



A STUDY TO ASSESS THE EFFECTIVENESS OF THE MATERNAL POSITIONING ON FINDINGS OF THE FETAL PARAMETERS DURING THE NON-STRESS TEST AT THE SELECTED HOSPITAL OF THE SOUTH GUJARAT

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ABSTRACT

Introduction: The non-stress test (NST) is a simple, noninvasive way of checking on your baby's health. The test, sometimes called a cardiotocography, records your baby's movement, heartbeat, and contractions. It notes changes in heart rhythm when your baby goes from resting to moving, or during contractions if you're in labor. Your baby's heart should beat faster when active just like yours. The NST can reassure you that your baby is healthy and getting enough oxygen. It's called a non-stress test because the test won't bother your baby. Your doctor won't use medications to make your baby move. The NST records what your baby is doing naturally. **Objectives:** 1). To assess the of fetal parameters during non-stress test. 2). To assess the effectiveness of maternal positioning on findings of the fetal parameters during non-stress test. 3). To assess the association between fetal parameters with the demographical variable. **Method:** An quantitative approach with pre-experimental one group short case study research design was adopted for this study. The sample comprised of 60 antenatal mothers. Sample was selected by using purposive sampling technique. Data collection was done from 14nd February to 20th February at Shree Janani hospital Dharmpur and 2 march 2020 to 22 march 2020 at Shrimad Raj Chandra hospital Dharmpur data was collected by using numerical scale. Data was analyzed using descriptive and inferential statistics. **Result:** In all the three position the fetal heart rate was normal from the range 100-160 b/m. The fetal movement are easily observed in left lateral position (42) participants and less observe in supine position (47) participants and for the number of accelerations the normal result found in the semi-setting position (45) participants. Thus, investigator concluded that the experimental study is good method of providing left lateral maternal positioning during

non-stress test. **Interpretations and conclusion:** In all the three position the fetal heart rate was normal from the range 100-160 b/m. The fetal movement are easily observed in left lateral position (42) participants and less observe in supine position (47) participants and for the number of accelerations the normal result found in the semi-setting position (45) participants. Thus, investigator concluded that the experimental study is good method of providing left lateral maternal positioning during non-stress test.

INTRODUCTION

The non-stress test (NST) is a simple, noninvasive way of checking on your baby's health. The test, sometimes called a cardiotocography, records your baby's movement, heartbeat, and contractions. It notes changes in heart rhythm when your baby goes from resting to moving, or during contractions if you're in labor. Your baby's heart should beat faster when active just like yours. The NST can reassure you that your baby is healthy and getting enough oxygen. It's called a non-stress test because the test won't bother your baby. Your doctor won't use medications to make your baby move. The NST records what your baby is doing naturally.

PROBLEM

A study to assess the effectiveness of the maternal positioning on findings of the fetal parameters during the non-stress test at the selected hospital of the south Gujarat.

OBJECTIVES

1. To assess the of fetal parameters during non-stress test.
2. To assess the effectiveness of maternal positioning on findings of the fetal parameters during non-stress test.
3. To assess the association between fetal parameters with the demographical variable.

OPERATIONAL DEFINITION

Assess

In this study assess refers to the effectiveness of maternal positioning on findings of fetal parameters during non-stress test.

Effectiveness

In this study effectiveness refers to the what are the different maternal positions that will affect the fetal parameters during the non-stress test.

Maternal positions

It refers to the way in which mothers are placed in bed while carrying out the non-stress test. The maternal positions used are supine- lying on back, left lateral- lying on side, semi sitting- sitting with back supported with a backrest in 45-degree angle.

Parameters

It refers to what is being observed during the non-stress test. In this study observation is done on the fetus.

Fetal parameters

In this study fetal parameters include fetal heart rate, movement, and acceleration with the help of a machine called cardiotocography.

Non-Stress Test

The fetal heart rates located with a stethoscope and place the cardiac transducer on the maternal abdomen which is held in position with a strap and the fetal wellbeing is assessed by fetal heart rate, fetal movements and acceleration through a displayed graph which is called cardiotocograph. Three times the procedure was carried out for a single mother with 20-minute duration.

ASSUMPTION

Non stress test is carried out in different positions, the position suitable to each woman are influenced by individual factors. Non stress test is a common procedure carried out in all pregnant women to assess the fetal wellbeing in utero. Comfort and suitability will according mother's perception.

DELIMITATION

The study was delimited to: -

Mothers who were admitted to one selected hospital for delivery.

Mothers posted for Elective caesarian.

Mothers who are willing to participate.

HYPOTHESIS

H1 -There will be significant difference between effectiveness of maternal positioning on findings of fetal parameters during non- stress test at the level of $p \leq 0.05$.

H2- There will be significant association between the fetal parameters with the demographical variable at the level of $p \leq 0.05$.

RESEARCH METHODOLOGY

REASERCH APPROACH: Quantitative research approach

RESEARCH DESIGN: pre- experimental research design- One short Case Study

VARIABLES:

Independent Variable: Maternal positioning

Dependent Variable: fetal parameters

Socio Demographic Variables: Age, Gestational weeks, Abdominal Girth

RESEARCH SETTING: The study was conducted in Shrimad Rajchandra Hospital Dhamrpur.

POPULATION AND SAMPLE:

POPULATION: Eligible antenatal Mother who came for antenatal visits.

SAMPLE: 60

SAMPLING TECHNIQUE: Purposive Sampling Technique.

DESCRIPTION OF TOOL:

1. SECTION-A: SOCIO DEMOGRAPHIC DATA

It consists of selected socio demographic variable such as age, gestational weeks, and abdominal girth.

Section 2: Numerical scale:

The scale used was a numerical rating scale which has components namely for the fetal heart rate abnormal, non- reassuring and abnormal and for the fetal movement absent and present and for the acceleration the no acceleration during non-stress test and two or more accelerations during non-stress test.

SCORE INTEPRATATION**FETAL HEART RATE**

Abnormal – 1

Non reassuring -2

Normal- 3

FETAL MOVEMENT

Non- Reactive-1

Reactive- 2

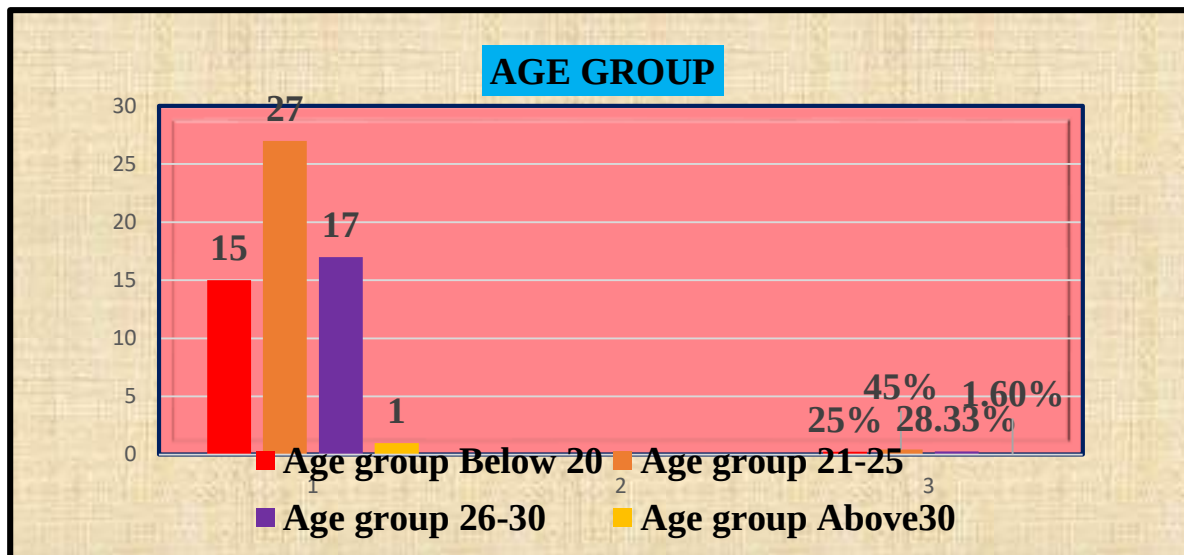
NUMBER OF ACCELERATION

No acceleration during non-stress test- 1

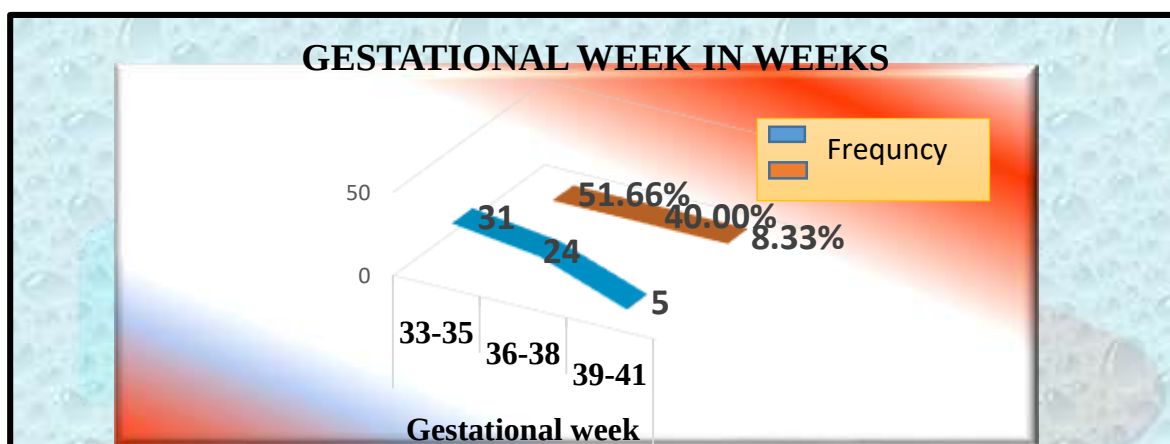
Two or the more acceleration during non-stress test-2

RESULT**SECTION-A****TABLE- 1: Frequency and percentage distribution of the demographical variable of the antenatal mothers****N= 60**

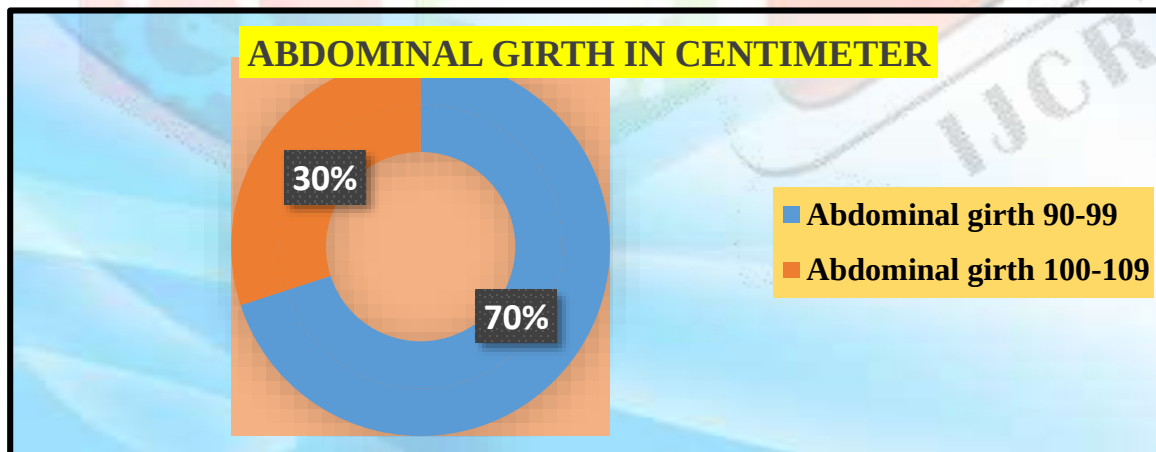
Demographical variables	Category	Frequency	Percentage
Age group	Below 20	15	25%
	21-25	27	45%
	26-30	17	28.33%
	Above30	1	1.60%
Gestational week	33-35	31	51.66%
	36-38	24	40.00%
	39-41	5	8.33%
Abdominal girth	90-99	42	70%
	100-109	18	30%



Distribution of graph according to Age in year



Distribution of the graph according to the gestational weeks

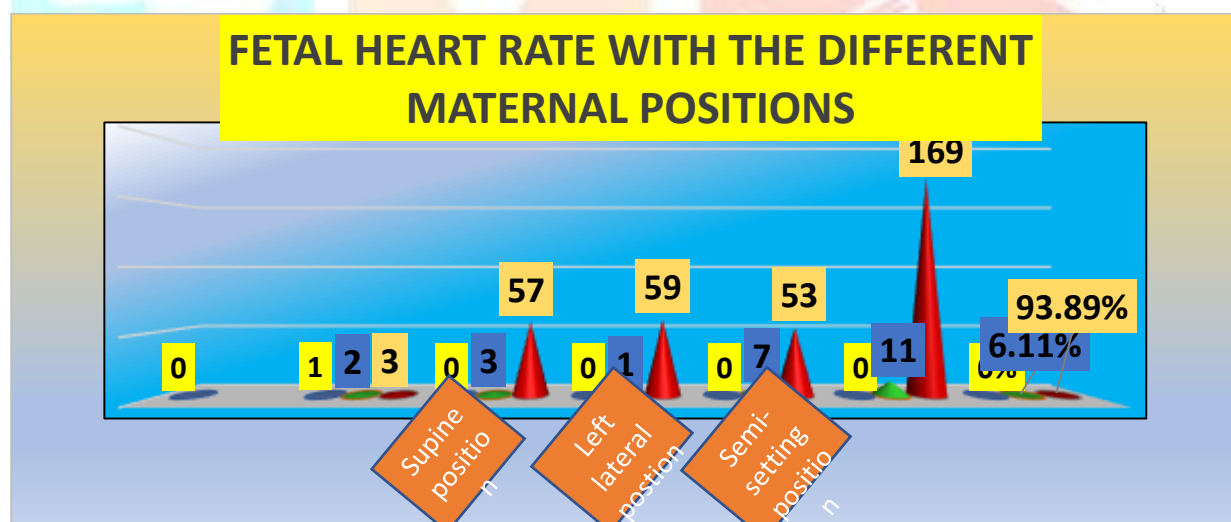


Distribution of the graph according to the abdominal girth in cm

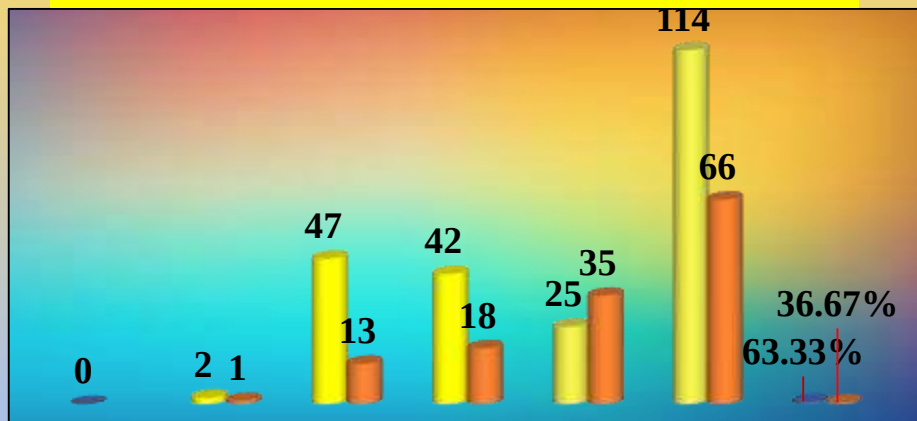
SECTION-2

Table no 2 - Description of the fetal parameters with the different maternal positioning.

FETAL PARAMETERS	CATEGORY	POSITION			FREQUENCY	PERCENTAGE
		Supine	Left lateral	Semi-setting		
FETAL HEART RATE	1 (>180 or <100)	0	0	0	0	0%
	2 (160-100)	3	1	7	11	6.11%
	3 (100-160)	57	59	53	169	93.89%
FETAL MOVEMENT	2 (2 or more fetal movement)	13	42	25	80	44.44%
	1 (Less than 2 fetal movement)	47	18	35	100	55.55%
NUMBER OF ACCELERATION	2 (2 or more fetal acceleration)	12	43	45	100	55.56%
	1 (Less than 2 fetal acceleration)	48	17	15	80	44.44%



FETAL MOVEMENT WITH THE DIFFERENT MATERNAL POSITIONS



NUMBER OF ACCELERATION WITH THE DIFFERENT MATERNAL POSITIONS

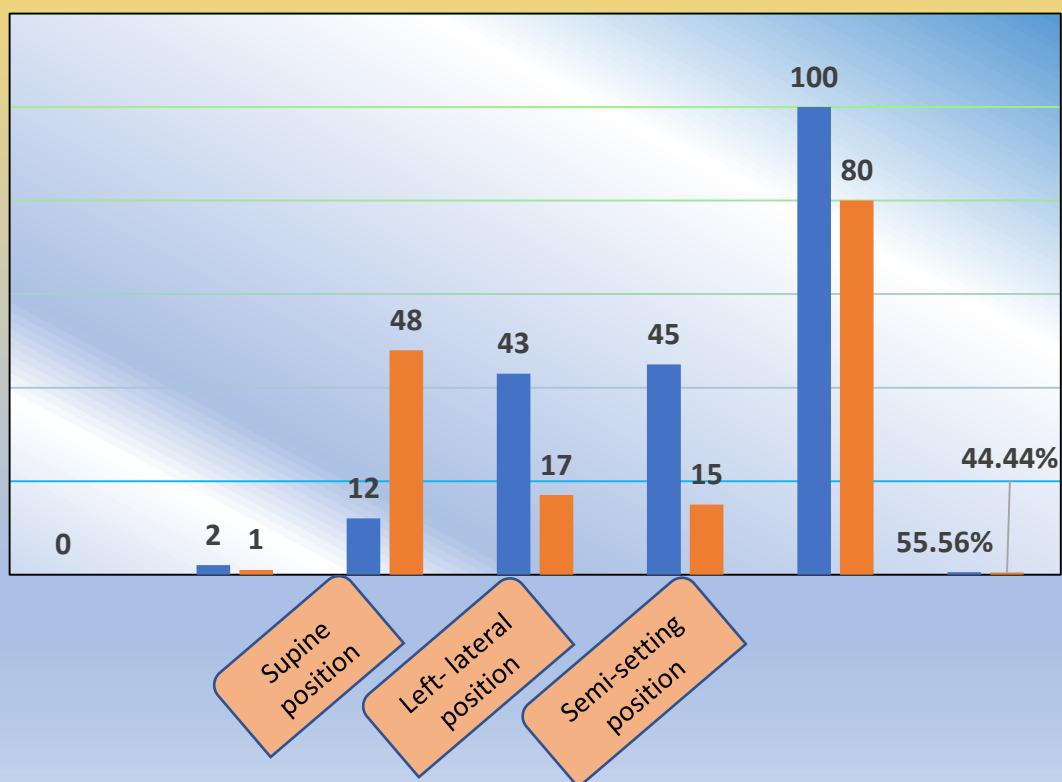


Table no. 3: Mean, median and standard deviation of the maternal positioning on findings of fetal parameters during non-stress test.

FETAL PARAMETERS	CATEGORY	POSITION			MEAN	MEDIAN	SD
		S.P	L.P	S.S.P			
FETAL HEART RATE	1 (>180 or<100)	0	0	0	8.816	9	0.390
	2 (160-180)	3	1	7			
	3 (100-160)	57	59	53			
FETAL MOVEMENT	2 (2 or more fetal movement)	13	42	25	4.333	4	0.795
	1 (Less than 2 fetal movement)	47	18	35			
NUMBER ACCELERATION	2 (2 or more fetal acceleration)	12	43	45	4.666	5	0.836
	1 (Less than 2 fetal acceleration)	48	17	15			

SECTION 3**TBALE NO. 4: Association between the fetal parameters and maternal position with the demographical variables. N=6**

Association between the fetal parameters and maternal positioning with the demographical variables									
SR.N O	VARIABLE	CATEGOR Y	TOTAL SCORE			CHI- SQUAR E VALIU E	D F	TABL E VALU E	INTERFEN CE
			<ME D.	>ME D	ME D				
1	AGE	<19	8	2	5	7.162	6	12.59	NS
		21-25	8	11	8				
		26-30	6	8	3				
		> 30	0	0	1				
2	GESTATION AL AGE IN WEEKS	33-35 W	9	11	11	11.574	4	9.49	S
		36-38 W	13	7	4				
		39-41 W	0	0	5				
3		90-99	16	14	12	0.1918	6	12.59	NS
		100-109	6	7	5				

	ABDOMINAL GIRTH IN CM	110-120	0	0	0				
		>120	0	0	0				

DISCUSSION

The Frequency and percentage distribution of the samples according to the demographic variables in experimental group can be depicted from the table no.1 the age wise distribution of samples reveals that the samples a greater number of participants are from the age group of the 21-25 years 27 (45%). The Distribution of the sample according to the gestational week the more participants are from the gestational weeks of the 33-35 weeks 31 (51.66%). The distribution of the sample according to the abdominal girth that is for the 90-99cm 42 (70%) and for the 100-109cm 18 (30%).

The present study shows that majority of the subjects for the fetal heart rate the normal result found in the left lateral position that is the 59 participants and abnormal result found in the semi-setting position that is the 7 participants. For the fetal movement the normal result found in the left lateral position that is the 42 participants and the abnormal result found in the supine position that is the 47 participants. And for the number of accelerations the normal result found in the semi-setting position that is the 45 participants and abnormal result found in the supine position that is the 48 participants.

CONCLUSION

In all the three position the fetal heart rate was normal from the range 100-160 b/m. The fetal movement are easily observed in left position (42) participants and less observe in supine position (47) participants and for the number of accelerations the normal result found in the semi-setting position (45) participants. Thus, investigator concluded that the experimental study is good method of providing left lateral position during non-stress test.

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