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A Study to Assess the Effectiveness of Antenatal Exercises on Outcome of Pregnancy Among Antenatal Women Attending Antenatal Clinic, in G S Medical College and Hospital, at Hapur

Himadri Kalita[1] and Shivani Chaudhary[2]
Associate Professor, GS College of Nursing, Pilkhuwa, UP, India[1]
Assistant Professor, GS College of Nursing, Pilkhuwa, UP, India[2]
himdrideepak@gmail.com[1] and shivaniup123@gmail.com[2]

Abstract: *This study aims to assess the effectiveness of antenatal exercise on outcome of pregnancy. Evaluation was done by experiments through the true experimental post –test control group. Convenient sample technique was used to assess the effectiveness of 60 samples in selected hospital of Hapur.30 samples in experimental group and 30 samples in control group was taken to get the effectiveness of the study. The tool consists of questionnaire to assess demographic data and a check list was used to check the effectiveness of antenatal exercises. The result reveals that the experimental group mean is 20.96 and standard deviation is 1.126, Control group mean is 18.63 and standard deviation is 1.135,t-cal value=4.0987 and t-tab value=2.58. Hence there is significant relationship between the post score values of experimental and control group. It was found that the experiments were effective in changing the outcome of pregnancy with statistical significance. This was a true experimental study with post-test control group design to determine the effectiveness of antenatal exercises on outcome of pregnancy among antenatal mother*

Keywords: Effectiveness, Antenatal Exercises , Outcome Of Pregnancy ,Antenatal Women

I. INTRODUCTION

Pregnancy is a special feeling for the mother-to-be. She suddenly realizes the power of being a woman being able to make a human out of her body. Being a special time, pregnancy is also a time where the mother-to-be should take special care for her body as every action of hers will affect her baby. During pregnancy, the way mother moves everyday is as important as any special exercises that mother can perform daily. Pregnancy is a very personal experience for each woman. This period in her life poses many new challenges and possible problems. The mother dreams about the infant and what the future holds for the new baby. How the mother responds to these challenges is dependent on her emotional maturity.

Regular exercise has lot of benefits and, the women pregnant, it can help her body cope better with the demands of giving birth and give you a quicker chance of getting back to the pre-pregnant state. When she first start exercising, it's important to start slowly and gradually build up what to do. It's far better to opt for the little and often approach, rather than doing occasional big bouts of exercise, and it's crucial to choose something she enjoys and that is not a chore. As a rough average, 30 minutes a day is ideal, or 15-20 minutes when she is pregnant. General health of the women's good habits like exercises, diet, rest and sleep, medications, hygiene, and regular emptying of bowel and bladder are reinforced, giving further advice when required.

1.1 Statement of the Problem

"A study to assess the effectiveness of antenatal exercises on outcome of pregnancy among antenatal women attending antenatal clinic, In G S Medical college and Hospital, at Hapur**".**

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1.2 Objectives

1. To determine the effectiveness of antenatal exercises among experimental group antenatal women.
2. To compare the post test scores between the experimental and control group antenatal women.
3. To associate the outcome of pregnancy with the selected demographic variables among experimental group women.

1.3 Hypothesis

There will be a statistical significance between the post test scores of experimental group and control group women.

1.4 Methodology

- **RESEARCH APPROACH-** Quantitative research approach
- **RESEARCH DESIGN-**True experimental post test control group design
- **SETTING OF THE STUDY-** G S Medical College and Hospital, at Hapur

VARIABLES-:

- **Dependent Variable -**Aspects like Method of labour, Duration of labour, amount of bleeding, APGAR score of the Baby, wellbeing of the mother and baby.
- **Independent Variable -** Antenatal Exercises

POPULATION- All the pregnant women after 36 weeks of gestation who attended to the antenatal clinic in G S Medical College and Hospital, at Hapur**.**

SAMPLE AND SAMPLE SIZE- 60 antenatal women who were registered at antenatal clinic and came for antenatal checkups.

SAMPLING TECHNIQUE - Convenient technique

CRITERIA FOR SAMPLE SELECTION

INCLUSION CRITERIA

- Antenatal women both primi & multigravida women.
- Antenatal women who are willing to participate in the study.
- Antenatal women who were completed 36 weeks of gestation.
- Antenatal women in the age of 19 -35 years.

EXCLUSION CRITERIA

- Antenatal women with high risk pregnancy.
- Antenatal women who did not understand English.

II. METHODS OF DATA COLLECTION AND ANALYSIS

DESCRIPTION OF THE TOOL

The investigator developed a tool based on the review of books, journals and Opinion of nursing & medical experts.

PART -I

Demographic variables are included age, education, religion, type of family, place of residence, no of deliveries, sources of health information.

PART –II

Observation check list related to the level of outcome of pregnancy by assessing mother and baby the aspects were related to duration and mode of labour, perception of pain, amount of bleeding & baby assessment includes vital signs etc.

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OBSERVATION CHECK LIST

S. No	Criteria	Total No of Items	Scores
1	Section-A Physiological l well-being of the women	10	10
2	Section-B Psychological well-being of the women	10	10
3	Section-C General well-being of the baby	10	10
	Total	30	30

SCORE INTERPRETATION:

The observation check list was used to give the mark for each aspect if yes '1' mark, if No '0' mark ,the total score was 30 .The level of outcome of pregnancy was interpreted by using the following formula:

The level of outcome of pregnancy = Obtained score / Total score × 100

The scores interpreted as given below

21-30 - Above average

11-20 - Average

Up to 10 - Below average

III. DATA ANALYSIS AND STATISTICAL METHODS USED

The statistical methods used for the analysis are number, percentage, Mean Standard deviation, independent "t" test, and chi-square test.

S.NO	DATA ANALYSIS	METHOD	REMARKS
1	Descriptive statistics	Frequency Percentage mean and standard deviation	Distribution of demographic variables. To assess the existing effectiveness on antenatal exercises
2	Inferential statistics	Independent t- test	To determine the effectiveness of Antenatal exercises on outcome of pregnancy
		Chi-square test	To find out the association between post test scores with selected socio demographic variables

The data obtained was mainly classified into four sections.

Section- I

Distribution of the demographic variables among the experimental & control group antenatal women.

Section- II

Post test scores on outcome of pregnancy among experimental and control group antenatal women.

Section –III

Comparative values of outcome of pregnancy scores between the experimental and control group antenatal women.

Section –IV

Association of socio demographic variables with the post test scores among experimental group Antenatal women.

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SECTION- I

TABLE-I: DISTRIBUTION OF FREQUENCY AND PERCENTAGE OF SOCIO DEMOGRAPHIC VARIABLES.

N=60

S. no	Demographic variables	Experimental		Control	
		frequency	percentage	frequency	Percentage
1	Age (a)19-23yrs (b)24-29yrs (c)30-35yrs	 20 8 2	 66.6% 26.6% 6.6%	 16 12 2	 53.3% 40% 6.6%
2	Education (a)Illiterate (b)School level (c)Secondary (d)Degree	 - 21 2 7	 0% 70% 6.6% 23.3%	 9 15 2 4	 30% 50% 6.6% 13.3%
3	Religion (a)Hindus (b)Muslims (c)Christians	 21 8 1	 70% 26.6% 3.3%	 20 7 3	 6.6% 23.3% 10%
4	Type of family (a)Nuclear (b)Joint	 15 15	 50% 50%	 19 11	 63.3% 36.6%
5	Residence (a)Rural (b) Urban	14 16	46.6% 53.3%	22 8	73.3% 26.6%
6	No of deliveries (a) First (b) Second (c) Third	 16 12 2	 53.3% 40% 6.6%	 11 16 3	 36.6% 53.3% 10%
7	Source of health information (a) Mass media (b) Health personnel (c) Relatives (d) Friends	 28 2 - -	 93.3% 6.6% 0% 0%	 28 2 - -	 93.3% 6.6% 0% 0%

The table : Elucidates that 19-23 years age women were 20 (66.6%) excess in the experimental group, where as in the control group women were 16 (53.3%).

In regard to educational status in school level among 21(71%) in experimental group women & illiterates 9 (30%) were in the control group women.

In regard to religion Hindus were 21 (70%) in the experimental group Muslims were 8 (26.6%) in the control group.

In regard to type of the family equal distribution among experimental group & control group 19 (63.3%) nuclear family and 11(36.6%) were under joint family.

In regard to the place of residence 16(53.3%) were in urban areas & 22 (73.3%) were in the control group were residing at rural areas.

In regard to the no of deliveries among women, 16(53.3%) were undergone one delivery in experimental group & (53.3%) were undergone second delivery in the control group.

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In regard to source of health information through mass media equally 28 (93.3%) of women were in experimental & control group women.

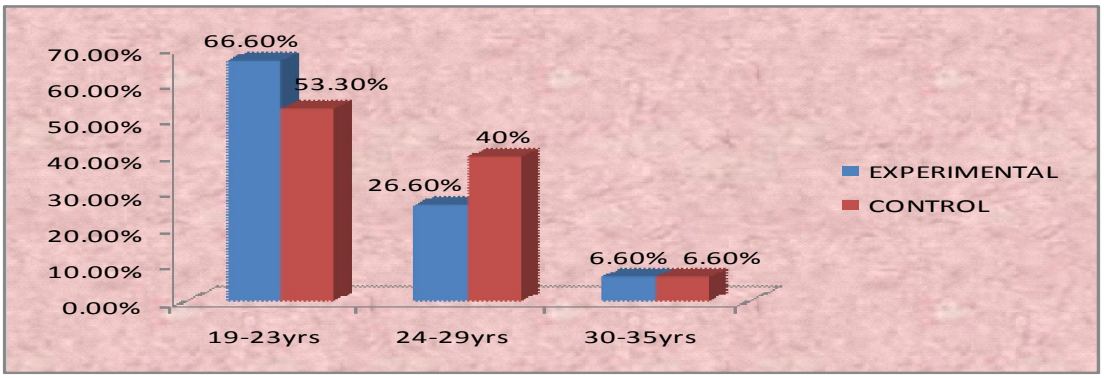

FIGURE -I ***SHOWS FREQUENCY AND DISTRIBUTION AGE IN YEARS AMONG ANTENATAL WOMEN***

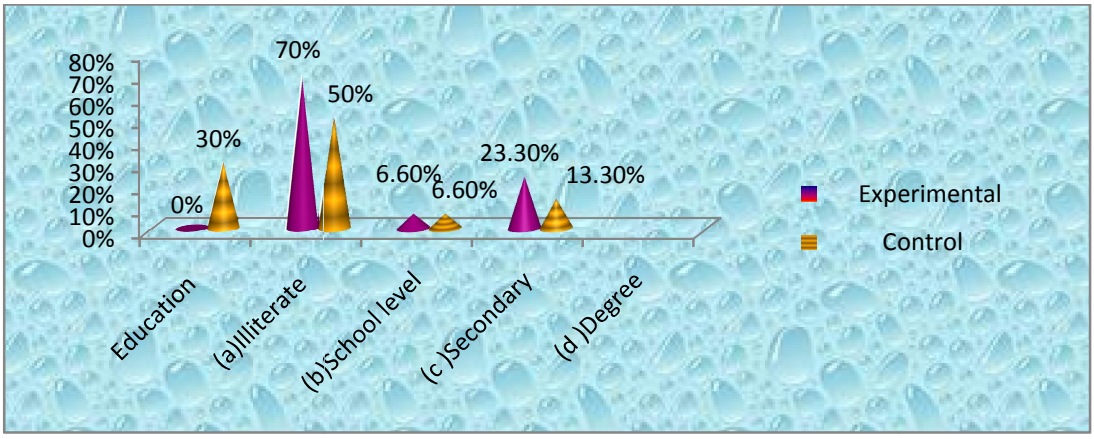

FIGURE –II ***SHOWS FREQUENCY AND DISTRIBUTION EDUCATIONAL STATUS AMONG ANTENATAL WOMEN***

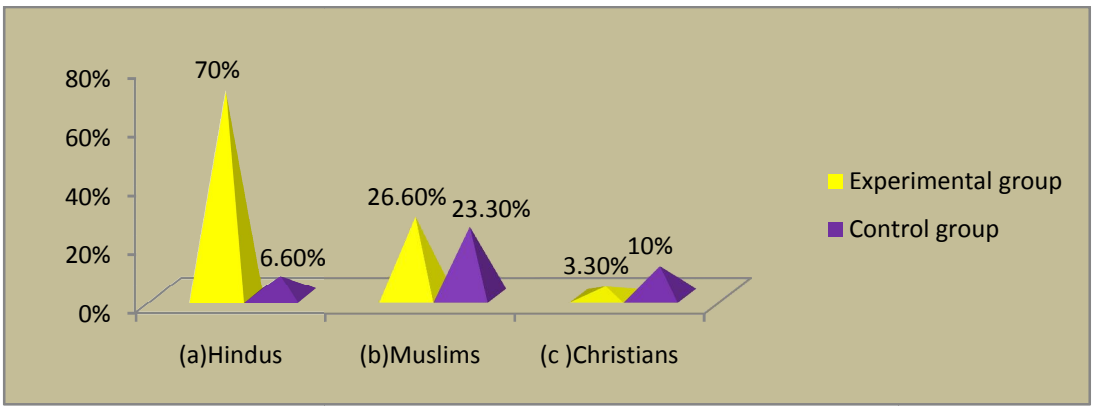

FIGURE –III ***SHOWS FREQUENCY AND DISTRIBUTION RELIGION AMONG ANTENATAL WOMEN***

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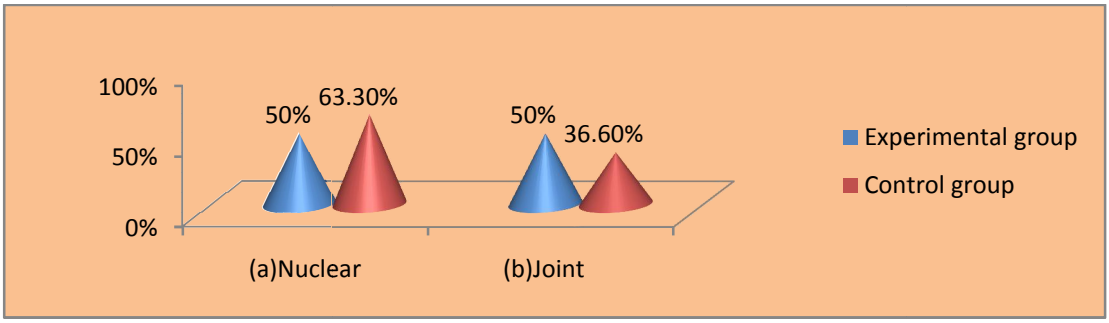

FIGURE–IV *SHOWS FREQUENCY AND DISTRIBUTION TYPE OF FAMILY AMONG ANTENATAL WOMEN*

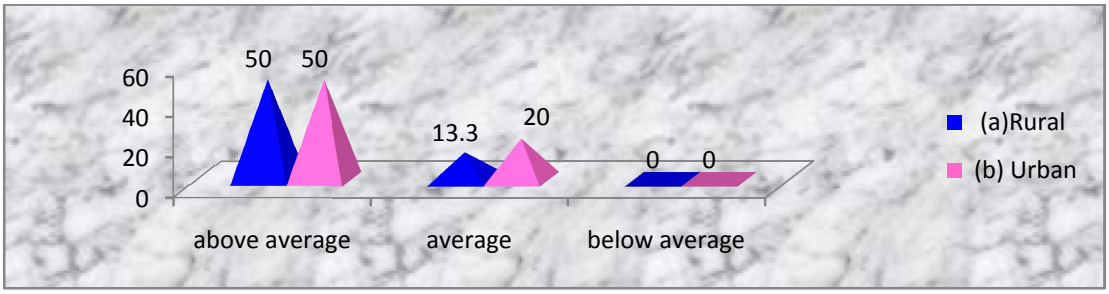

FIGURE –V *SHOWS ASSOCIATION OF OUTCOME OF PREGNANCY WITH RESIDENCE AMONG EXPERIMENTAL GROUP ANTENATAL WOMEN*

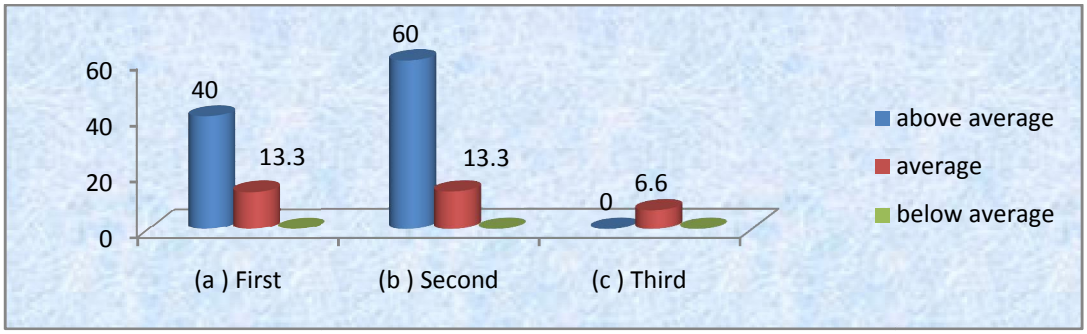

FIGURE -VI *SHOWS ASSOCIATION OF OUTCOME OF PREGNANCY WITH NO OF DELIVERIES AMONG EXPERIMENTAL GROUP ANTENATAL WOMEN*

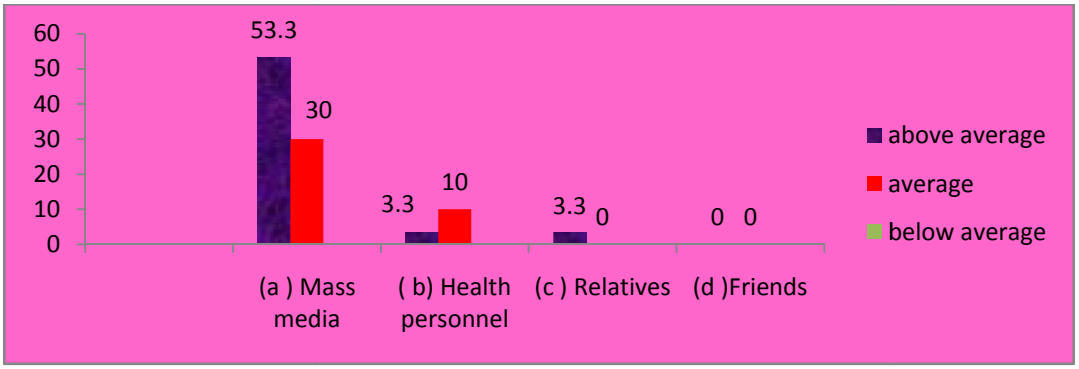

FIGURE- VII *SHOWS ASSOCIATION OF OUTCOME OF PREGNANCY WITH SOURCE OF HEALTH INFORMATION AMONG EXPERIMENTAL GROUP ANTENATAL WOMEN*

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SECTION- II

TABLE-2: DISTRIBUTION OF POST TEST SCORES ON OUT COME OF PREGNANCY AMONG EXPERIMENTAL AND CONTROL GROUP WOMEN.

S. no	Criteria	Outcome of pregnancy					
		below average		Average		above average	
		No	%	No	%	No	%
1	Experimental group	-	-	12	39.9	18	50.3
2	Control group	-	-	25	83	5	17

The above table shows the distribution of the level of outcome of Pregnancy among the experimental group and control group women. The data reveals that out of 30 samples 18 (50.3%) women had above Average score and 12 (39.9%) had average score. It shows the distribution of the level of outcome of Pregnancy among the control Group. The data reveals that out of 30 Samples 5 (17 %) women had above average score and 25 (83 %) had Average score. The hypothesis was accepted that there will be a Statistical Significance on antenatal exercises on outcome of pregnancy among Women.

SECTION- III

TABLE-3: DISTRIBUTION OF COMPARATIVE VALUES ON OUT COME OF PREGNANCY SCORES AMONG THE EXPERIMENTAL AND CONTROL GROUP WOMEN.

S. no	Outcome of pregnancy	Mean	Standard deviation	"t' value
1	Experimental group	20.96	1.126	4.0987
2	Control group	18.63	1.135	(p< 0.05)

t-tab value; 2.58 (p< 0.05)

Table - Shows that effectives of antenatal exercises on outcome of pregnancy among antenatal women. It shows the experimental group mean 20.96, and Standard deviation 1.126, and control group mean 18.63, and Standard Deviation 1.135 . t- Cal value = 4.0987, t-tab 2.58 (p< 0.05) with (30-1), t-calculated value > t-table value. There is a significant relationship between the post score values of experimental and control group. Hence we accepted the research hypothesis.

IV. RESULT

SECTION –IV

TABLE –4: ASSOCIATION BETWEEN THE SOCIO DEMOGRAPHIC VARIABLES WITH THE POST TEST SCORES AMONG EXPERIMENTAL ANTENATAL WOMEN.

S.N 0	DEMOGRAPHIC VARIABLES	POST TEST SCORES IN EXPERIMENTAL GROUP						CHI SQUARE VALUE
		ABOVE AVERAGE (21-30)		AVERAGE (11-20)		BELOW AVERAGE (up to 10)		
		f	%	f	%	f	%	
1	Age							2.766
	(a)19-23yrs	13	43.310	7	23.3	0	0	NS
	(b)24-29yrs	3	6.6	5	16.6	0	0	4 df
	(c) 30-35yrs	2	0	0	0	0	0	(p< 0.05)
2.	Education							
	(a)Illiterate	0	0	0	0	0	0	3.366
	(b)School level	12	40	9	30	0	0	NS
	(c)Secondary	2	6.67	0	0	0	0	6 df
	(d)Degree	5	16.67	2	6.67	0	0	(p< 0.05)

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3	Religion (a)Hindus (b)Muslims (c)Christians	13 6 1	43.3 20 3.3	8 2 0	26.6 6.6 0	0 0 0	0 0 0	3.29 NS 4 df (p< 0.05)
4	Type of family (a)Nuclear (b)Joint	13 7	43.3 23.7	2 8	6.6 26.6	0 0	0 0	1.038 NS 2 df (p< 0.05)
5	Residence (a)Rural (b) Urban	10 10	50 50	4 6	13.3 20	0 0	0 0	1.176 NS 2 df (p< 0.05)
6	No of deliveries (a) First (b) Second (c) Third	12 18 0	40 60 0	4 4 2	13.3 13.3 6.6	0 0 0	0 0 0	2.945 NS 4 df (p< 0.05)
7	Source of health information (a) Mass media (b) Health personnel (c) Relatives (d)Friends	16 1 1 0	53.3 3.3 3.3 0	9 3 0 0	30 10 0 0	0 0 0 0	0 0 0 0	4.033 NS (6d.o.f) (p< 0.05)

NS-Not significant : df- degrees of freedom

The above table shows that association between the socio demographic variables among the post test scores of antenatal experimental women. There is no significant relationship between all the socio demographic variables with the post test scores of antenatal women in experimental group

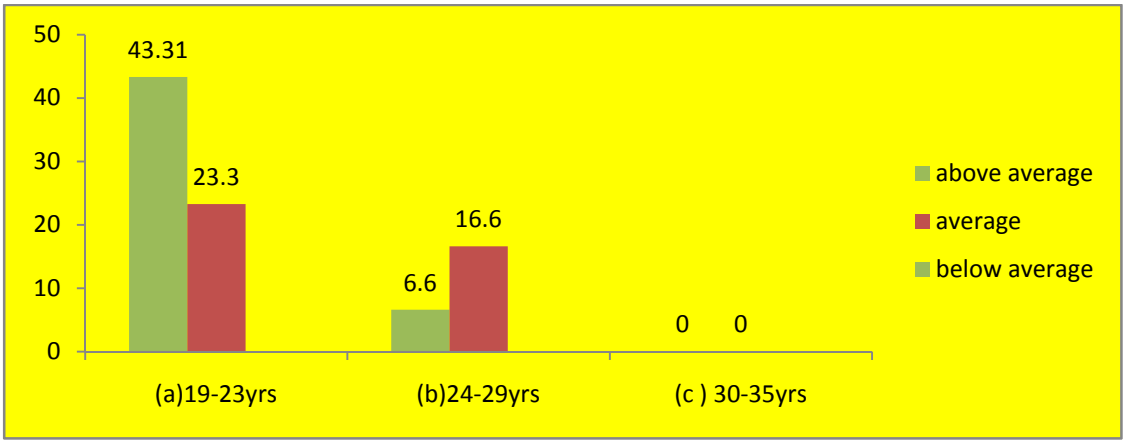

FIGURE- VIII *SHOWS ASSOCIATION OF OUTCOME OF PREGNANCY WITH AGE AMONG EXPERIMENTAL GROUP ANTENATAL WOMEN*

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V. SUMMARY AND MAJOR FINDINGS

5.1 SUMMARY OF THE STUDY

The study was conducted from 6-3-2021 to 8-4-2022 at the antenatal OPD in G S Medical College and Hospital, Hapur. A sample of 60 antenatal women were selected ,among this 30 in experimental group and 30 in control group by using convenient sampling technique . Antenatal exercises were demonstrated to each experimental group antenatal mother for about 25 minutes. An observation checklist was used to assess the effectiveness of antenatal exercises on outcome of pregnancy among experimental group antenatal women.

5.2 MAJOR FINDINGS OF THIS STUDY

1. This study has proved the effectiveness of antenatal exercises on outcome of pregnancy among experimental group antenatal women.
2. The effectiveness of antenatal exercises was assessed by using independent" t" test.
3. The association between the socio demographic variables and effectiveness of antenatal exercises on outcome of pregnancy among experimental group women was assed by using chi- square test.

NURSING IMPLICATIONS

This study showed that the above average outcome of pregnancy in experimental group of antenatal women has achieved rather than the control group women after practice of antenatal exercises .The nurses and health workers can initiate the Antenatal women to practice antenatal exercises after completion of early months of pregnancy.

NURSING PRACTICE

Health education is an integral part of nursing service. The nurse can be an instrument in helping the antenatal women to practice antenatal exercises. The demonstration of antenatal exercises to the antenatal women proved the achievement of above average outcome of pregnancy and hence such demonstrations and teaching programmes can be planned by the nurses for antenatal women depending on the condition of pregnancy. This facilitates the achievement of above average outcome of pregnancy and helps in postnatal complications. The community health nurse also has a responsibility to teach antenatal exercises to antenatal women to achieve good outcome of pregnancy. The community health nurse also has a responsibility to teach antenatal exercises to antenatal women to achieve good outcome of pregnancy.

VI. RECOMMENDATIONS

Health education booklets, pamphlets and leaflets can be given to the antenatal women who are all able to read in the local language regarding antenatal exercises and it's importance.

The study can be conducted at PHC & Homes to provide the good outcome of pregnancy among the antenatal women.

SUGGESTIONS FOR FURTHER STUDY

1. Similar study can be initiated in other hospitals in various districts and states in collaboration with RCH programme.
2. A similar study can be conducted a large sample
3. A video teaching based intervention can be done to assess the effectiveness of antenatal exercises on outcome of pregnancy among antenatal women.

VII. CONCLUSION

The conclusion drawn from this study was that there was a significant difference between the post test scores of experimental group women and control group women. This showed that the antenatal exercises were beneficial during antenatal period based on the outcome of pregnancy among experimental group and the control group women.

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