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A Pre-Experimental Study To Assess A Study To Assess The Effectiveness Of Yoga On Minor Physical Problems Among Antenatal Mothers Attending Antenatal Outpatient Department In Government Hospital Sagar.

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ABSTRACT

A pre-experimental study to assess a study to assess the effectiveness of Yoga on Minor Physical Problems Among Antenatal Mothers Attending Antenatal Outpatient Department In Government hospital Sagar.

Conceptual framework adopted for this study was general system theory. The research design used in this study was one group pretest, posttest design. Thesamples were selected by using convenient sampling technique. The sample size consisted of 90 antenatal mothers. The instrument used for the data collection wasnumerical rating scales to assess the level of low back pain, level of edema, level of leg gramps among antenatal mothers. The interventional strategy consisted of yoga which simple posture to relax, leg folding, leg cross, leg straight leg sideward, chair twisting, Triangle posture, calf stretch sitting on heal exercises. Data was collected for a period of 6 weeks among antenatal mothers. The collected data were analysed by using descriptive statistics (frequency percentage, mean and standard deviation) and inferential statistics ('t' test and Chi-Square) to test the study hypothesis. Major Study Findings: Regarding to the effectiveness of yoga on minor physical problems amongantenatal mothers. The Post test mean value was lower than the pre test mean valueregarding low back pain, leg edema, leg gramps among antenatal mothers. The obtained 't' value for low back pain 7.584 was significant at P=0.00 level. The obtained 't' value for leg edema 4.08 was significant at P=0.00 level. The obtained't' value for leg gramps 4.76 was significant at P=0.00 level. There is no association

between effect of yoga on minor physical problem among antenatalmothers with their selected demographic variables.

Yoga is becoming increasingly accepted everywhere as part of self care during pregnancy and preparation for childbirth and motherhood. So, yoga must betaught in the antenatal period and can be practical from early pregnancy.

INTRODUCTION

Pregnancy is one of most important events that happen in women. During pregnancy women feel anxious and apprehensive as they receive lots of advice andmedical information. The mother is carrying a new life within her, her body mustmake certain adaptations, these adaptations of the body can be very annoying andby some intervention that help the pregnant mother to carry her pregnancy more comfortable and safely. Changes of body during pregnancy can bring minor problems that cause irritation and discomforts.

Pregnancy is a wonderful time in a women life, but many changes that takeplace in a women's body may be uncomfortable. Nutrition, exercise, rest and dailycare will help with most of the aches and strains of pregnancy. Having anestablished regimen can alleviate most discomforts.

Complementary therapies to help pregnancy more relaxing and fulfilling. Many women choose to complement traditional medicine with alternative treatments during their pregnancy. Alternative therapies can relax and heal the body and spirit and make pregnancy more enjoyable. There are many different forms of complementary therapy but one of the more popular one is prenatal Yoga.

Yoga is the project way to stay flexible create energy, relieve stress and prepare for birth. Yoga has increased in popularity in recent years and shown to lower blood pressure, improve sleep indigestion, strength muscles and points increase flexibility. The reduction of the strain during pregnancy is essential whichis done by gentle exercise and relaxation. This must be taught in the antenatal period and can be practical from early pregnancy. During pregnancy, many womendevelop backache because of hormonal and postural changes.

Yoga is also exercise and relaxation technique which control the body andmind of women and alleviate the discomforts caused by pregnancy.

In our country most of the pregnant women were not aware about yoga, practice and benefits during pregnancy. There is a need for action. This promotedme to do research to assess the effect of Yoga on minor physical problems amongantenatal mothers.

Problem Statement

A study to assess the effectiveness of yoga on selected minor physical problems among antenatal mothers attending antenatal outpatient department inGovernment hospital Sagar.

Objectives

- To assess the selected minor physical problems among the antenatalmothers.
- To find out the effectiveness of yoga on selected minor physical Problemsamong the antenatal mothers after practice.
- To associate the effect of yoga on selected minor physical problems withselected demographic variables.

Research Approach

The research approach used in this study was quantitative approach.

Research Design

The research Design used in this study was Pre experimental Design.

Setting

The study was conducted in the outpatient department of Sagar Government Hospital.

It is a rural center with is 40 bedded and enhanced with MCH & General health facilities of treatment of minor physical problems, Lab , Pharmacy and specifically maternity facilities Including labour, LSCS and family planning. Monday & Tuesday conducting antenatal clinic which is about 80-100 mothers coming for antenatal check-up.

Population

All antenatal mothers

Sample

The sample consists of antenatal mothers who are attending antenatal outpatient department in Sagar government hospital, whose gestational age above 12weeks.

Sample size

The sample size selected for this study was 90 antenatal mothers attending antenatal outpatient department in Sagar Government Hospital, whose gestational age above 12weeks.

Sampling Technique

The samples selected by using a convenient sampling technique.

Criteria For Sample Selection

Inclusion criteria:

Antenatal mothers of 2 and 3 trimesters (gestational ages above 12 weeks)

Antenatal mothers who are willing to participate in the study.

Antenatal mothers with minor physical problems.

Exclusion Criteria:

Antenatal mothers who are not willing to participate in the study.

Antenatal mothers who are having obstetrical and medical complication.

Data Collection Tool

Description of Data Collection Tool

As the study aimed at evaluating the effectiveness of yoga among antenatalmothers with minor physical problems, the data collection instruments weredevolved through extensive review of literature, in consultation with the experts and with opinion of faculty members.

The instrument used in study was demographic variables Performa, ratingscales on low back pain, leg edema, leg gramps.

Demographic Variable Performa

The demographic variables included in the Performa were age, religion, education type of family, family income, source of information, gravida.

Rating Scales

Rating scale for low back painRating scale for Leg edema Rating scale for leg cramps

Validity and Reliability

The tool was developed through a review of literature. For content validityand the instrument was reviewed by experts in the area of the study.

The Reliability of the tool was established by conducting the pilot study and tool was tested by using interrelated method. The Reliability of the tool in low back pain was found R = 0.97 leg edema was found R = 0.93 leg cramps was found R = 0.94 which indicates that rating scale is reliable.

Pilot Study

The Pilot study was conducted on a sample of 6 antenatal mothers at Sagar Government hospital. The results showed that the instrument valid and reliable.

Data Collection Procedure

Data collection is the gathering of the information needed to address a research problem. The data collection was done for six weeks. Formal permissionto conduct the study was obtained from the medical officer of Government hospital Sagar. The participants were selected based on the selection criteria. The data was collected in the following pattern.

The sample was selected from the outpatient department and a good rapport was established with the participants. The purpose of the study was explained and written consent was obtained.

Rating scales on low back Pain, Leg edema, leg cramps used to assessed minorphysical problems in pre test. Yoga was taught to antenatal mothers and post testwas done last week of data collection period.

The Section 1 deals with distribution of demographic variables of antenatal motherswith minor physical problems.

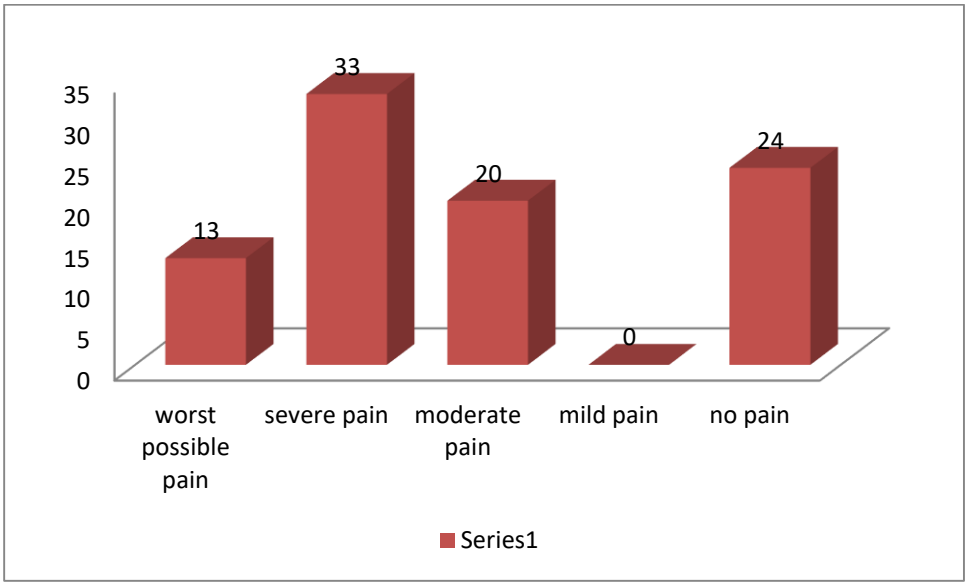
Demographic variables	Antenatal mothers	
	No.	%
Age in years Below 20 yrs	15	16.7
b) 21 - 25 yrs	56	62.2

c) 26 – 30 yrs	17	18.9
d) Above 30 yrs	2	2.2
Religion Hindu	82	91.1
b) Christian	5	5.6
c) Muslim	3	3.3
Education Illiterate	1	1.1
b) Primary	18	20.0
c) Secondary	58	64.4
d) Graduate	13	14.4
Type of Family Nuclear family	34	37.8
b) Joint family	56	62.2
5. Family Income		
a) Rs. 5000 - 10000	47	52.2
b) Rs. 10001 - 15000	43	47.8
Source of information Yes	32	35.6
b) No	58	64.4
Gravida Primi	64	71.1
b) Multi	26	28.9

The data presented in above table that reveals with regard to age the majority of antenatal mothers 56(62.2%) belonged to age group of 21-25 years, 82(91%) were hindu religion, regarding education of antenatal mothers 58(64.4%)had secondary education, 56(62.2%) belonged joint family, regarding family income majority 47(52.2%) of antenatal mothers had the income of Rs. 5000- 10000 per month, 58(64.4%) antenatal mothers known about yoga , with regards gravida majority of antenatal mothers 64(71.1%) were primi. This clearly indicatesthat there was a need to educate yoga among antenatal mothers.

Section II: This Section deals with assessment of minor physical problems among antenatal mothers

Figure 1Percentage distribution of low back pain amongantenatal mothers in pretest



The Figure 1 depicts the score obtained the level of low back pain experienced among antenatal mothers in pre test. Out of 90 mothers 13(14.4%) hadworst possible pain, 33(36.7%) had severe pain, 20(22.2%) had moderate pain, 24(26.4%) had no pain.

Figure 2Percentage distribution of leg edema amongantenatal mothers in pretest

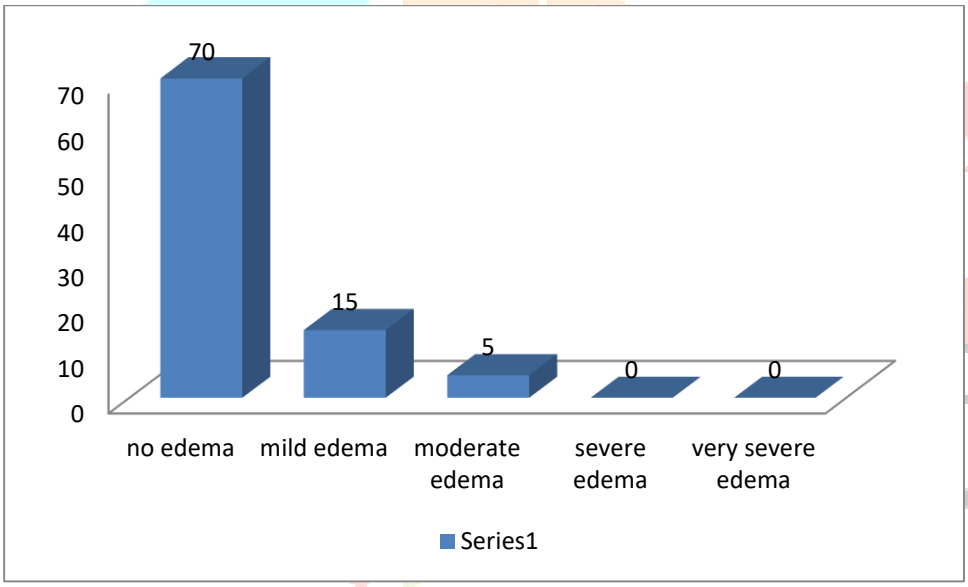
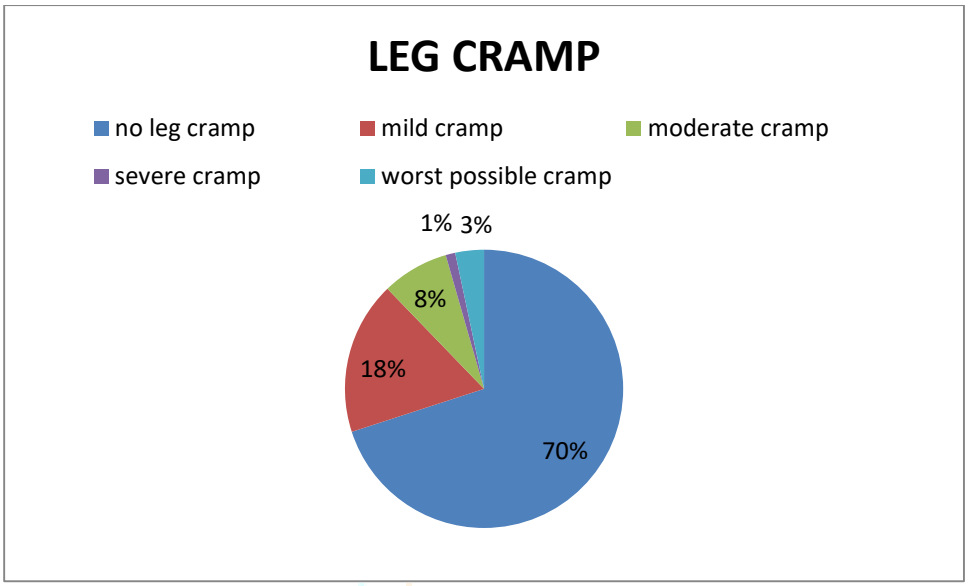


Figure 2 Percentage distribution of leg edema amongantenatal mothers in pretest

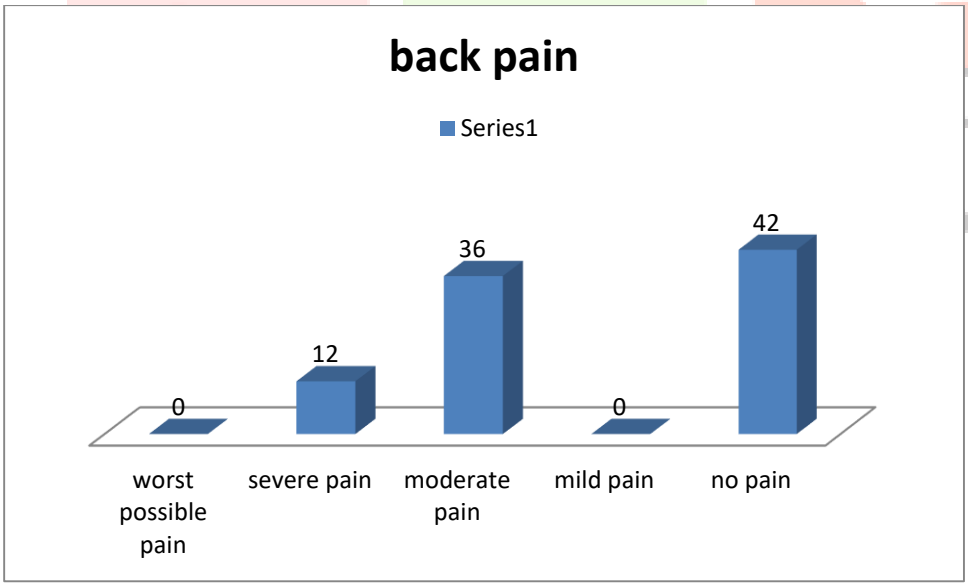
The above Figure 2 shows that the level of leg edema among antenatal mothers in pre test. Out of 90 mothers 5(5.6%) had moderate edema, 15(16.7%) had mild edema, 70(77.8%) had no edema.

Figure 3 Percentage distribution of leg cramps amongantenatal mothers in pretest



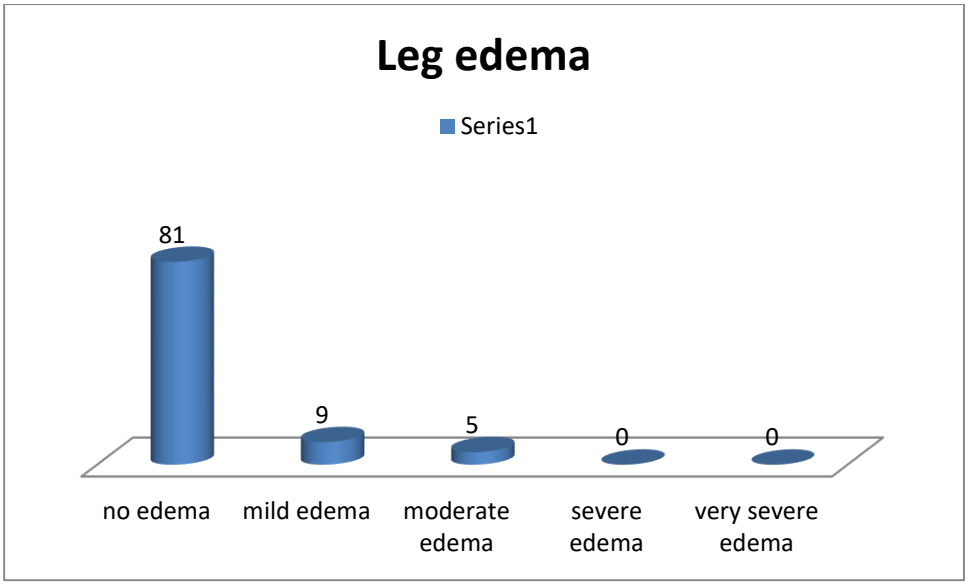
The above Figure 3 shows that the level of leg cramps among antenatal mothers in pre test. Out of 90 mothers 3(3.3%) had worst possible cramps, 1(1.1%)had severe cramps, 16(17.8%) had mild cramps, 63(70.0%) had no leg cramps. This clearly indicates that there was a need teach yoga among the antenatal mothers to reduce minor physical problems.

Figure 4 Percentage distribution of low back pain amongantenatal mothers in posttest



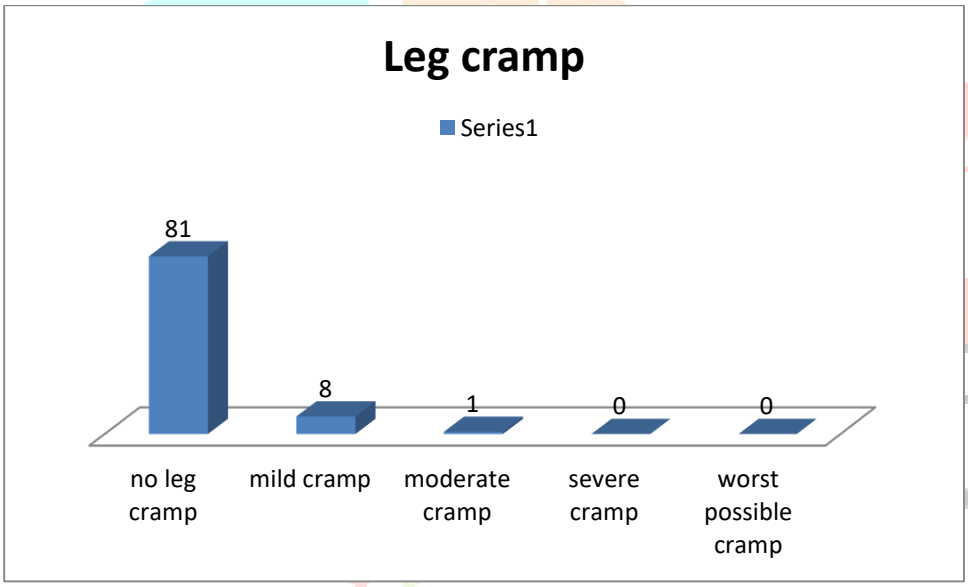
The above Figure 4 depicts the score obtained the level of low back pain experienced among antenatal mothers in post test. Out of 90 mothers 12(13.3%) had severe pain, 36(40.0%) had moderate pain, 42(46.7%) had no pain.

Figure 5 Percentage distribution of leg edema amongantenatal mothers in posttest



The above Figure 5 shows that the level of leg edema among antenatal mothers in post test. Out of 90 mothers 9(10.0%) had mild leg edema, 81(90.0%)had no leg edema.

Figure 6 Percentage distribution of leg cramps amongantenatal mothers in posttest



The above Figure 6 shows that the level of leg cramps among antenatal mothers in post test. Out of 90 mothers 1(1.1%) had moderate leg cramps, 8(8.9%)had mild leg cramps, 81(90.0%) had no leg cramps.

Effectiveness of low back pain score among antenatal mothers

Law back pain score	Mean	SD	Mean difference	t value	
Pretest pain	2.21	0.15	0.922	7.584	P=<0.05 Significant
Post test pain	1.20	0.12			

Table reveals that pain score in pre test (2.21) mean score and the standard deviation value (0.15). Post test (1.20) mean score and the standard deviation value(0.12). The mean difference between pre test and

the post test was 0.922 and standard deviation difference was 1.15. The obtained t' value was 7.584 significantat P=0.00.

There is a significant difference between post pains it was inferred that Yogais effective in reducing low back pain among antenatal mothers.

Effectiveness of leg edema among antenatal mother

LEG EDEMA	Mean	SD	Mean difference	t value	
Pretest	0.28	0.56	0.18	4.057	P=<0.05 Significant
Post test	0.10	0.30			

TABLE reveals that leg edema score in pre test (0.28) mean score and the standarddeviation value (0.56). Post test (0.10) mean score and the standard deviation value(0.30). The mean difference between pre test and the post test was 0.18 and standard deviation difference was 0.41. The obtained t' value was 4.087 significantat P=0.00.

There is a significant difference between post leg edema it was inferred thatYoga is effective in reducing leg edema among antenatal mothers.

Effectiveness of leg cramps among antenatal mothers

LEG CRAMP	Mean	SD	Mean difference	t value	
Pretest	3.50	0.94	0.39	4.763	P=<0.05 Significant
Post test	3.89	0.35			

Table reveals that leg cramps score in pre test (3.50) mean score and thestandard deviation value (0.94). Post test (3.89) mean score and the standard deviation value (0.35). The mean difference between pre test and the post test was 0.39 and standard deviation difference was 0.77. The obtained t' value was 4.763significant at P=0.00.

There is a significant difference between post leg cramps it was inferred that Yoga is effective in reducing leg cramps among antenatal mothers.

Association between Level of Pain in Pre Test and Demographic Variables among Antenatal Mothers

Demographic variables	No pain	%	Moderate pain	%	Severe pain	%	Very severe pain	%	Chi square & P values
	No.	%	No.	%	No.	%	No.	%	
1. Age in years									$\chi 2 = 7.438$,
a) Below 20 yrs	4	26.7	4	26.7	4	26.7	3	20.0	d.f = 9
b) 21 - 25 yrs	14	25.0	11	19.6	23	41.1	8	14.3	P=0.592 (N.S)

c) 26 – 30 yrs	4	23.5	5	29.4	6	35.3	2	11.8	
d) Above 30 yrs	2	100.0	0	0.0	0	0.0	0	0.0	
2. Religion									χ 2 = 5.928,
a) Hindu	22	26.8	16	19.5	32	39.0	12	14.6	d.f = 6
b) Christian	1	20.0	2	40.0	1	20.0	1	20.0	P=0.431(N.S)
c) Muslim	1	33.3	2	66.7	0	0.0	0	0.0	
3. Education									χ 2 = 13.794,
a) Illiterate	0	0.0	0	0.0	1	100.01	0	0.0	d.f = 9
b) Primary	8	44.4	3	16.7	3	6.7	4	22.2	P=0.130(N.S)
c) Secondary	12	20.7	16	27.6	21	36.2	9	15.5	
d) Graduate	4	30.8	1	7.7	8	61.5	0	0.0	
4. Type of Family									χ 2 = 2.181,
a) Nuclear family	8	23.5	6	17.6	13	38.2	7	20.6	d.f = 3
b) Joint family	16	28.6	14	25.0	20	35.7	6	10.7	P=0.536 (N.S)
5. Family Income									χ 2 = 2.147,
a) Rs. 5000 - 10000	11	23.4	11	23.4	16	34.0	9	19.1	d.f = 3
b) Rs. 10001 15000	13	30.2	9	20.9	17	39.5	4	9.3	P=0.543 (N.S)
6. Source of Information									χ 2 = 4.416, d.f = 3
a) Yes	12	37.5	4	12.5	11	34.4	5	15.6	P=0.220 (N.S)
b) No	12	20.7	16	27.6	22	37.9	8	13.8	
7. Gravida									χ 2 = 5.451,
a) Primi	21	32.8	12	18.8	21	32.8	10	15.6	d.f = 3
b) Multi	3	11.5	8	30.8	12	46.2	3	11.5	P=0.142 (N.S)

It can be inferred from table 2 that there was no significant association between the demographic variables and level of low back pain among antenatal mothers inpre test.

Association between Level of Edema in Pre Test and DemographicVariables among Antenatal Mothers

	No.	%	No.	%	No.	%	value
1. Age in years							$\chi 2 = 3.663$,
a) Below 20 yrs	12	80.0	2	13.3	1	6.7	d.f =6
b) 21 - 25 yrs	44	78.6	10	17.9	2	3.6	P=0.722
c) 26 – 30 yrs	13	76.5	2	11.8	2	11.8	(N.S)
d) Above 30 yrs	1	50.0	1	50.0	0	0.0	
2. Religion							$\chi 2 = 3.099$,
a) Hindu	65	79.3	12	14.6	5	6.1	d.f = 4
b) Christian	3	60.0	2	40.0	0	0.0	P=0.541
c) Muslim	2	66.7	1	33.3	0	0.0	(N.S)
3. Education							$\chi 2 = 10.859$,
a) Illiterate	1	100.	0	0.0	0	0.0	d.f = 6
b) Primary	16	0	2	11.1	0	0.0	P=0.093
c) Secondary	46	88.9	10	17.2	2	3.4	(N.S)
d) Graduate	7	79.3	3	23.1	3	23.1	
		53.8					
4. Type of Family							$\chi 2 = 0.723$,
a) Nuclear family	27	79.4	6	17.6	1	2.9	d.f = 2
b) Joint family	43	76.8	9	16.1	4	7.1	P=0.697
							(N.S)
5. Family Income							$\chi 2 = 1.139$,
a) Rs. 5000 - 10000	38	80.9	6	12.8	3	6.4	d.f = 2
b) Rs. 10001 - 15000	32	74.4	9	20.9	2	4.7	P=0.566
							(N.S)
6. Source of							$\chi 2 = 0.076$,
information	25	78.1	5	15.6	2	6.3	d.f = 2
a) Yes	45	77.6	10	17.2	3	5.2	P=0.963
b) No							(N.S)
7. Gravida							$\chi 2 = 4.791$,
a) Primi	46	71.9	14	21.9	4	6.3	d.f = 2
b) Multi	24	92.3	1	3.8	1	3.8	P=0.091
							(N.S)

It can be inferred from table 4 that there was no significant association between the demographic variables and level of leg edema among antenatal mothers in pre test.

Table 6: Association between Level of Leg Cramp Grading in Pre Test andDemographic Variables among Antenatal Mothers

	No.	%	No.	%	No.	%	
1. Age in years							$\chi 2 = 4.799$,
a) Below 20 yrs	13	86.7	1	6.7	1	6.7	d.f =6
b) 21 - 25 yrs	36	64.3	11	19.6	9	16.7	P=0.570 (N.S)
c) 26 – 30 yrs	12	70.6	4	23.5	1	5.9	
d) Above 30 yrs	2	100.0	0	0.0	0	0.0	
2. Religion							$\chi 2 = 2.124$,
a) Hindu	56	68.3	15	18.3	11	13.4	d.f = 4
b) Christian	4	80.0	1	20.0	0	0.0	P=0.713(N.S)
c) Muslim	3	100.0	0	0.0	0	0.0	
3. Education							$\chi 2 = 7.404$,
a) Illiterate	1	100.0	0	0.0	0	0.0	d.f = 6
b) Primary	9	50.0	6	33.3	3	16.7	P=0.285 (N.S)
c) Secondary	43	74.1	7	12.1	8	13.8	
d) Graduate	10	76.9	3	23.1	0	0.0	
4. Type of Family							$\chi 2 = 0.013$,
a) Nuclear family	24	70.6	10	17.9	4	11.8	d.f = 2
b) Joint family	39	69.6	6	17.6	7	12.5	P=0.994 (N.S)
5. Family Income							$\chi 2 = 0.307$,
a) Rs. 5000 - 10000	33	70.2	9	19.1	5	10.6	d.f = 2
b) Rs. 10001 - 15000	30	69.8	7	16.3	6	14.0	P=0.858 (N.S)
6. Source of information							$\chi 2 = 0.608$,
a) Yes	21	65.6	7	21.9	4	12.5	d.f = 2

b) No	42	72.4	9	15.5	7	12.1	P=0.738 (N.S)
7. Gravida							χ 2 = 0.181,
a) Primi	44	68.8	12	18.8	8	12.5	d.f = 2
b) Multi	19	73.1	4	15.4	3	11.5	P=0.913 (N.S)

It can be inferred from table 6 that there was no significant association between the demographic variables and level of leg cramps among antenatal mothers in pre test.