5
Good	8	8
Very Good	87	87
Total	100	100%

Table – 2: shows that with regard to fetal movement Cardiff count, 5(5%) had poor fetal movement, 8(8%) had good fetal movement and 87(87%) had very good fetal movements.
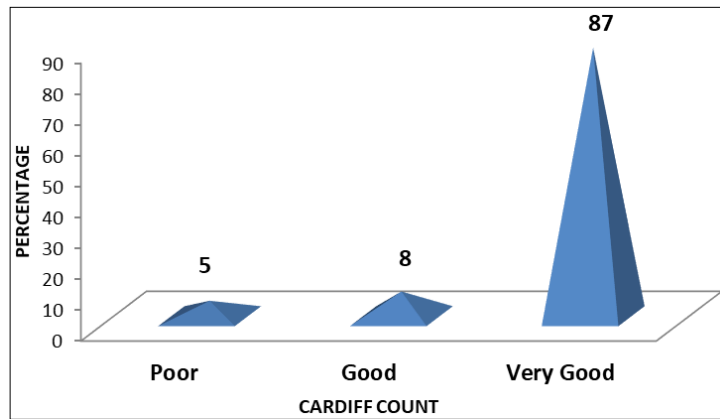
Fig 2: Percentage distribution of antenatal mothers based on Cardiff count.

Table 3: Mean and Standard Deviation of DFMC chart and Cardiff count score among antenatal mothers. (N=100)

Sample Category	DFMC Chart		Cardiff count	
	Mean	SD	Mean	SD
Antenatal Mothers	9.71	3.516	33.12	2.23

Table no-3: Shows that antenatal mothers DFMC chart Mean is 9.71 and standard deviation was 3.51. And the Cardiff count mean is 33.12 and standard deviation was 2.23.

Table 4: Association between fetal movement based on DFMC chart and selected socio demographic variables among antenatal mothers. (N=100)

S. No	Demographic Variables	Poor		Good		Very Good		Chi-Square
		F	%	F	%	F	%	
1.	**Age**							C=10.94
	a)20-25 years	12	12	28	28	12	12	Df=4
	b)26-35 years	11	11	24	24	-	-	T=9.49
	c)36-40 years	2	2	7	7	4	4	$P<0.05$ S*
2.	**Type of Family**							C=10.5
	a)Nuclear	6	6	27	27	10	10	Df=4
	b)Joint	14	14	22	22	5	5	T=9.49
	c)Extended	5	5	10	10	1	1	$P<0.05$ S*
3.	**Obstetrical Score**							C=6.66
	a)Primi Para	8	8	23	23	12	12	Df =2
	b)Multi Para	17	17	36	36	4	4	T=5.99 $P<0.05$ S*
4.	**Source of Information**							C=96.72
	a)Radio	-	-	-	-	-	-	Df=6
	b)Health Personnel	21	21	50	50	15	15	T=12.59
	c)News Paper	1	1	-	-	-	-	$P<0.01$ S***
	d)Internet	3	3	9	9	1	1	

Table 5: Association between fetal movement based on Cardiff count and selected socio demographic variables among antenatal mothers. (N=100)

S. No	Demographic Variables	Poor		Good		Very Good		Chi-Square
		F	%	F	%	F	%	
1.	**Religion**							C=13.17
	a)Christian	2	2	3	3	20	20	Df=6
	b)Muslim	1	1	1	1	14	14	T=12.59
	c)Hindu	2	2	4	4	48	48	$P<0.05$
	d)Others	-	-	-	-	5	5	S*
2.	**Obstetrical Score**							C=6.66
	a)Primi Para	2	2	4	4	37	37	Df=2
	b)Multi Para	3	3	4	4	50	50	T=5.59 $P<0.05$ S*
3.	**Source of Information**							C=96.72
	b)Radio	-	-	-	-	-	-	Df=6
	c)Health Personnell	4	4	8	8	74	74	T=12.59
	d)News Paper	-	-	-	-	1	1	$P<0.02$ S***
	e)Internet	1	1	-	-	12	12	

Major findings of the study

- Regard to fetal movement based on DFMC, 25(25%) had poor fetal movements, 59(59%) are had good fetal movement and 16 (16%) had very good Fetal movements.
- Regard to fetal movement based on Cardiff count, 5(5%) had poor fetal movement, 8(8%) had good fetal movement and 87(87%) had very good fetal movements.
- Antenatal mothers DFMC chart Mean score was 9.71 and standard deviation was 3.51. And the Cardiff count mean score is 33.12 and standard deviation was 2.23.
- Regarding association between DFMC count and demographic variables, age, type of family, obstetrical score and source of information had significant association at $P<0.05$ level.
- Regarding association between Cardiff count and demographic variables, religion, obstetrical score and source of information had significant association at $P<0.05$ level.

Conclusion

The researcher suggested that DFMC and Cardiff Count Ten Chart are the essential tools to know the fetal movements to decide the fetal wellbeing in order to reduce the intra uterine death.

References

1. Helen Varney, Jan M, Kriebs Kasolyn, Gegor Varney's L. Text Book of Midwifery, Fourth edition. All India publishers and Distributors Regd, 632-635.
2. Latha P, Pavitra. The effectiveness of maternal and infant dyad on attachment among postnatal mothers in Narayana College Hospital, Nellore. International journal of medical and health research. 2017; 3(1):10-12.
3. Ladewig, Marcia London L. Sally brookens olds Essential of Maternal-New born nursing second edition. Addison Wesley publications, 348, 168, 170, 370, 372, 491, 385, 386, 499, 400, and 401.
4. Latha P. Effectiveness of peri-partum protocol on maternal and fetal outcome among mothers in NMCH, Nellore, A.P. International journal of health sciences and research. 2017; 7(5):200-204.
5. Phumdoung S, Syoungvanichsate. Women's experiences of warning signs during labour, journals.org/index.php/SOMJ/article/view 4226 Accessed on 18-11- 2012.
6. Latha P. A study to assess the knowledge and attitude among primi gravidae mothers regarding safe reproductive child health in a selected hospital of Moga, Punjab. International journal of health sciences and research. 2017; 7(6):262-265.
7. Latha P. Effectiveness of STP on newborn care among primi mothers at Govt. Hospital, Bhadrachalam, Telangana. Narayana Nursing Journal. 2015; 4(4):24-27.
8. Latha P. A study to assess the effectiveness of preterm initiatives on selected parameters among preterm neonates in Narayana Medical College Hospital at Nellore, A.P. International journal of research and review. 2017; 4(7):30-34.