CHAPTER 4

Analysis and Interpretation of Data

This chapter deals with the analysis and interpretation of data collection from all the samples to determine the effect of planned teaching on knowledge and self expressed practices among women during perimenopause in relation to management of selected physical components of menopause, affecting health related quality of life (HRQoL). Data analysis was based on the objectives and hypothesis of the study. They are as mentioned below:

Objectives of the Study

1. To find out the existing symptoms of menopause affecting physical health related quality of life (HRQoL) among women during perimenopause.

2. To assess the existing knowledge and self expressed practices of women, in relation to management of selected physical components of menopause before teaching.

3. To assess the effect of planned teaching on knowledge and self expressed practices of women, in relation to management of selected physical components of menopause after teaching.

4. To compare the effect of planned teaching on knowledge and self expressed practices of women, in relation to management of selected physical components of menopause before and after teaching.

5. To find the association between selected demographic and personal characteristics and knowledge and self expressed practices of women in relation to management of selected physical components of menopause.

6. To find out the views of women about the instructional manual

Hypotheses

Ho1.The planned teaching has no significant effect on the level of knowledge among women during perimenopause in relation to management of selected physical components of menopause affecting health related quality of life.

Ho2.The planned teaching has no significant effect on self expressed practices among women during perimenopause in relation to management of selected physical components of menopause affecting physical health related quality of life.

Ho3.The planned teaching has no significant association between knowledge, self expressed practices and selected demographic characteristics (age, marital status, education,) and personal characteristics (medical checkup, breast self examination and PAP smear) of women.

The data collected from 300 women were summarized, compared and inferences were drawn based on the objectives of the study and hypothesis. The data were analyzed using SPSS version 17.0 and the results are organized under following headings.

4.1 Section I :

This section presents the distribution of subjects on following characteristics.

I A) Demographic Characteristics

I B) Personal Characteristics

4.2 Section II :

Distribution of subject based on existing status of menopause affecting HRQoL using Menopause Rating Scale.

4.3 Section III :

This section presents the effectiveness of Planned Teaching Program on knowledge and self expressed practices among study subjects in relation to management of selected physical components of menopause affecting HRQoL.

A) Comparison of overall knowledge and practices during pre test and post test.

B) Comparison of item wise knowledge during pre and post test

C) Comparison of item wise practices during pre and post test

D) Comparison of overall and item wise mean scores, on knowledge and practices during pre and post test.

4.4 Section IV: This section presents the association between, knowledge and self expressed practices in relation to management of selected physical components of menopause and selected demographic and personal characteristics of perimenopausal women.

A) Association between knowledge and demographic and personal characteristics

B) Association between practices and demographic personal characteristics

4.6 Section V: This section presents the views of participants regarding the information booklet

4.1 Section - I

This section presents the demographic and personal characteristics of subjects. Descriptive statistics such as frequencies and percentage were used to describe the demographic and personal data. The data are presented as section I A and B.

Section I A discusses with the demographic characteristics of subjects. The data are presented in Table - 1, 2, 3 and Figures 3, 4, 5, and 6.

Description of tables

1. Frequency distribution of subjects based on age, marital status and age of marriage.
2. Frequency distribution of subjects based on educational and occupational status.
3. Frequency distribution of subjects based on monthly income and type of family.

Table – 1

Frequency distribution of subjects based on age, marital status and age of marriage. N= 300

Demographic Characteristics	N	%
Age in Years		
40 to 42	104	34.0
43 to 45	70	23.0
46 to 48	56	19.0
49 to 51	38	13.0
52 to 55	32	11.0
Marital status		
Unmarried	4	1.3
Married	282	94.0
Divorced	1	0.3
Widow	13	4.4
Age of marriage		
Unmarried	4	1.3
< 10 years	1	0.3
10 to 14 Years	4	1.3
15 to 18 years	22	7.3
19 to 22 Years	106	35.4
23 to 26 Years	114	38.0
27 to 30 Years	33	11.0
> 30 Years	16	5.4

Table 1 indicates most of the subjects were in the age group of 40 to 42 years. Majority (94%) of subjects were married and most of them got married at the age group of 19 to 22 (35.30%) and 23 to 26 years (38%). ***Figure 3 & 4***

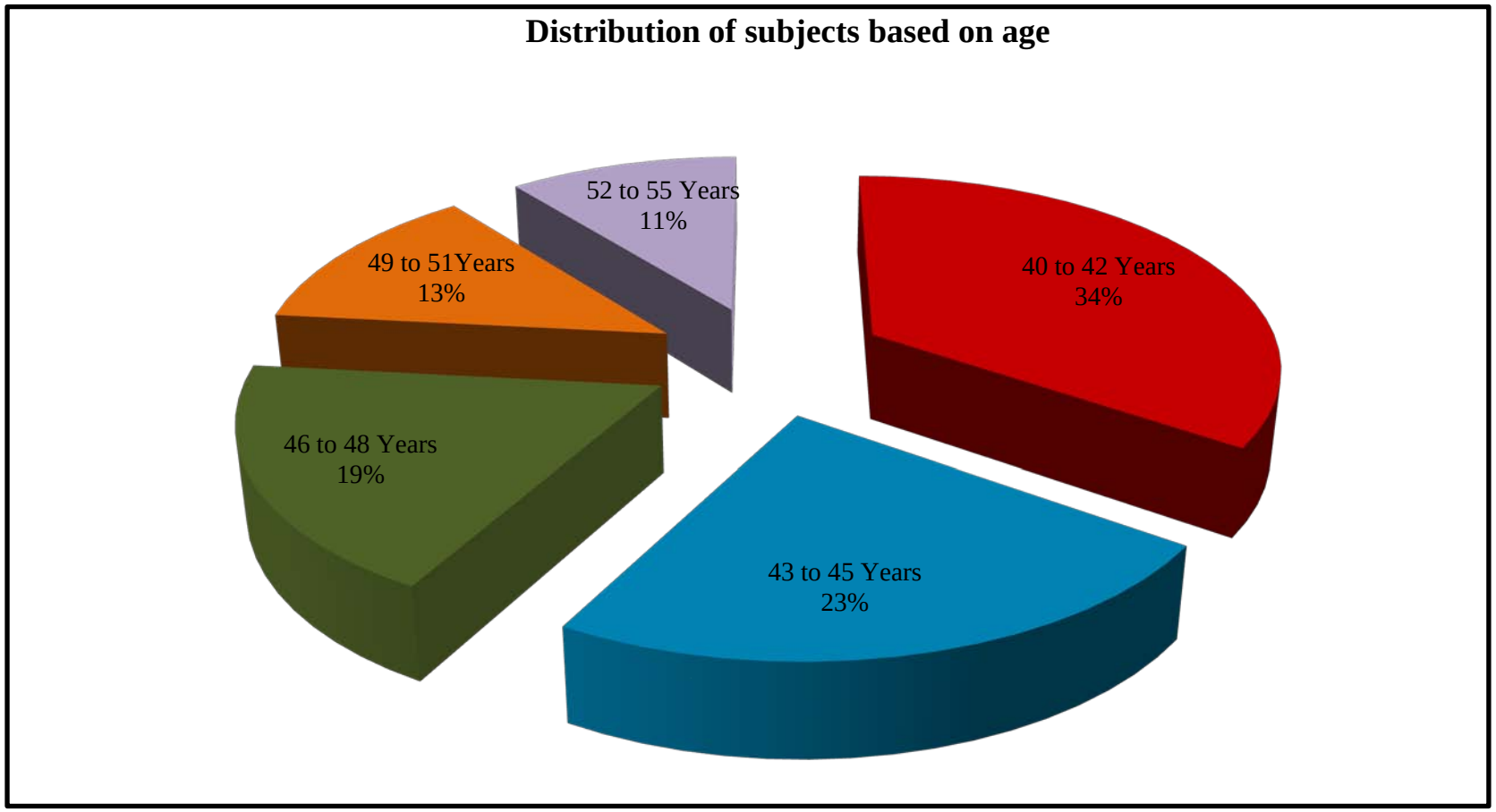

***Figure 3*: Distribution of subjects based on age in years indicates that,** majority (34%) of the subjects were in the age group of 40 – 42 years.

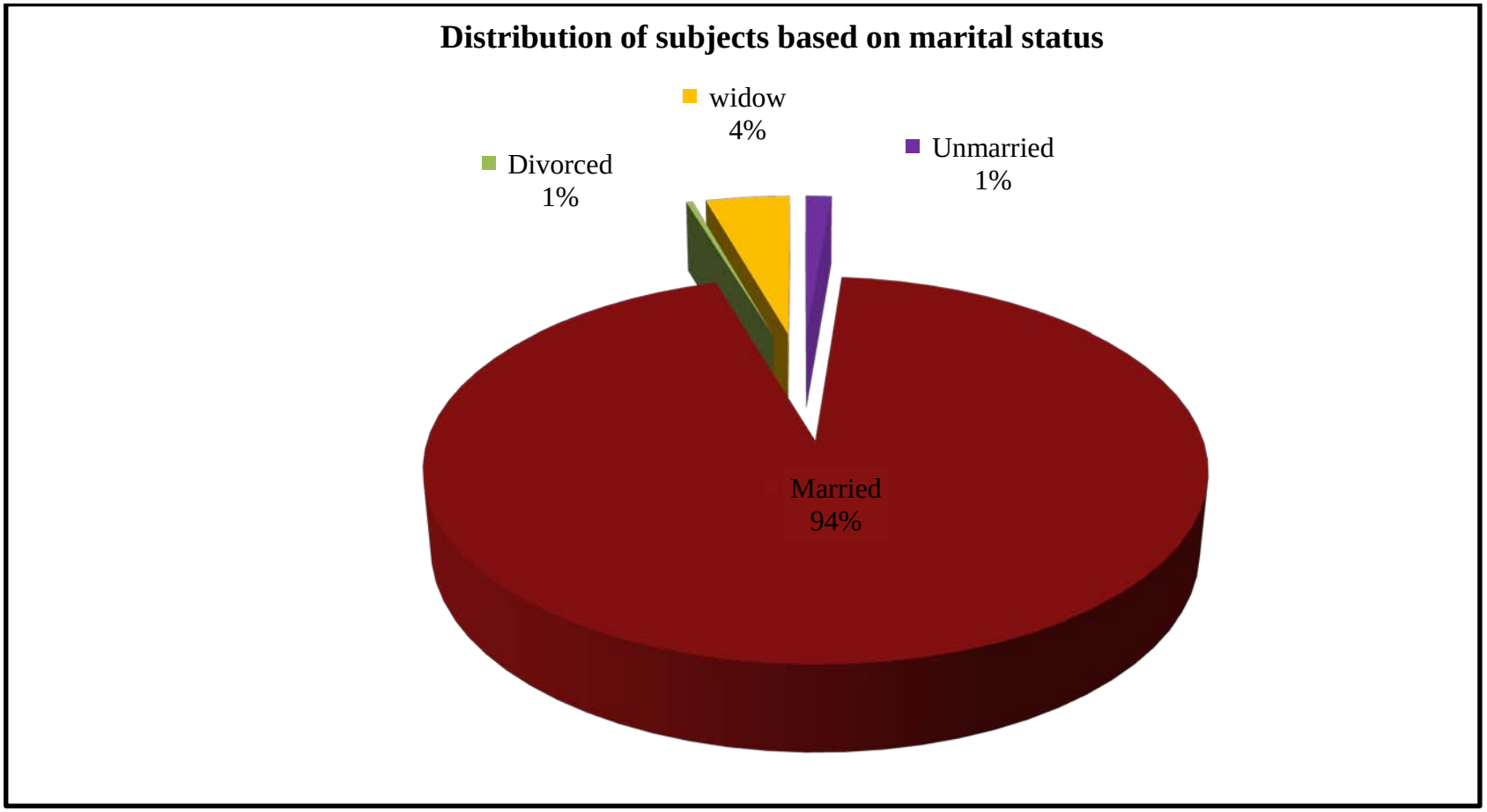

***Figure 4*: Distribution of subjects based on marital status shows that**, majority (94%) of subjects were married.

Table - 2

Frequency distribution of subjects based on educational and occupational status

N= 300

Demographic Characteristics	N	%
Education:		
Primary	7	2.3
Middle School	7	2.3
High-School	43	14.3
Higher Secondary	56	18.7
Graduation	104	34.7
Post-Graduation	39	13.0
Professional	44	14.7
Occupation:		
Professional	44	14.7
Business	4	1.3
clerical	60	20
Skilled	47	15.7
semiskilled	10	3.3
unskilled	16	5.3
House-wife	113	37.7
Any other	6	2

Table 2 shows that, most (34.7%) of the subjects were educated up to graduation and only 2.3% up to primary and middle school levels. Majority (37.7%) of them were housewives. ***Figure 5 & 6***

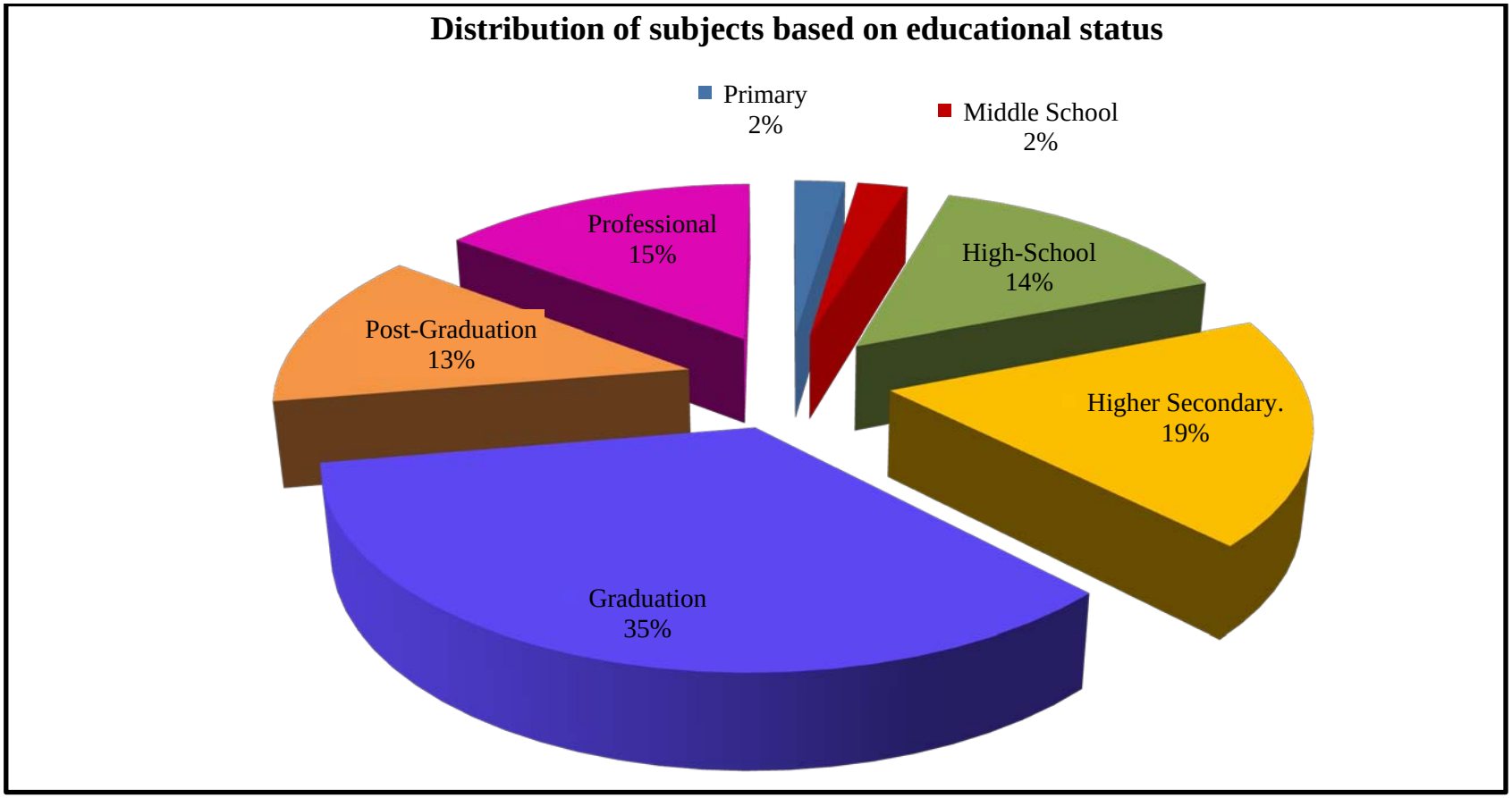

***Figure 5*: Distribution of subjects based on educational status** shows that majority (35%) of women were educated up to graduation, 13% up to post graduation and 15% to professional level. 33% women were educated up to higher secondary and only 4% up to middle school level.

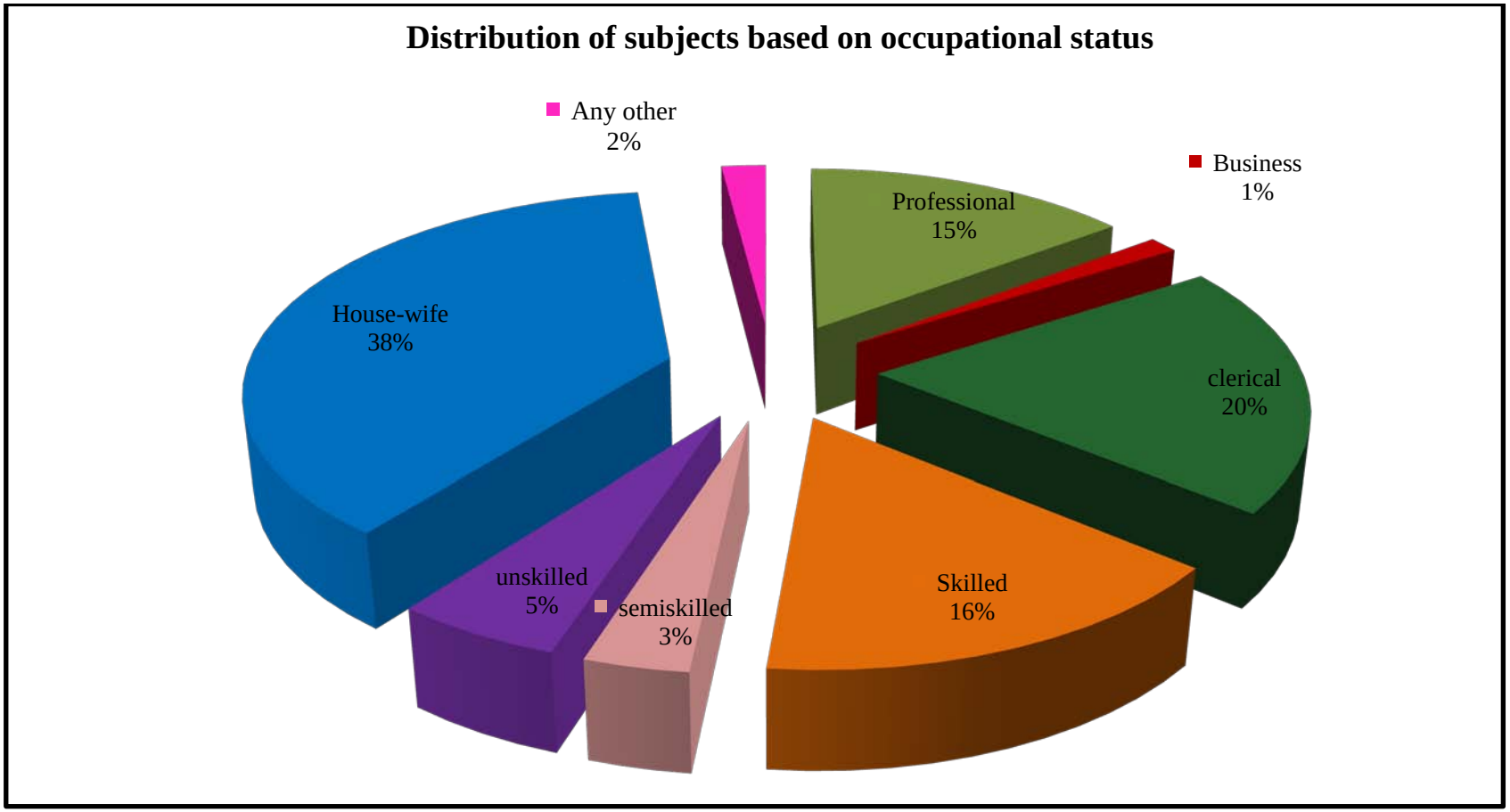

***Figure 6*: Distribution of subjects based on occupational status** indicates 38% of them as housewives and 62% working women.

Table - 3

Frequency distribution of subjects based on monthly income and type of family

N= 300

Demographic Characteristics	N	%
Monthly Income in Rupees		
< 5000	11	3.7
5001 to 10000	24	8.0
10001 to 15000	45	15.0
15001 to 20000	40	13.3
20001 to 25000	40	13.3
25001 to 300000	50	16.7
> 300000	90	30.0
Type of family		
Nuclear	190	63.3
Joint	101	33.7
Extended	9	3.0

Table 3 shows that, the monthly income of 30% subjects was > Rs 30,000 and almost equal representation (13.3 % to 16.7%) was found between the income groups of Rs. 10001 to Rs. 30,000. Most (63.3%) of them were belonging to a nuclear family.

Section I B

This section deals with the personal characteristics of subjects. The data are presented in tables 4,5,6,7,8,9 and Figures 7, 8, 9 .10 and 11.

Description of Tables

4. Frequency distribution of subjects based on menstrual history.

5. Frequency distribution of subjects based on personal characteristics.

6. Frequency distribution of subjects based on Body Mass Index (BMI) and Waist and Hip Ratio (WHR).

7. Frequency distribution of subjects based on medical health.

8. Frequency distribution of subjects based on Regular medical check - up, Breast Self Examination, lipid profile and PAP smear.

9. Frequency distribution of subjects based on self rating of menopause knowledge and source of information

Table – 4

Frequency distribution of subjects based on menstrual history. N= 300

Personal Characteristics	N	%
Age of menarche		
< 10 Years	1.0	0.3
10 to 13 Years	121	40.4
14 to 16 Years	156	52.0
17 to 19 Years	21	7.0
Don't Know	1.0	0.3
Duration of menstrual cycle		
15 to 20 days	12	4.0
21 to 27 days	106	35.3
28 to 33 days	98	32.6
34 to 39 days	14	4.7
More than 40 Days	11	3.7
Not Applicable (stopped menstruating)	59	19.7
Intensity of menstrual flow		
Mild Regular	81	27.0
Mild Irregular	45	15.0
Moderate Regular	68	22.7
Moderate Irregular	17	5.7
Intense Regular	18	6.0
intense Irregular	4.0	1.3
Not Applicable	67	22.3
Last Menstrual Period		
0 to 1 Month	189	63.0
2 to 3 Months	19	6.4
4 to 6 Months	13	4.3
7 to 12 months	13	4.3
> 12 Months	66	22.0

Table 4 expresses that, 52% subjects attained menarche between the ages of 14 to 16 years. The duration of menstrual cycle for 35.3% of them was from 21 to 27 days and menstrual bleeding for 27% was found to be mild and regular, while 22.7% reported moderate and regular. Majority (63%) of them had their last menstrual period between 0 – 1 month back while 22% had already attained menopause.

Table - 5

Frequency distribution of subjects according to the personal characteristics

Personal Characteristics	N	%
Number of children		
None	17	5.7
One	83	27.7
Two	169	56.3
Three or more	31	10.3
Number of meals per day		
one	6	2.0
two	144	48.0
three	132	44.0
More than three	18	6.0
Other than regular food items in the diet		
Nil	2	0.7
fruits	239	79.6
salads	169	56.3
milk/ milk products	155	51.6
sprouted pulses	132	44.0
any other	72	24.0
Frequency of exercises		
Daily	74	24.7
Occasionally	101	33.7
rarely	75	25.0
Never	50	16.7
What are the activities		
Household	206	68.6
walking	190	63.3
running	09	3.0
None	15	5.0

Table – 5 presents that, majority (56.3%) of subjects had two children. Most (48%) of them reported that, they eat twice a day and 79.6% include fruits in their daily diet other than regular food items. Only 24.7 % were found to be performing regular exercises and most of them (68%) preferred household chores as a medium of performing regular exercises.

Table - 6

Frequency distribution of subjects based on Body Mass Index (BMI) and Waist and Hip Ratio (WHR)

N= 300

Personal Characteristic	N	%
B.M.I		
Underweight	08	2.7
Healthy	120	40.0
Overweight	132	44.0
Obese I	29	9.7
Obese II	07	2.3
Extreme Obesity	04	1.3
Waist and Hip Ratio (WHR)		
No Health Risk (WHR below 0.85)	171	57.0
Health Risk (WHR above 0.85)	129	43.0

Table 6 reveals Body Mass Index (BMI) and waist and hip ratio of subjects. 44% of them were found to be in the overweight category while 40% were identified with healthy BMI. The waist and hip ratio of 57% of them was under normal level whereas 43% of them were categorized in the health risk group. ***Figure 7 & 8***

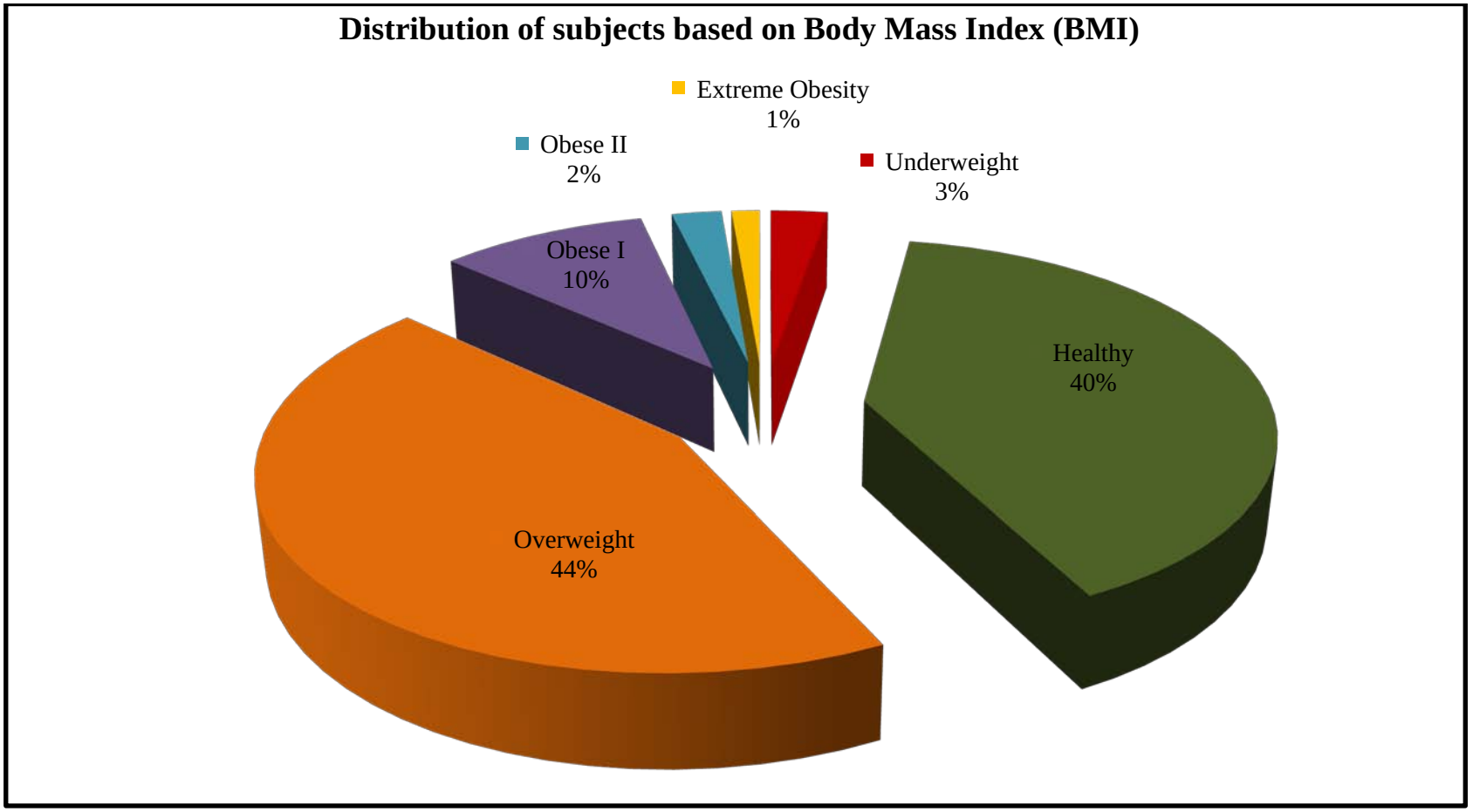

***Figure 7*: Distribution of subjects based on Body Mass Index (BMI)** illustrates 44 % women as overweight and 13 % obese while 40% of them were found with normal BMI and only 3% with underweight.

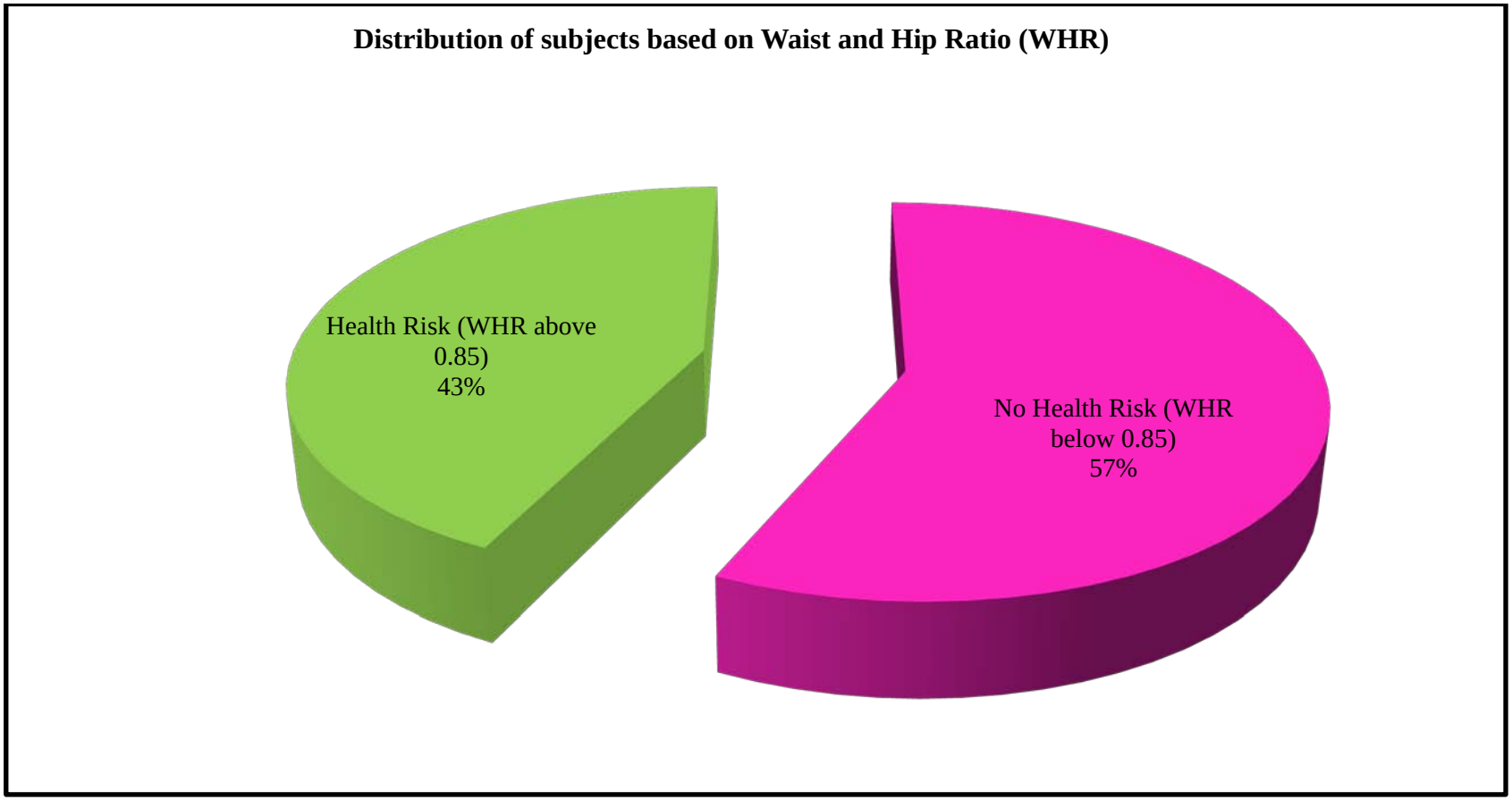

***Figure 8*: Distribution of subjects based on waist and hip ratio (WHR)** shows, 57% of them with normal WHR whereas, for 43% subjects WHR was found to be beyond normal limits.

Table – 7

Frequency distribution of subjects based on medical health

N = 300

Personal Characteristics	N	%
Medical Problems		
Yes	119	39.7
No	181	60.3
Which type health problem		
Hypertension	50	16.6
Heart Disease	15	5.0
osteoporosis	14	4.6
Thyroid disorder	27	9.0
Any Other	43	14.3
Nil	173	57.5
Taking any medicines		
Yes	126	42.0
No	159	53.0
NA	15	5.0
System of medicines		
Allopathic	92	30.7
Ayurvedic	38	12.7
Homeopathic	13	4.3
Any other	07	2.3
NA	159	53.0

Table 7 expresses that 60.3% subjects did not have any medical problem. Out of 39.7% who reported having medical problems, hypertension was found in 16.6 % of them. From those who were taking medicine (42%) majority (30.7%) were following allopathic system of medicine. ***Figure 9 & 10***

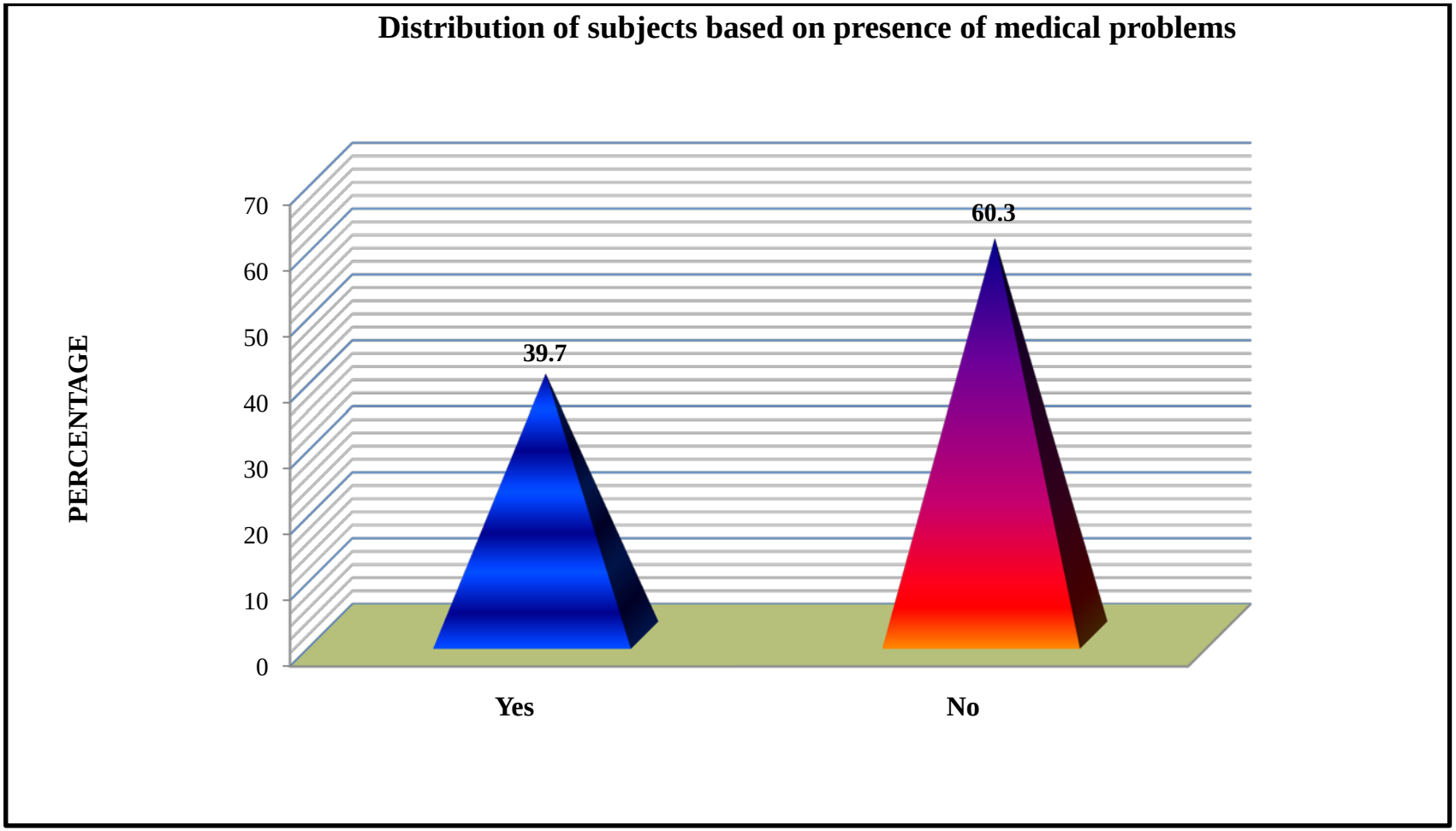

***Figure 9*: Distribution of subjects based on presence of medical problems** shows that 60.3% subjects were found without any medical problems while 39.7 % reported having medical problems.

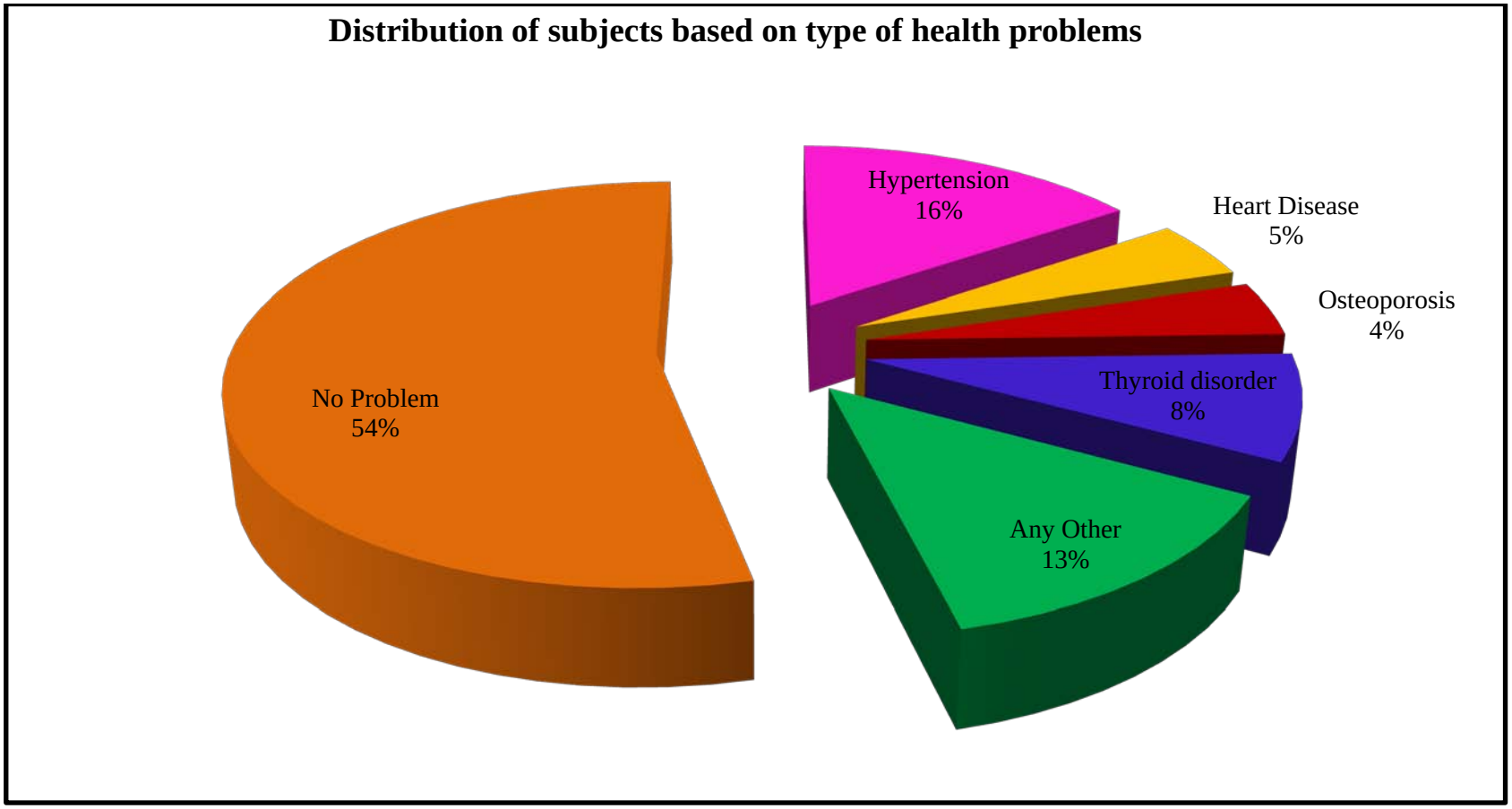

***Figure 10*: Distribution of subjects based on type of health problem illustrates** 54% subjects without any medical problem and 42% with medical problems like hypertension, heart disease, thyroid disorder, osteoporosis and other.

Table – 8

Frequency distribution of subjects based on Regular medical check - up, Breast self examination, lipid profile and PAP smear.

N = 300

Personal Characteristics	N	%
Regular medical check up		
Yes	102	34.0
No	198	66.0
Regular Breast Self Examination		
Yes	128	42.7
No	172	57.3
Regular Lipid Profile		
Yes	69	23.0
No	231	77.0
Regular PAP Smear		
Yes	34	11.3
No	266	88.7

Table 8 reveals that, only 34 % of study subjects had regular medical checkup and only 42.7% reported performance of regular Breast Self Examination. Most of the subjects were unaware about regular lipid profile (77%) and regular PAP smear (88.7%) examination. ***Figure 11***

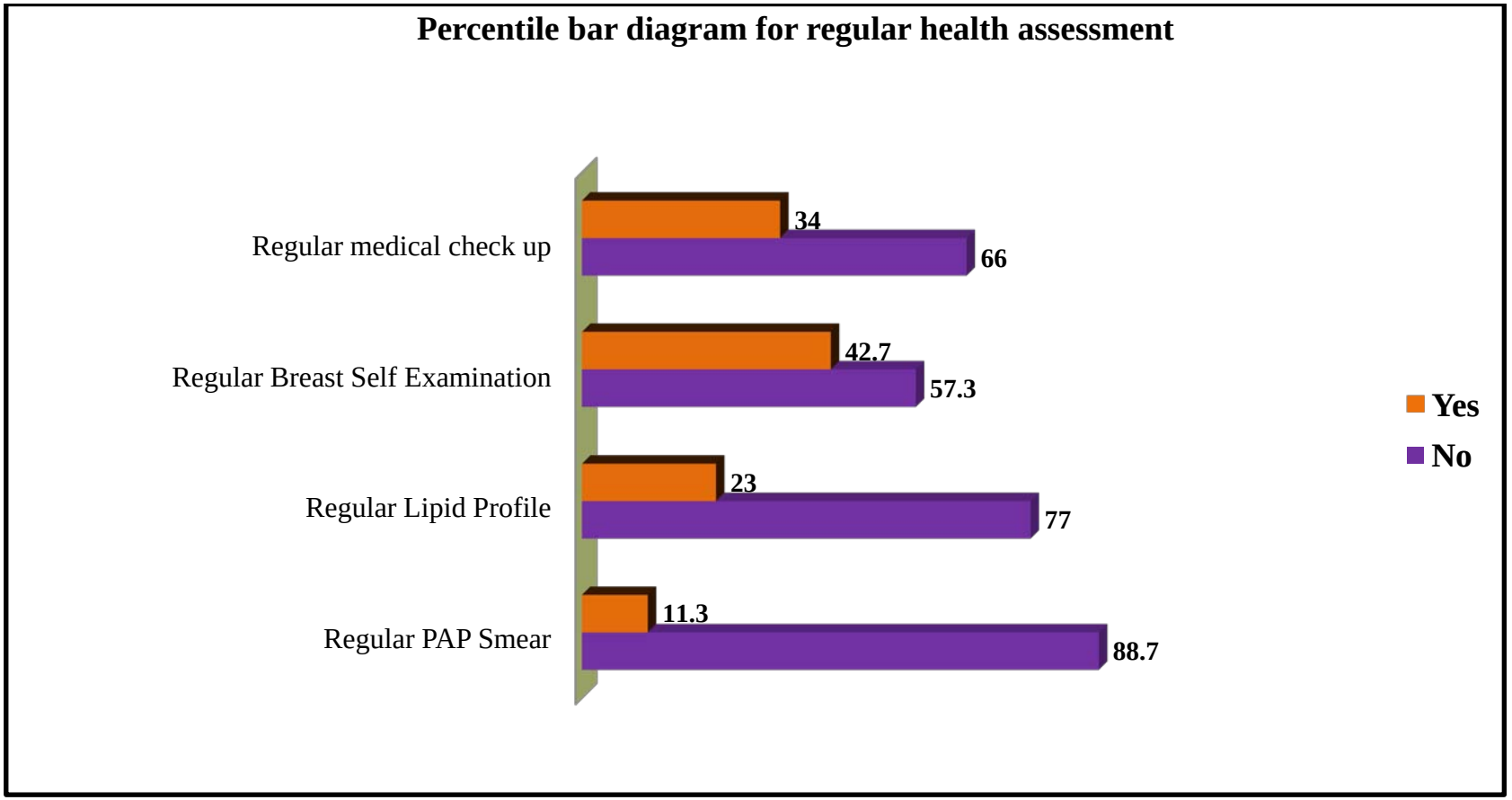

***Figure 11*: Distribution of subjects based on regular health assessment like regular medical checkup, BSE, lipid profile and PAP smear shows** that, only 34% participated in regular medical check-up, 42% perform BSE, 23% visited the hospital for regular lipid profile and only 11% for PAP smear done.

Table – 9

Frequency distribution of subjects based on self rating menopause knowledge and source of information **N = 300**

Personal Characteristics	N	%
Rating of menopause knowledge		
Very good	17	5.7
Fair	126	42.0
Little	106	35.3
No Knowledge	51	17.0
Sources of information		
No Knowledge	167	55.6
Books/ Magazine	72	24.0
Internet	87	29.0
Friends	73	24.3
Health Professional	8	2.5
Any Other	20	6.6

Table 9 presents self rating of knowledge regarding menopause and sources of information. 42% subjects rated having fair knowledge and 35% little knowledge about menopause. It is noted that books /magazines (24%) internet (29%) and friends (24%) were identified as the common sources of seeking information on menopause.

4.2 Section II

This section deals with the distribution of subjects based on severity of menopause symptoms, affecting HRQoL. Menopause Rating Scale was used for assessment.

The data was collected only once prior to pre test by using Menopause Rating Scale. The data is presented in tables 10, 11, 12 and figures 12, 13, 14 15

Description of tables

10. Frequency distribution of subjects based on severity of hot flashes, night sweats, heart discomfort and sleep problem

11. Frequency distribution of subjects based on severity of sexual problem, bladder problem and dryness of vagina

12. Frequency distribution of subjects based on severity of physical exhaustion, joint and muscle discomfort.

TABLE - 10

Frequency distribution of subjects based on severity of hot flashes, night sweats, heart discomfort and sleep problem

N = 300

VARIABLES	SEVERITY									
	Not at all		Mild		Moderate		Severe		Very Severe	
	N	%	N	%	N	%	N	%	N	%
HOT FLASHES AND NIGHT SWEATS										
Feeling of intense heat	198	66.0	52	17.4	37	12.3	09	3.0	04	1.3
Excessive sweating	205	68.3	40	13.3	35	11.7	15	5.0	05	1.7
HEART DISCOMFORT										
Awareness of heart beat	179	59.7	76	25.3	36	12.0	05	1.7	04	1.3
Feeling of heart skipping	266	88.7	29	9.7	04	1.3	01	0.3	Nil	Nil
Chest tightness	250	83.3	34	11.3	12	04	02	0.7	02	0.7
SLEEP PROBLEM										
Difficulty in falling asleep	207	69.0	43	14.3	37	12.3	11	3.7	02	0.7
Difficulty in sleeping through	239	79.7	31	10.3	24	08	06	02	Nil	Nil
Waking very early morning	228	76.0	36	12	30	10	04	1.3	02	0.7

Table 10 expresses that, the majority of subjects were not at all affected by most of these symptoms except some suffered from mild awareness of heart beat (25.3%) and mild feeling of intense heat (17.3 %). ***Figure 12***

TABLE - 11

Frequency distribution of subjects based on severity of sexual problem, bladder problem and dryness in the vagina N = 300

VARIABLES	SEVERITY									
	Not at all		Mild		Moderate		Severe		Very Severe	
	N	%	N	%	N	%	N	%	N	%
SEXUAL PROBLEM										
Change in sexual desire	216	72	43	14.3	29	9.7	10	3.3	02	0.7
Change in sexual activity	244	81.3	29	9.7	21	07	06	02	Nil	Nil
Change in sexual satisfaction	252	84	29	9.7	09	03	09	03	01	0.3
BLADDER PROBLEM										
Pain or burning while urinating	274	91.3	18	6	06	02	01	0.3	01	0.3
Increase need to urinate	189	63	47	15.7	46	15.3	15	05	03	01
Urine Leak	238	79.3	26	8.7	26	8.7	09	03	01	0.3
DRYNESS IN VAGINA										
Sensation of dryness	222	74	38	12.7	31	10.3	08	2.7	01	0.3
Burning in vagina	246	82	26	8.7	20	6.7	06	02	02	0.7
Pain during intercourse	252	84	28	9.3	14	4.7	04	1.3	02	0.7

T**able – 11 shows** the presence of sexual, bladder and vaginal problems in the study subjects. Majority of them were not at all affected by any of these symptoms except a few of them complain of having mild (15.7%) to moderate (15.3%), increased need to urinate. Some of the subjects had mild sensation of dryness in the vagina (12.7%) and change in sexual desire (14.3%). ***Figure 13.***

Table - 12

Frequency distribution of subjects based on severity of physical exhaustion, joint and muscle discomfort

N = 300

VARIABLES	SEVERITY									
	Not at all		Mild		Moderate		Severe		Very Severe	
	N	%	N	%	N	%	N	%	N	%
PHYSICAL EXHAUSTION										
General decrease in performance	160	53.3	66	22	50	16.7	20	6.7	04	1.3
General decrease in concentration	175	58.3	69	23	33	11	18	06	05	1.7
JOINT AND MUSCLE DISCOMFORT										
Pain in joints	125	41.7	69	23	59	19.7	33	11	14	4.7
Stiffness in the morning	182	60.7	53	17.7	37	12.3	22	7.3	06	2.0

Table – 12 indicates that, many of the subjects had mild to moderate decrease in performance (22%) and concentration (23%) while more than 50 % were not affected at all. Joint pains were reported by many of the subjects as mild (23%), moderate (19.7) and very severe (4.7%). The severity of joint and muscular discomfort was reported more as compared to the other symptoms of menopause. ***Figure 14.***

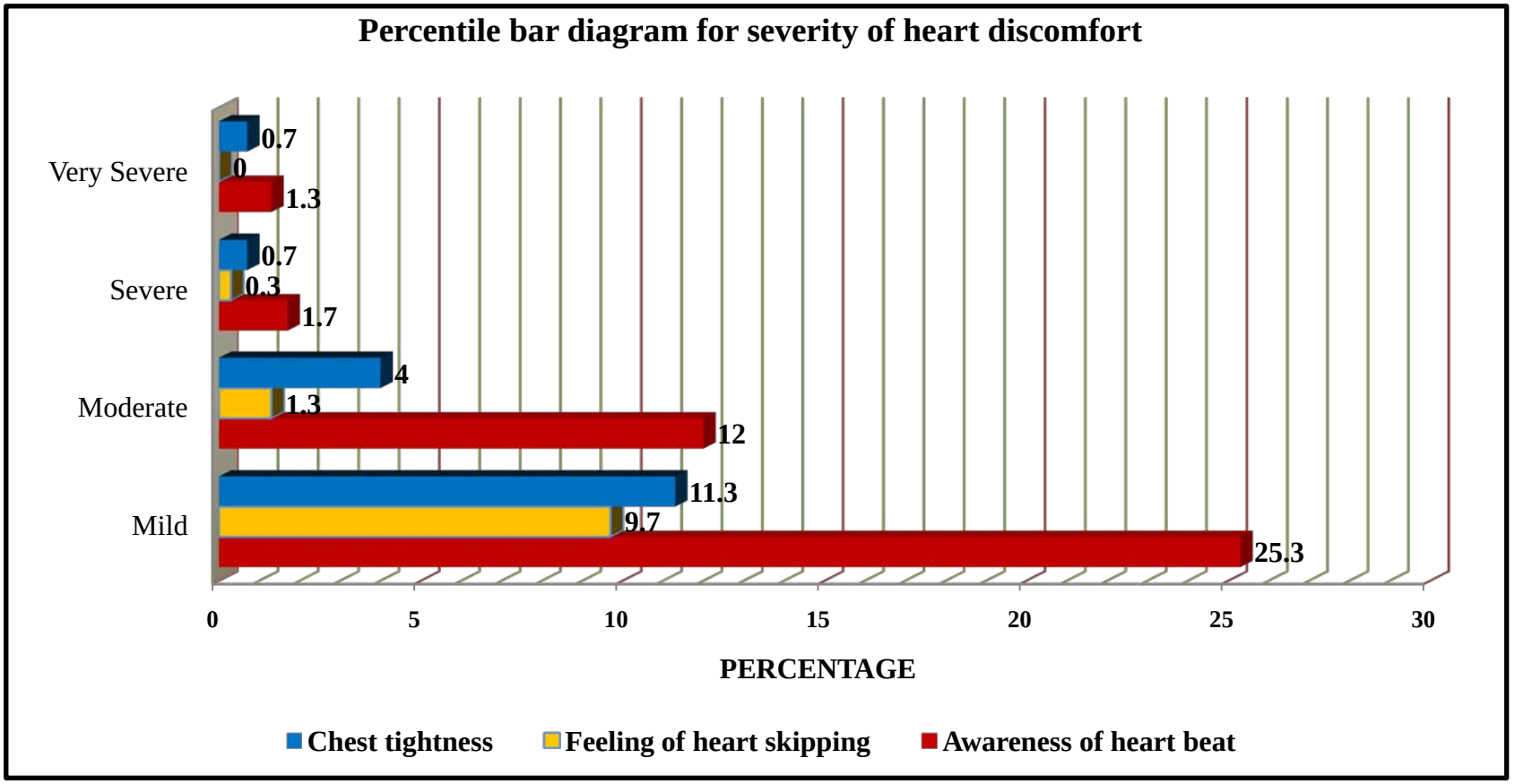

***Figure 12*: Distribution of subjects based on severity of heart discomfort,** illustrates that the subjects were found with mild to moderate degree of heart discomfort.

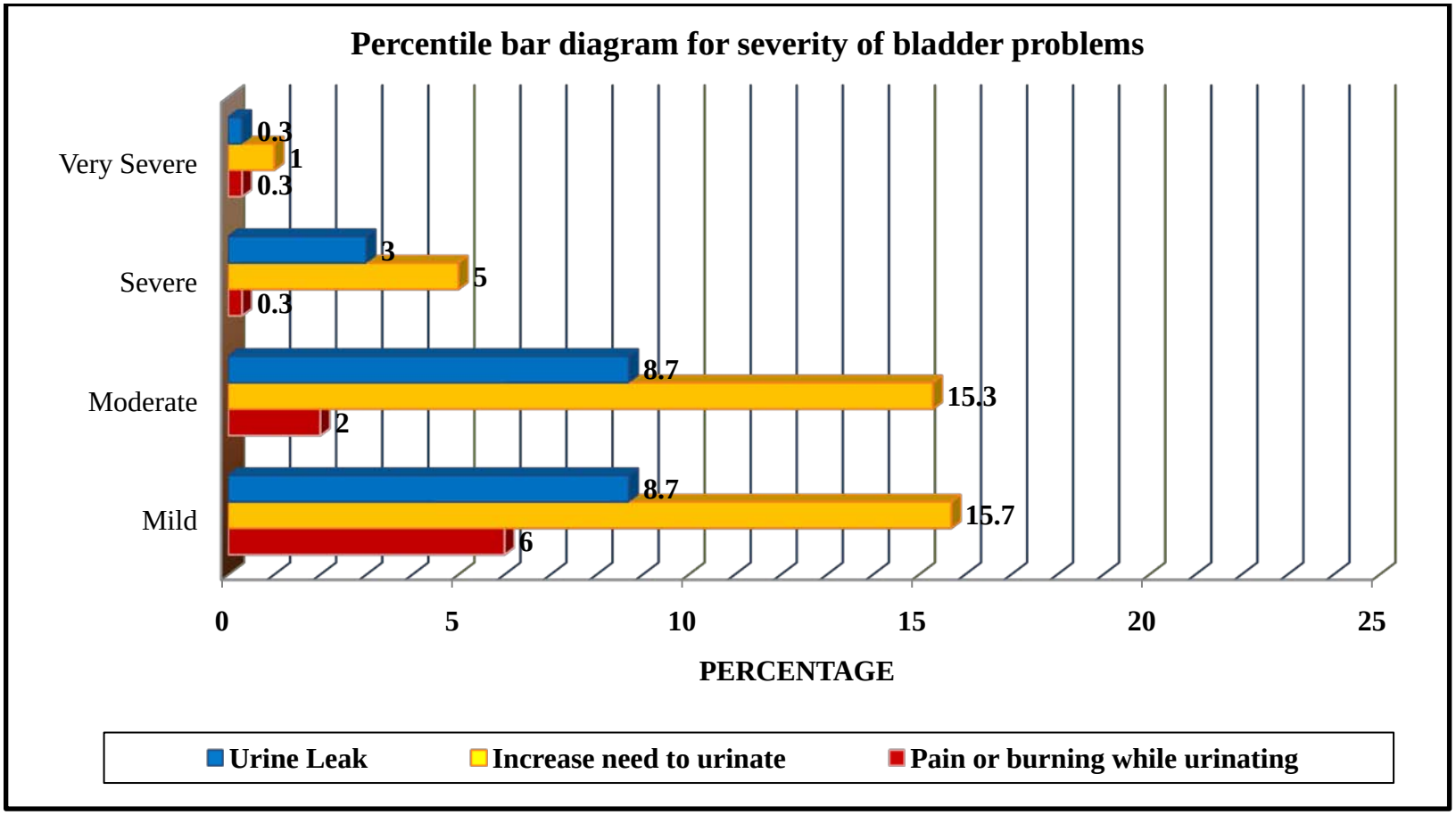

***Figure 13*: Distribution of subjects based on severity of bladder problems** indicates that, the symptoms like increased need to urinate and urine leak was commonly reported by more than 15% of the study subjects as mild to moderate intensity.

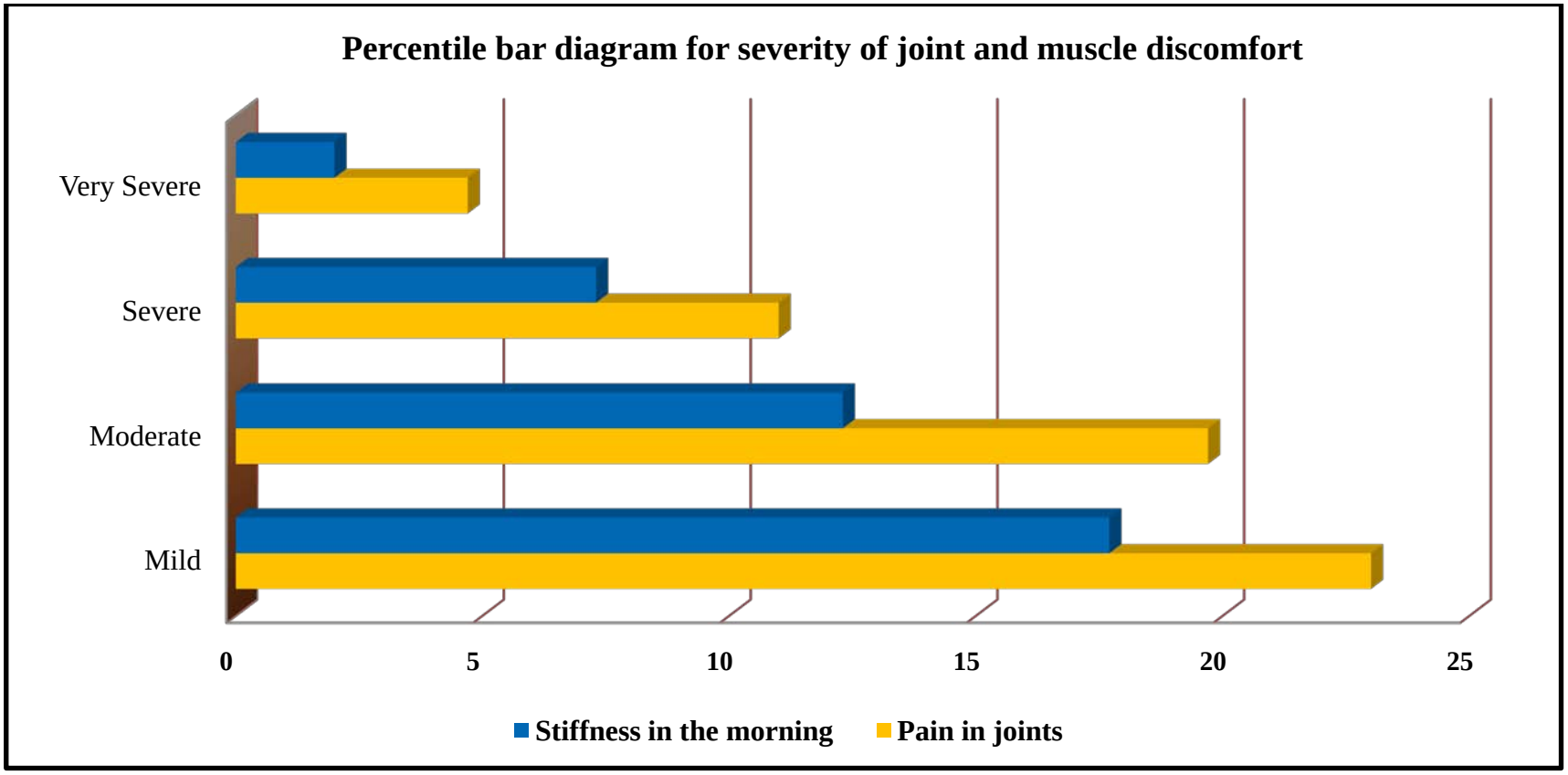

***Figure 14* illustrates distribution of subjects based on severity of joint and muscle discomfort**. The reported symptoms of joint pains were found as mild (23%) to moderate (19.7) and very severe (4.7%). The severity of joint and muscular pain was reported more as compared to the other symptoms of menopause.

4.3 Section III

This section presents the effectiveness of Planned Teaching Program. In order to test the effect of planned teaching on knowledge and practices, the null hypotheses is stated and tested using paired t test. The null hypotheses...

Ho1 – The planned teaching has no significant effect on the level of knowledge among women during perimenopause in relation to management of selected physical components of menopause affecting health related quality of life.

Ho2 - The planned teaching has no significant effect on the practices among women during perimenopause in relation to management of selected physical components of menopause affecting health related quality of life.

III A) Deals with the distribution of subjects based on overall knowledge and practices during pre test and post test. The data are presented in table 13,14 and figure 15, 16

III B) Deals with the distribution of subjects based on item wise knowledge during pre test and post test. The data are presented in tables 15, 16, 17,18 and figures 17, 18, 19, 20, 21, 22

III C) Presents the distribution of subjects based on item wise practices during pre test and post test. The data are presented in tables 19, 20, 21,22 and figures 23, 24, 25, 26, 27, and 28.

III D) Describes comparison of mean scores on overall and item wise knowledge and practices of subjects, in relation to management of selected physical components of menopause during pre and post test. The data are presented in table 21, 22, 23, and figure 29, 30. 31 and 32

Section III A

This section deals with the distribution of subjects based on overall knowledge and practices in relation to management of selected physical components of menopause affecting HRQoL during pre test and post test. The data are presented in table 13, 14 and figure 15, 16

Description of tables

Table 13. Comparison of overall knowledge, in relation to management of selected physical components of menopause, affecting HRQoL, during pre test and post test.

Table 14. Comparison of overall practices, in relation to management of selected physical components of menopause, affecting HRQoL during pre test and post test.

Table – 13

Comparison of overall knowledge in relation to management of selected physical components of menopause affecting HRQoL during pre test and post test (N= 300+300)

	LEVEL OF KNOWLEDGE												Pearson Chi - Square		
	Very Poor		Poor		Average		Good		Very Good		Excellent				
	N	%	N	%	N	%	N	%	N	%	N	%	χ^2 value	df	P Value
Pre test (300)	72	24.0	131	43.7	60	20	20	6.7	11	3.7	6	2			
Post test (300)	0	0	1	0.3	9	3	24	8	95	31.7	171	57	458.469[a]	5	.000
Total (600)	72	12.0	131	22	69	11.5	44	7.3	106	17.7	177	29.5			

Table 13 shows that, majority (87.7%) of subjects belonged to below average category in relation to overall knowledge regarding management of selected physical components of menopause during pre test, while only 4.3% of them were found in this category during post test. In the post test 88.7 % of the subjects belonged to very good and excellent category whereas, only 5.7% were in this category during pre test. Statiscally a highly significant difference is found on over all knowledge of the study subjects as the p value is < 0.05 at 5% level of significance. The null hypotheses **Ho1 -** The planned teaching has no significant effect on the level of knowledge among women during perimenopause in relation to management of selected physical components of menopause affecting health related quality of life is rejected and is interpreted that planned teaching helps in improving knowledge. ***Figure 15***

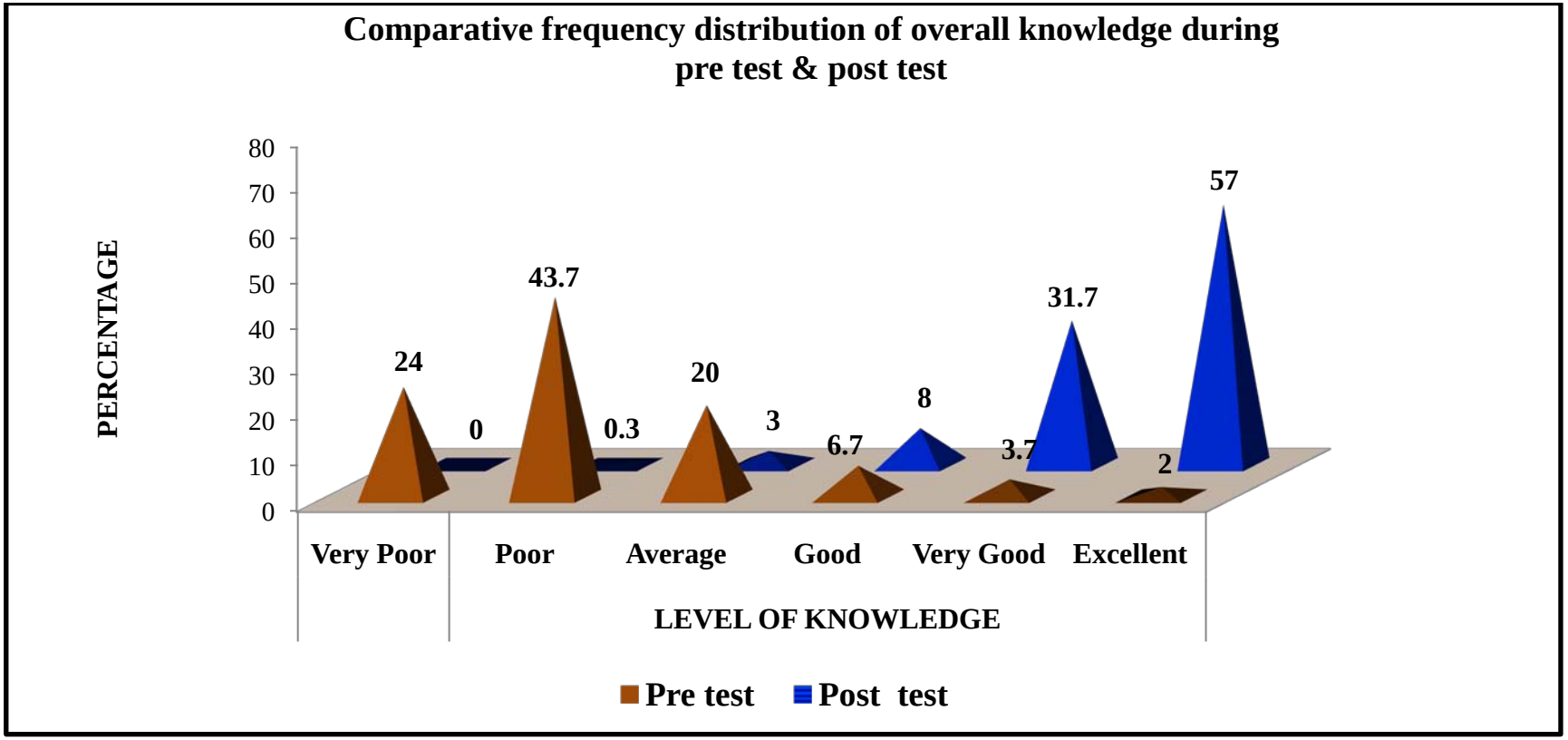

***Figure 15*: Distribution of subjects based on overall knowledge during pre and post test, in relation to management of menopause illustrates** that, only 5.7% subjects were under very good and excellent category during pretest where as 88.7% women were found in this category after post test.

Table – 14

Comparison of overall practices in relation to management of selected physical components of menopause affecting HRQoL during pre test and post test. (N= 300+300)

	LEVEL OF KNOWLEDGE (PRACTICE)												Pearson Chi - Square		
	Very Poor		Poor		Average		Good		Very Good		Excellent				
	N	%	N	%	N	%	N	%	N	%	N	%	χ^2 value	df	P Value
Pre test (300)	72	24	94	31.3	72	24	38	12.7	16	5.3	8	2.7			
Post test (300)	0	0	1	0.3	5	1.7	10	3.3	55	18,3	229	76.3	465.177[a]	5	.000
Total (600)	72	12	95	15.8	77	12.8	48	8	71	11.8	237	39.5			

Table 14 reveals that, majority (79.3%) of subjects belonged to below average category in relation to overall practices on management of selected physical components of menopause during pre test while only 6.3% were found in this category after post test. At the post test 76.3 % of subjects were found in excellent category while only 2.7% were seen in this category during pre test. Statiscally a highly significant difference is found on overall practices as the P value is < 0.05 at 5% level of significance. The null hypotheses **Ho2. -** The planned teaching has no significant effect on self expressed practices among women during perimenopause in relation to management of selected physical components of menopause affecting health related quality of life is rejected and interpreted that planned teaching improves practices. ***Figure 16***

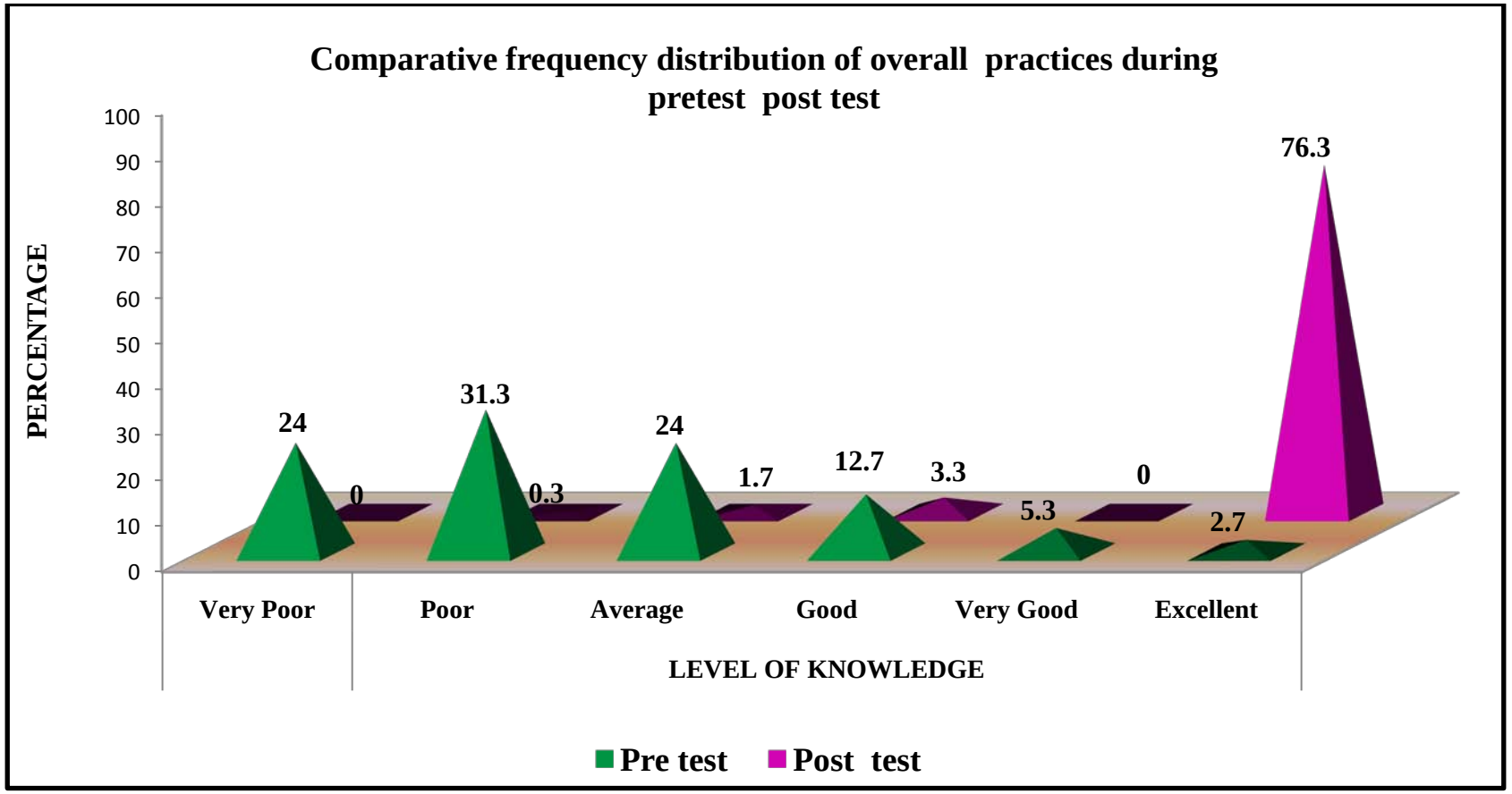

***Figure 16*: Distribution of subjects based on overall practices in relation to management of menopause during pretest and post test** illustrates that only 2.7% were with excellent knowledge during pre test while 76.3% were found in this category after post test.

Section III B

This section presents comparison of item wise knowledge during pre test and post test in relation to management of selected physical components of menopause, affecting HRQoL using paired t test. The data are presented in table 15, 16, 17, 18 and *Figure 17, 18, 19, 20, 21 & 22.*

Description of tables

Table 15. Comparison of item wise knowledge on female reproductive system, menopause and hot flashes/night sweats, during pretest and post test.

Table 16. Comparison of item wise knowledge on heart discomfort, sleep disturbances and joint pains, during pretest and post test.

Table 17. Comparison of item wise knowledge on urinary problem, vaginal problem and sexual problem during pretest and post test.

Table 18. Comparison of item wise knowledge on gain in weight, health hazards and health screening during pretest and post test.

Table – 15

Comparison of item wise knowledge, on female reproductive system, menopause and hot flashes/night sweats, during pretest and post test. (Pretest 300 + Post test 300)

Items	LEVEL OF KNOWLEDGE												Pearson Chi - Square		
	Very Poor		Poor		Average		Good		Very Good		Excellent				
	N	%	N	%	N	%	N	%	N	%	N	%	χ^2 value	df	P Value
Female Reproductive System															
Pre test	63	21.0	93	31.0	88	29.3	31	10.3	21	7.0	4	1.3	333.417[a]	5	**.000**
Post test	0	0	2	0.7	33	11.0	53	17.7	97	32.3	115	38.3			
Menopause															
Pre test	192	64.0	45	15.0	14	4.7	24	8.0	4	1.3	21	7.0	292.123[a]	5	**.000**
Post test	18	6	54	18	6	2	17	5.7	10	3.3	195	65			
Hot Flashes and Night sweats															
Pre test	120	40.0	88	29.3	58	19.3	23	7.7	6	2.0	5	1.7	445.674[a]	5	**.000**
Post test	0	0	6	2	21	7	59	19.7	0	0	214	71.3			

Table 15 illustrates item wise knowledge of subjects on female reproductive system 81.3%, hot flashes /night sweats 88.6% of them were found under average and below category during pretest while more than 88% of were under good and above category after post test except for basic information on menopause with 74% under the same category after post test. A highly significant differences were found in the knowledge, on all the items (p value <0.05 at 5%level of significance). ***Figure 17***

Table – 16

Comparison of item wise knowledge, on heart discomfort, sleep disturbances and joint pains, during pretest and post test.

(N= Pretest 300+ Post test 300)

Items	LEVEL OF KNOWLEDGE												Pearson Chi – Square		
	Very Poor		Poor		Average		Good		Very Good		Excellent				
	N	%	N	%	N	%	N	%	N	%	N	%	χ^2 value	df	P Value
Heart Discomfort															
Pre test	142	47.3	83	27.7	44	14.7	22	7.3	0	0	9	3.0	422.111[a]	4	**.000**
Post test	0	0	6	2	21	7	59	19.7	0	0	214	71.3			
Sleep Disturbances															
Pre test	113	37.7	102	34.0	31	10.3	18	6.0	19	6.3	17	5.7	362.357[a]	5	**.000**
Post test	1	0.3	7	2.3	14	4.7	37	12.3	63	21	178	59.3			
Joint Pain															
Pre test	124	41.3	79	26.3	67	22.3	15	5.0	10	3.3	5	1.7	397.026	5	**.000**
Post test	1	0.3	6	2.0	31	10.3	31	10.3	40	13.3	191	63.7			

Table 16 illustrates that 89.7% subjects had average and below knowledge on heart discomfort, 82% on sleep disturbances and 89.9% on Joint pains, during pretest while more than 87% of were under good and above category after post test. A highly significant difference was found in the knowledge, on all the items (p value < 0.05 at 5%level of significance). ***Figure 18&19***

Table – 17

Comparison of item wise knowledge on urinary problem, vaginal problem and sexual problem, during pretest and post test.
(Pretest 300+ Post test 300)

Items	LEVEL OF KNOWLEDGE														
	Very Poor		Poor		Average		Good		Very Good		Excellent		Pearson Chi – Square		
	N	%	N	%	N	%	N	%	N	%	N	%	χ^2 value	df	P Value
Urinary Problem															
Pre test	111	37.0	73	24.3	71	23.7	17	5.7	11	3.7	17	5.7	403.119[a]	5	**.000**
Post test	0	0	3	1.0	14	4.7	21	7	85	28.3	177	59			
Vaginal Problem															
Pre test	150	50.0	57	19.0	59	19.7	14	4.7	10	3.3	10	3.3	389.420[a]	5	**.000**
Post test	2	0.7	4	1.3	25	8.3	56	18.7	78	26.0	135	45			
Sexual Problem															
Pre test	161	53.7	58	19.3	47	15.7	13	4.3	6	2.0	15	5.0	399.933[a]	5	**.000**
Post test	3	1	4	1.3	20	6.7	45	15	76	25.3	152	50.7			

Table 17 shows the knowledge of study subjects on urinary, vaginal and sexual problems. It was found that more than 85% had average and below knowledge on all the items during pre test whereas, a significant difference was found in the knowledge during post test. More than 89% were found under good and above category during post test. A highly significant difference was found on all the items (p value < 0.05 at 5%level of significance). ***Figure 20 &21***

Table – 18

Comparison of item wise knowledge on gain in weight, health hazards and health screening during pretest and post test

(Pretest 300+ Post test 300)

Items	LEVEL OF KNOWLEDGE														
	Very Poor		Poor		Average		Good		Very Good		Excellent		Pearson Chi - Square		
	N	%	N	%	N	%	N	%	N	%	N	%	χ^2 value	df	P Value
Gain in Weight															
Pre test	133	44.3	51	17.0	50	16.7	35	11.7	19	6.3	12	4.0	385.716[a]	5	**.000**
Post test	0	0	1	0.3	11	3.7	31	10.3	101	33.7	156	52			
Health Hazards															
Pre test	80	26.7	116	38.7	72	24.0	17	5.7	6	2.0	9	3	416.537[a]	5	**.000**
Post test	1	0.3	4	1.3	25	8.3	17	5.7	48	16	205	68.3			
Health Screening															
Pre test	61	20.3	52	17.3	45	15.0	30	10.0	36	12.0	76	25.3	239.224[a]	5	**.000**
Post test	3	1	2	0.7	2	0.7	11	3.7	33	11	249	83			

Table 18 shows that, the subjects had poor and very poor knowledge on gain in weight (61.3%) and health hazards (65.4%) whereas, 25.3% were found with excellent knowledge on health screening during pretest. The knowledge on all the components was improved significantly during post test $p < 0.05$ at 5%level of significance). ***Figure 22***

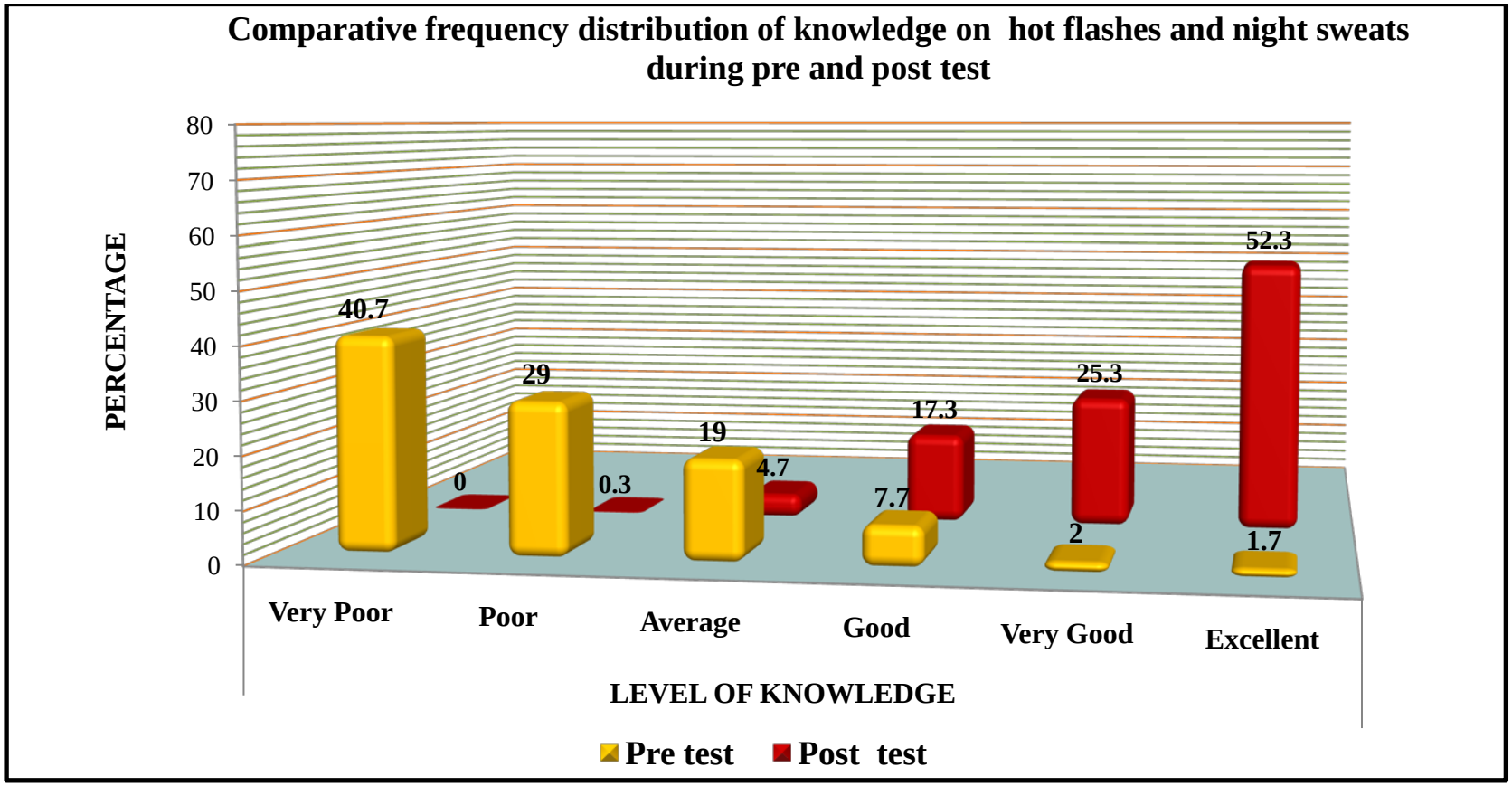

***Figure 17*: Distribution of subjects based on item wise pre and post test knowledge on hot flashes and night sweats** illustrates only 11.4 % subjects were under good and above category during pre test and whereas 94.9% were found in this category after post test.

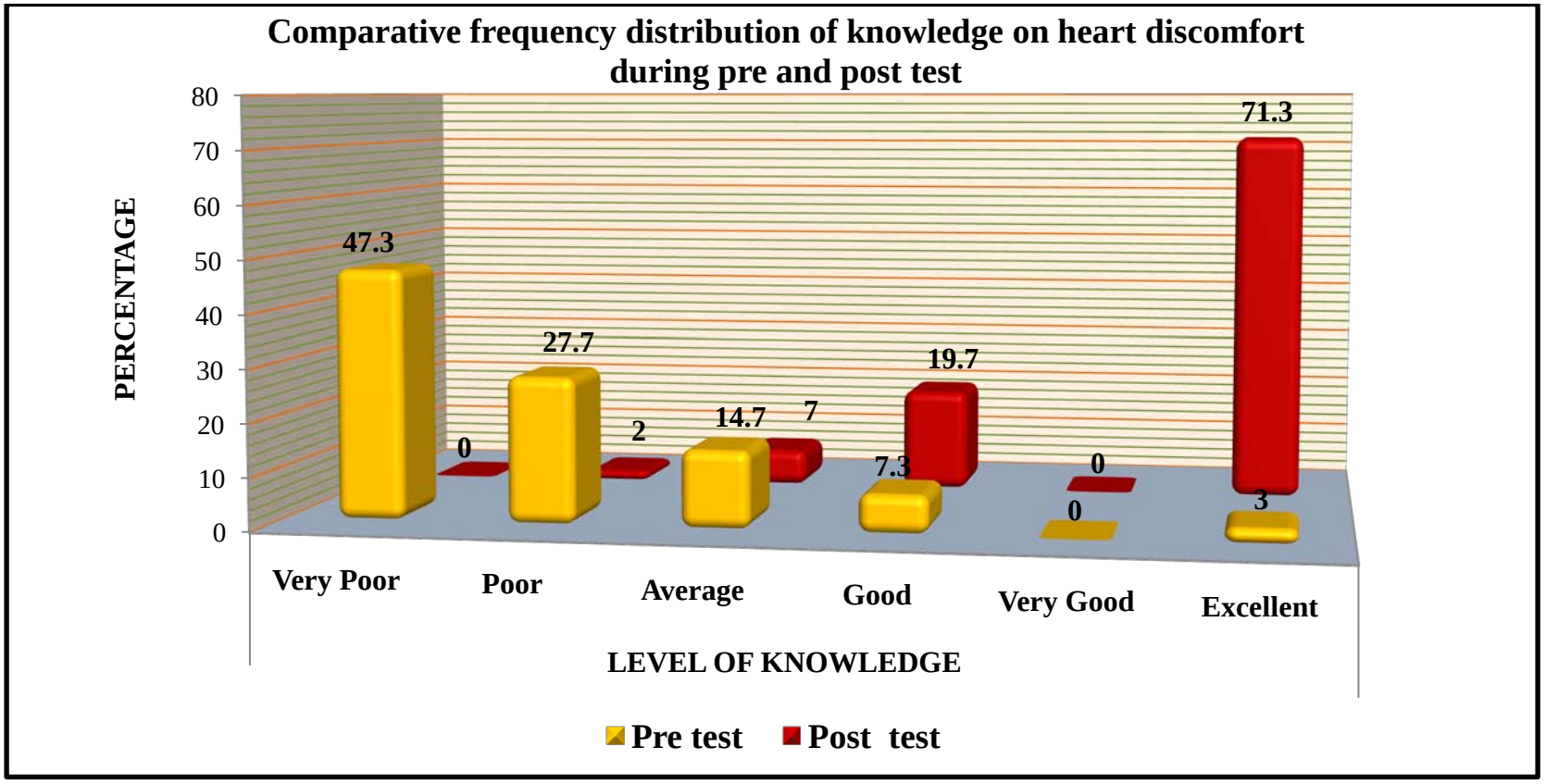

***Figure 18*: Distribution of subjects based on item wise pre and post test knowledge on heart discomfort** shows that during pre test 89.9 % women were below average and during post test only 2% were in this category.

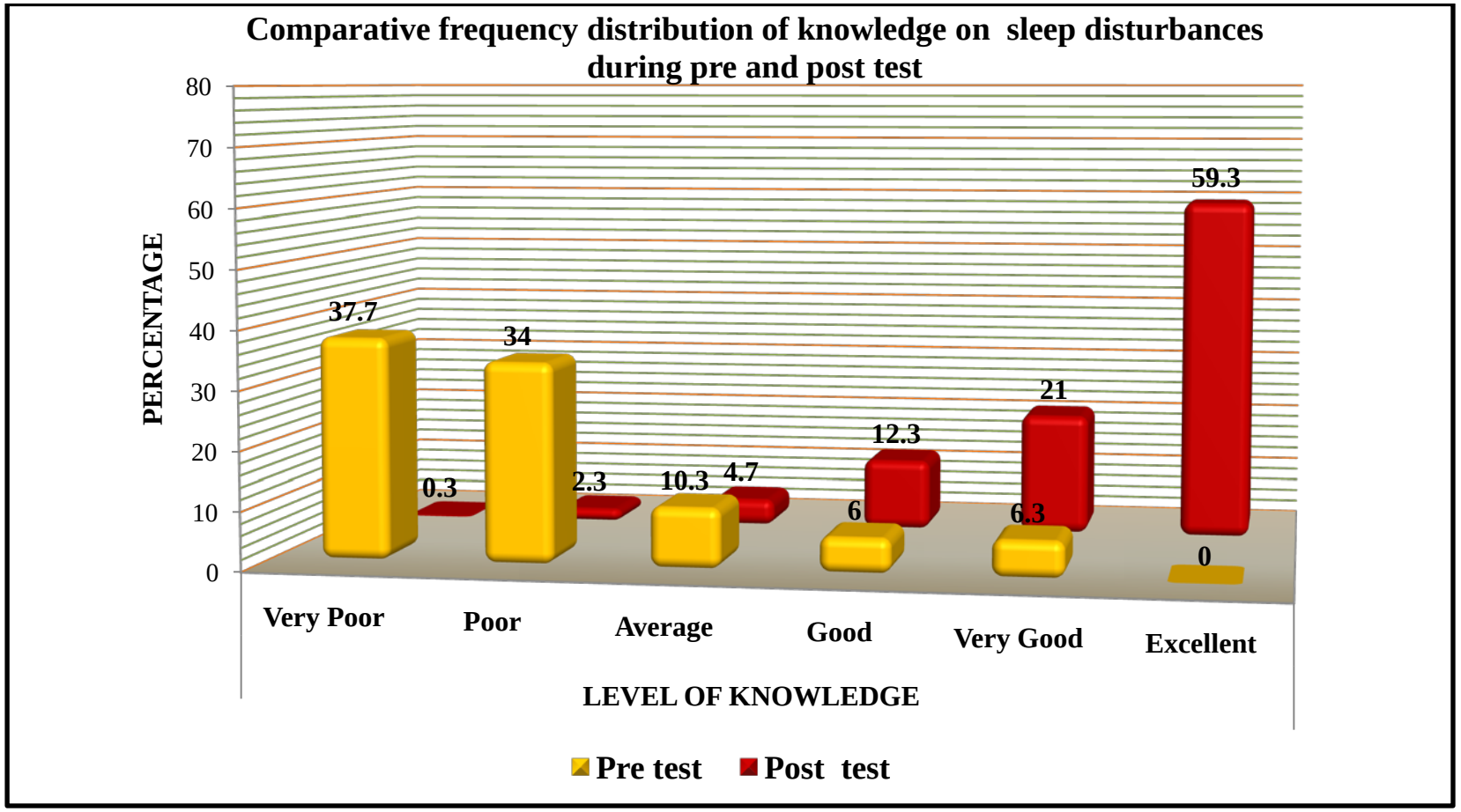

***Figure 19*: Distribution of subjects based on item wise pre and post test knowledge on sleep disturbances** illustrates 71.1% subjects under poor and very poor category during pre test, while only 2.6% were found in this category after post test.

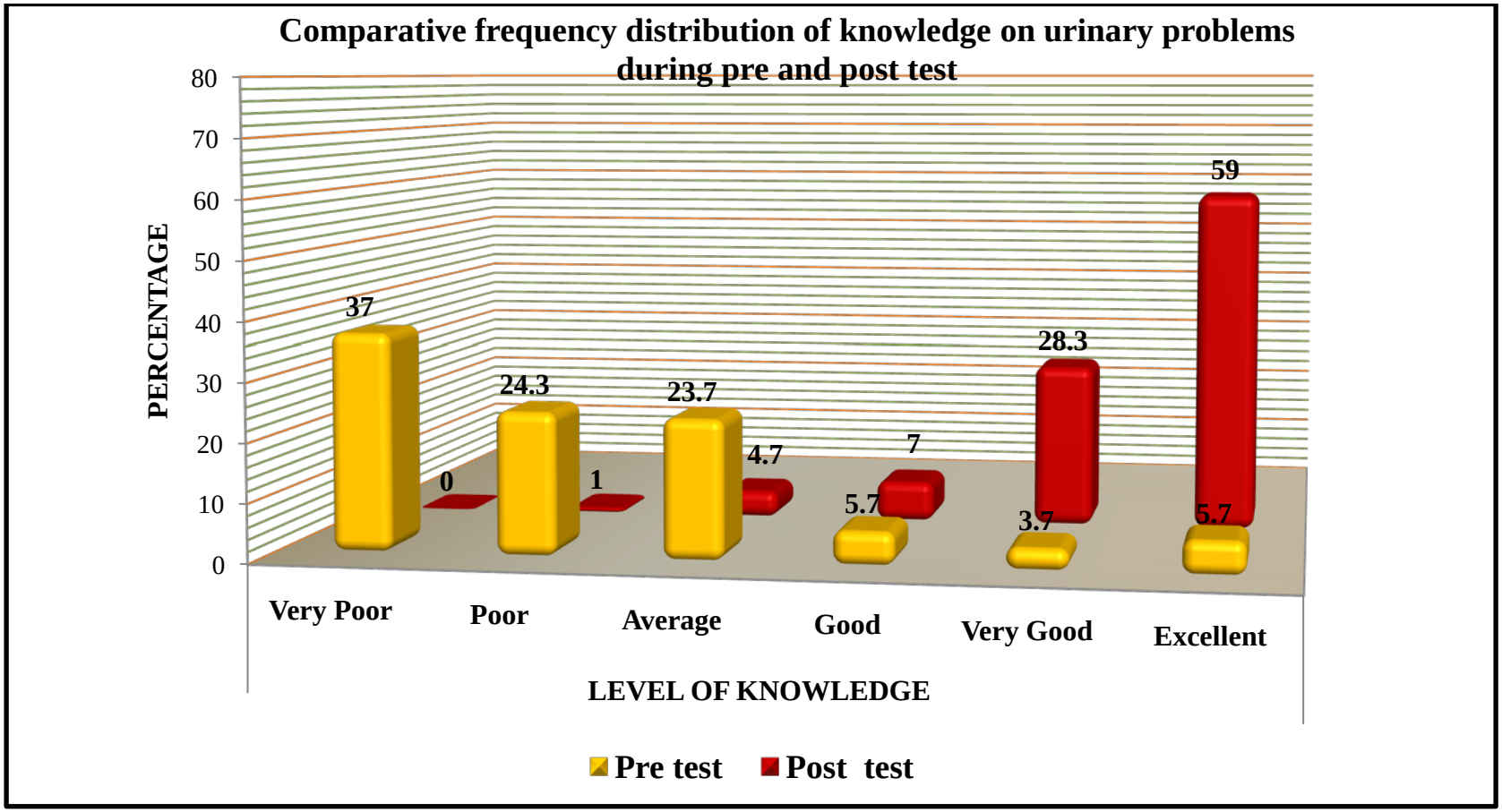

***Figure 20*: Distribution of subjects based on item wise pre and post test knowledge on urinary problem shows** that, during pre test only 15.1 % were in very good and excellent category whereas, 94.3% them were found in this category during post test.

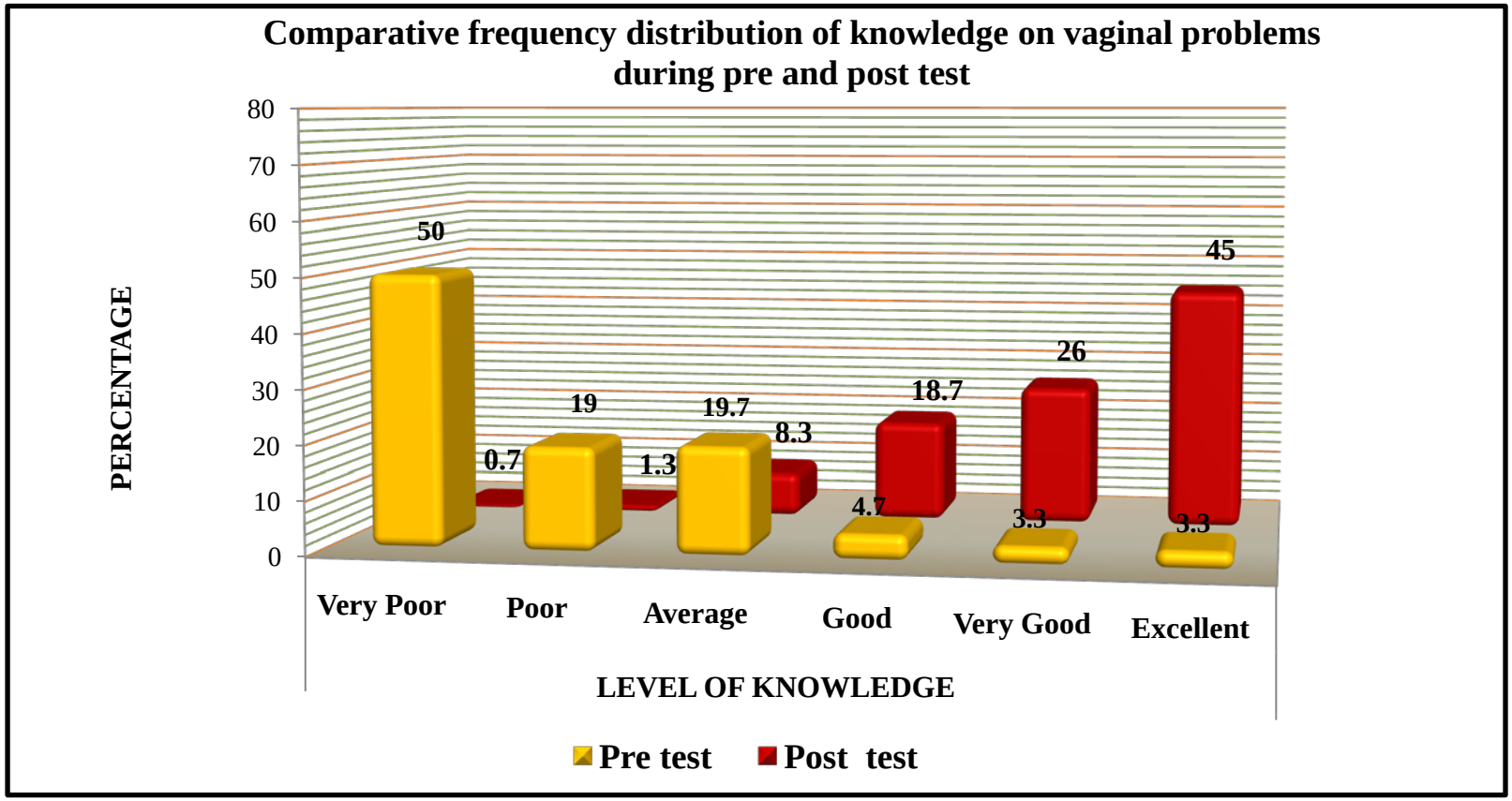

***Figure 21*: Distribution of subjects based on item wise pre and post test knowledge on vaginal problem indicates** 69% subjects under poor and very poor category during pre test, whereas only 2% were in this category during post test.

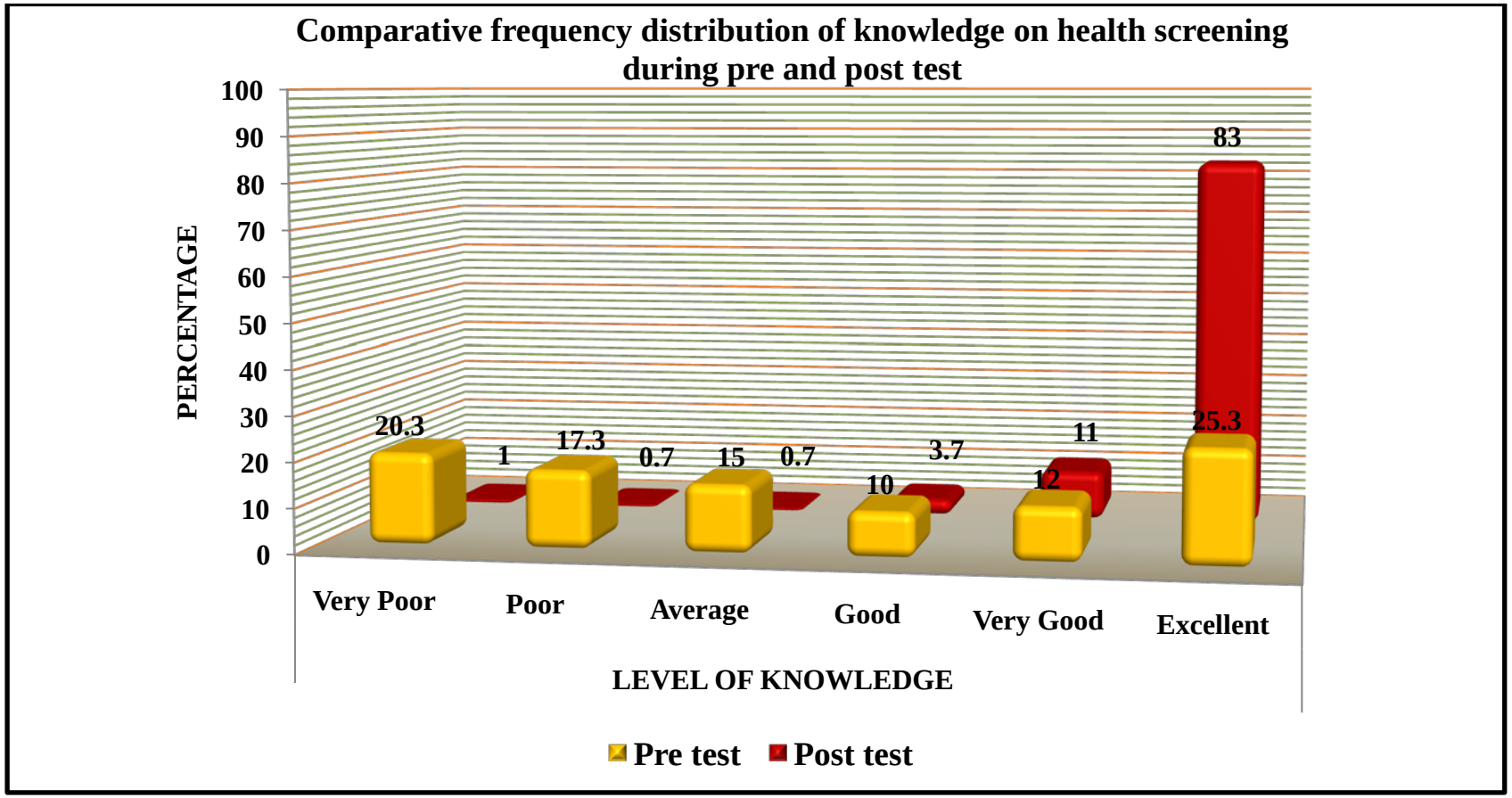

***Figure 22*: Distribution of subjects based on item wise pre and post test knowledge on health screening depicts** 47.3% subjects under good and above category during pre test, while 96.7% were found in the same category after post test.

Section III C

This section deals with comparison of item wise practices, during pre test and post test, in relation to management of selected physical components of menopause, affecting HRQoL. The data are presented in table 19, 20 and *Figure 23, 24, 25, 26, 27 & 28*.

Description of tables

Table 19. Comparison of item wise practices on hot flashes/night sweats, heart discomfort, sleep disturbances and joint pains, during pretest and post test.

Table 20. Comparison of item wise practices on urinary, vaginal, sexual problems and gain in weight, during pretest and post test.

Table – 19

Comparison of item wise practices on hot flashes/night sweats, heart discomfort, sleep disturbances and joint pains, during pretest and post test. (N= Pretest 300+ Post test 300)

Items	LEVEL OF KNOWLEDGE												Pearson Chi - Square		
	Very Poor		Poor		Average		Good		Very Good		Excellent				
	N	%	N	%	N	%	N	%	N	%	N	%	χ^2 value	df	P Value
Hot Flashes & Night sweats															
Pre test	83	27.7	94	31.3	64	21.3	21	7	19	6.3	19	6.3	419.227[a]	5	**.000**
Post test	1	0.3	1	0.3	8	2.7	12	4	25	8.3	253	84.3			
Heart Discomfort															
Pre test	78	26	78	26	77	25.7	25	8.3	17	5.7	25	8.3	359.875[a]	5	**.000**
Post test	0	0	2	0.7	14	4.7	20	6.7	51	17	213	71			
Sleep Disturbances															
Pre test	77	25.7	70	23.3	70	23.3	36	12	32	10.7	15	5	281.130[a]	5	**.000**
Post test	1	0.3	0	0.3	33	11	36	12	115	38.3	115	38.3			
Joint Pain															
Pre test	64	21.3	79	26.3	39	13	40	13.3	43	14.3	35	11.7	311.838[a]	5	**.000**
Post test	1	0.3	2	0.7	3	1	21	7	46	15.5	227	75.7			

Table 19 illustrates item wise practices on hot flashes/ night sweats, heart discomfort, sleep disturbances and joint pains. It was seen that 59% subjects were found in poor and very poor category for practices on hot flashes and night sweats, 52% on heart discomfort, 49% on sleep disturbances and 47.6% on joint pains during pre test, while more than 88% subjects were found in good and above category during post test for the same items. A highly significant difference was found on all the items during post test (p value < 0.05). ***Figure 23, 24, 25***

Table – 20

Comparison of item wise practices on urinary, vaginal, sexual problems and gain in weight, during pretest and post test.

(N= Pretest 300+ Post test 300)

Items	LEVEL OF KNOWLEDGE												Pearson Chi - Square		
	Very Poor		Poor		Average		Good		Very Good		Excellent				
	N	%	N	%	N	%	N	%	N	%	N	%	χ^2 value	df	P Value
Urinary Problem															
Pre test	192	64	78	26	5	1.7	5	1.7	6	2	14	4.7	348.034[a]	5	**.000**
Post test	3	1	59	19.7	32	10.7	24	8	43	14.3	139	46.3			
Vaginal Problem															
Pre test	100	33.3	57	19	44	14.7	33	11	20	6.7	46	15.3	338.151[a]	5	**.000**
Post test	0	0	2	0.7	5	1.7	13	4.3	23	7.7	257	85.7			
Sexual Problem															
Pre test	139	46.3	69	23	31	10.3	25	8.3	12	4	24	8	383.787[a]	5	**.000**
Post test	0	0	4	1.3	9	3	25	8.3	38	12.7	224	74.7			
Gain in Weight															
Pre test	60	20	64	21.3	73	24.3	55	18.3	0	0	48	16	309.551[a]	4	**.000**
Post test	0	0	3	1	9	3	35	11.7	0	0	253	84.3			

Table 20 shows, majority (90%) of subjects were under poor and very poor category for practices on urinary problem during pretest while only 20.7% were found in this category after post test. Knowledge on practices for vaginal problem (15.3%) and gain in weight (16%) have shown a significantly higher percentage under excellent category during pre test. A significant difference was found on practices for all the items during post test (p value < 0.05 at 5% level of significance). ***Figure 27 & 28***.

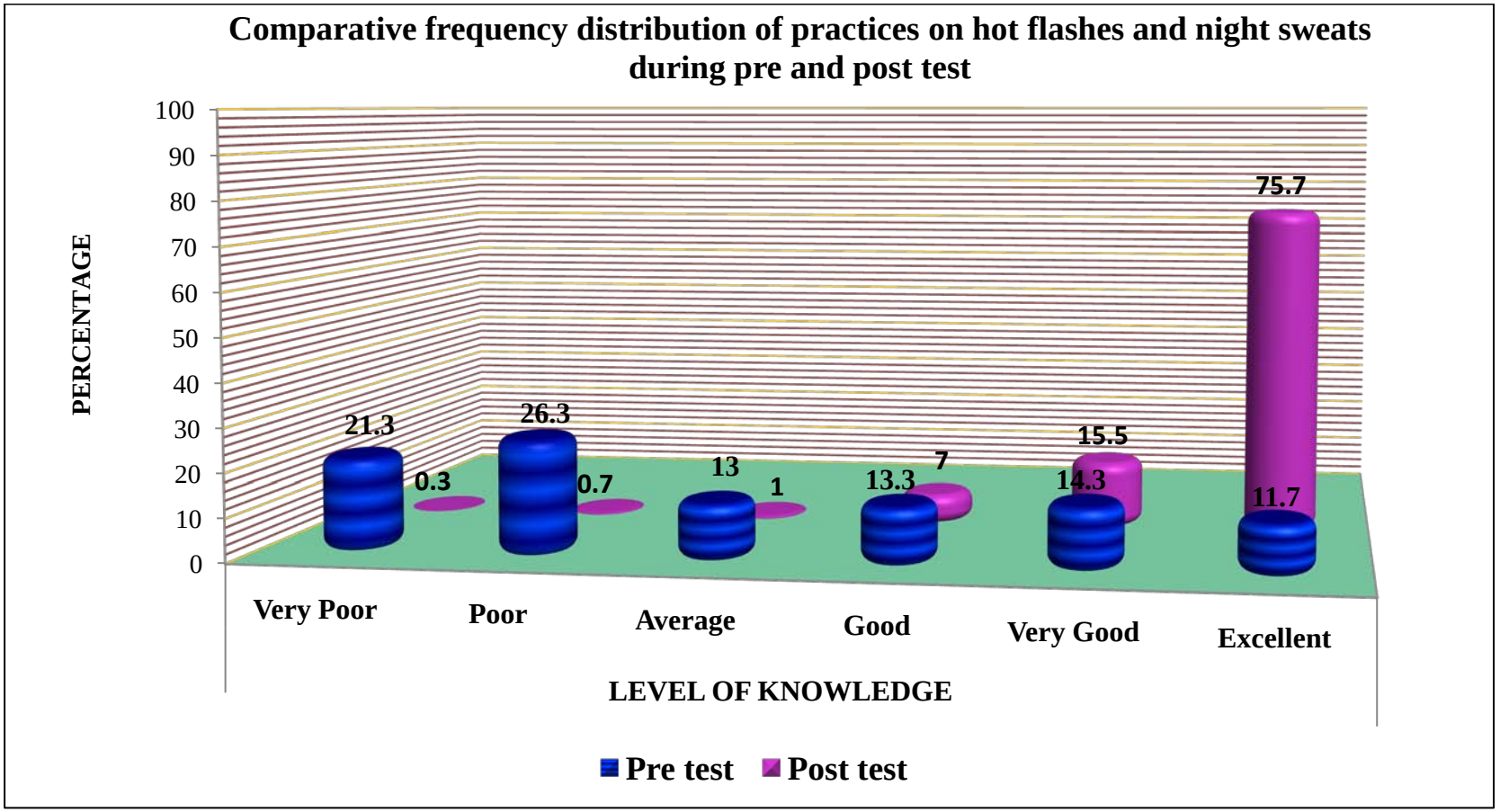

***Figure 23*: Distribution of subjects based on item wise pre and post test practices on hot flashes and night sweats shows** 60.6% subjects under average and below category during pretest while only 2% in the same category after post test.

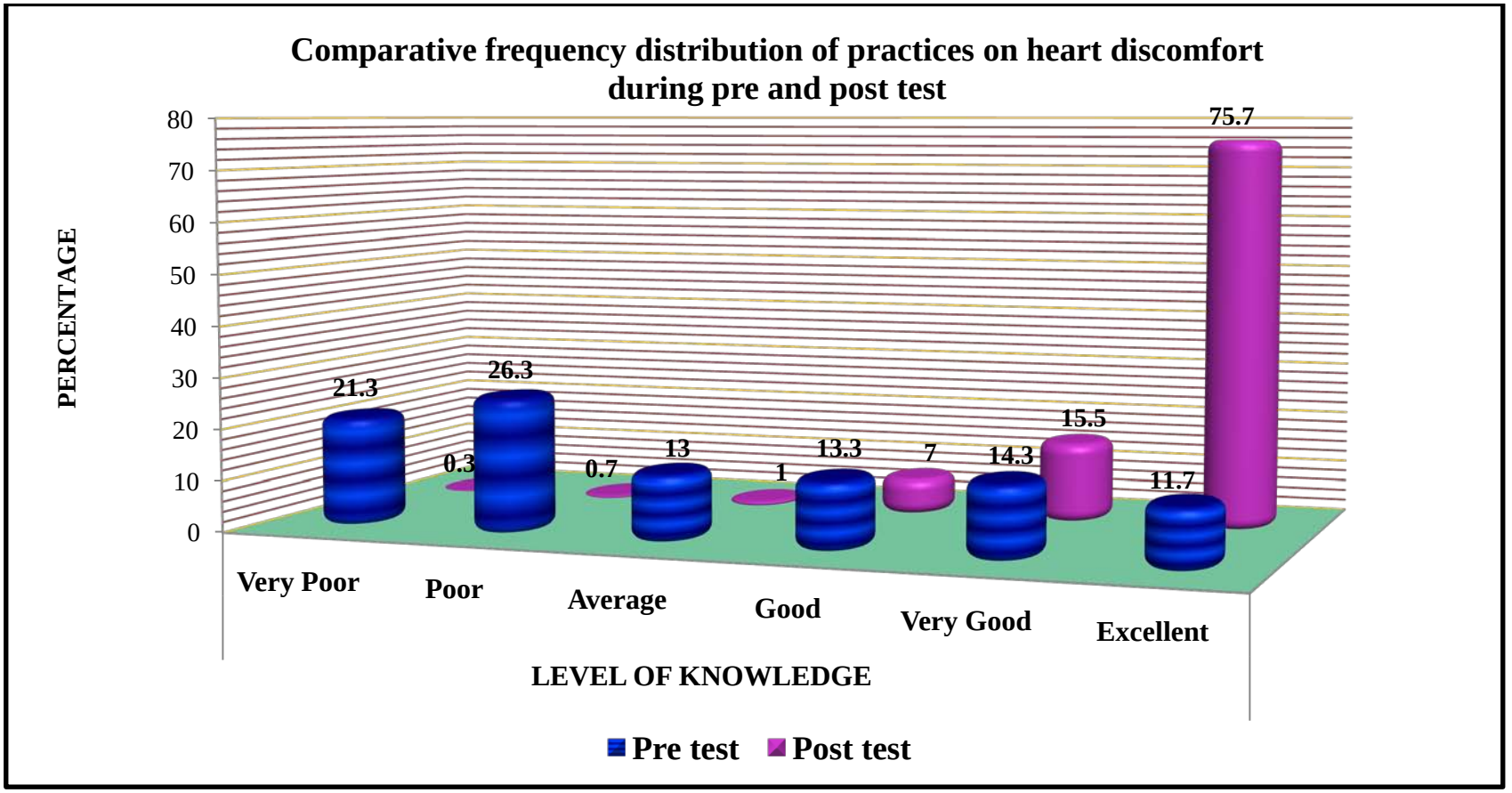

***Figure 24*: Distribution of subjects based on item wise pre and post test practices on heart discomfort presents,** only 39.3 % subjects during pretest under good and above category while 98.2% were found in the same category after post test.

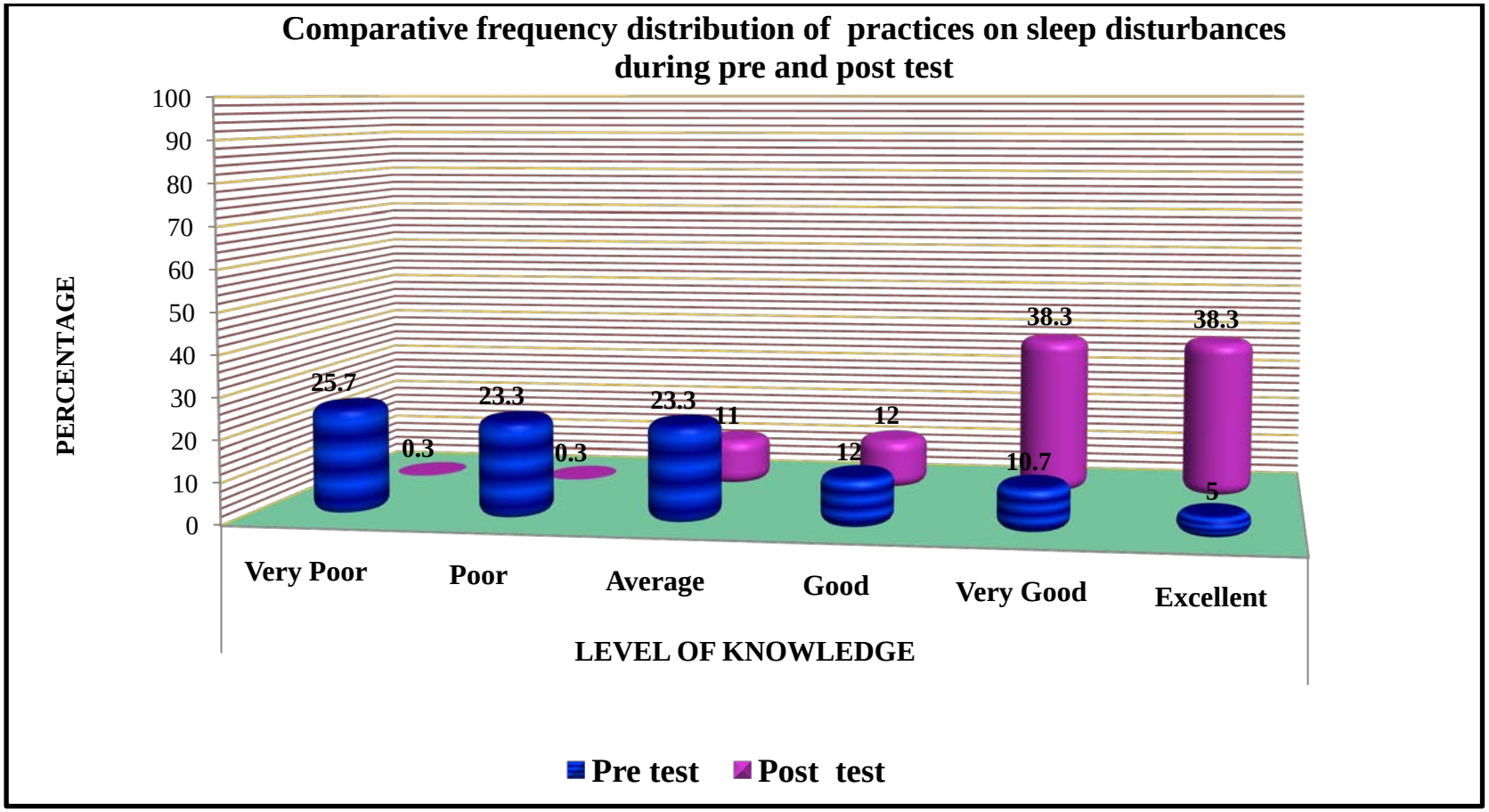

***Figure 25*: Distribution of subjects based on item wise pre and post test practices on sleep disturbances indicates** only 27.2 % subjects under good and above category during pretest, while 88.6% were found in the same category after post test.

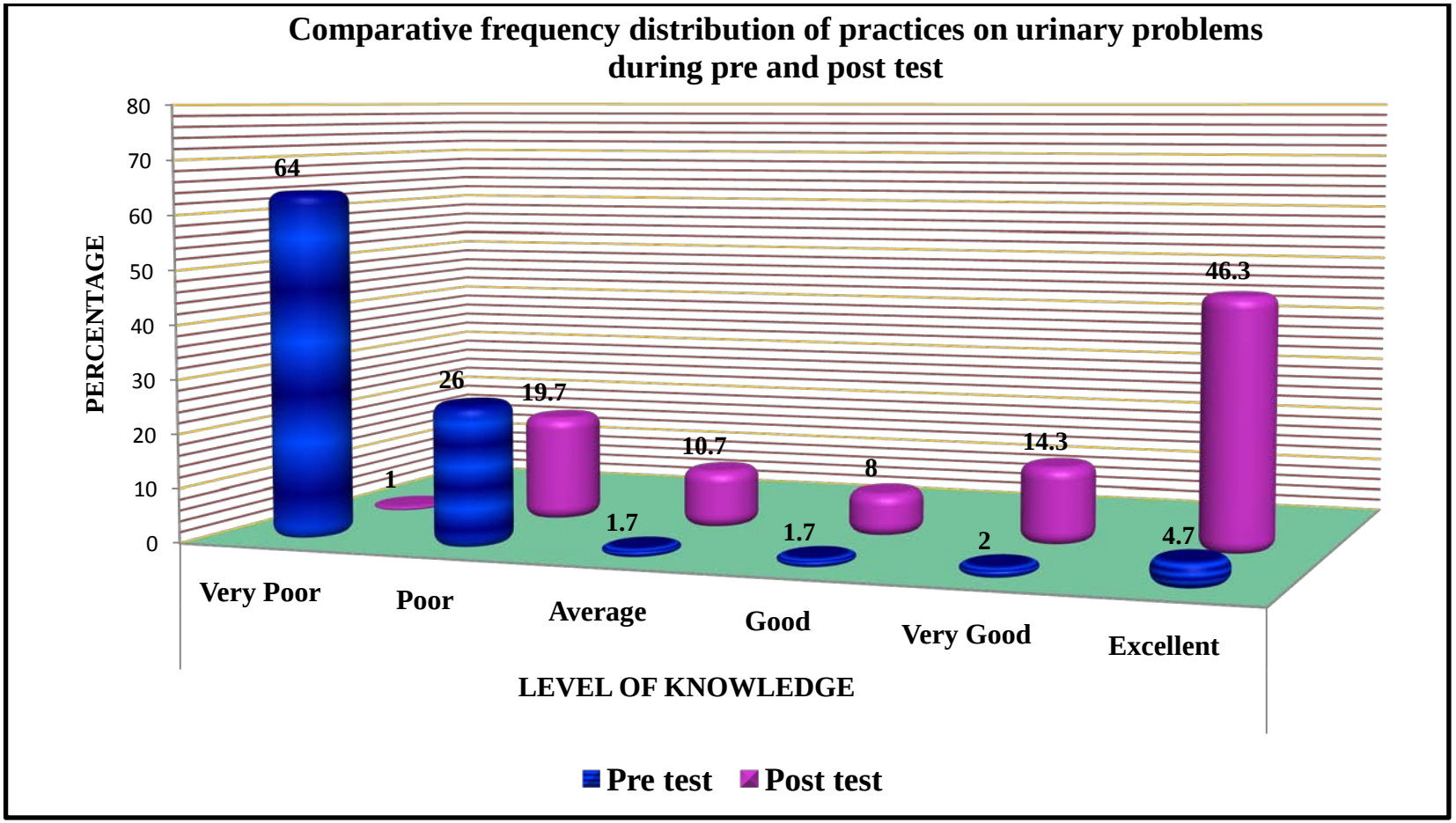

***Figure 26*: Distribution of subjects based on item wise pre and post test practices on urinary problems illustrates** 90% subjects in poor and very poor category during pre test, where as only 20.7% were in this category after post test.

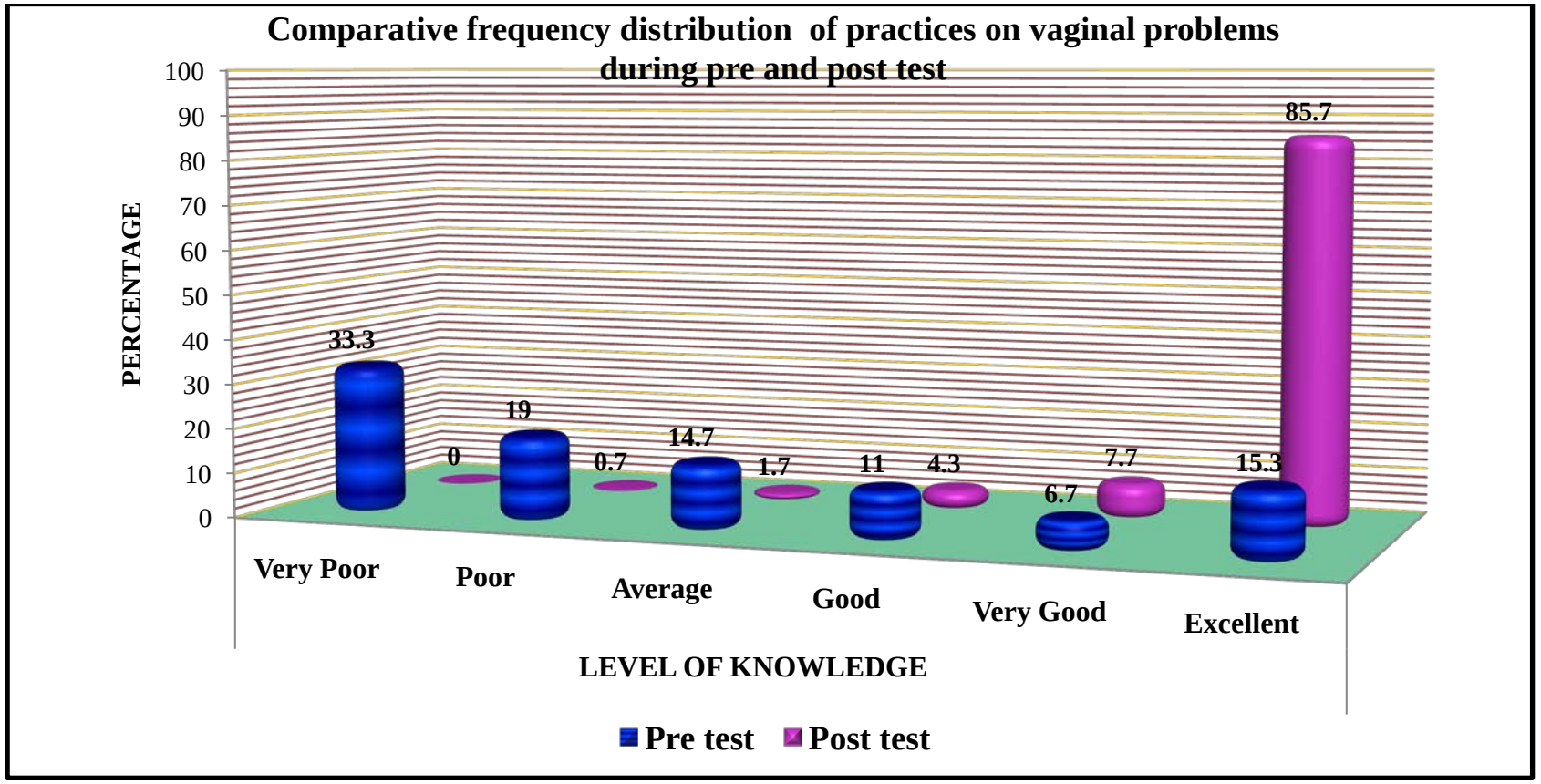

***Figure 27*: Distribution of subjects based on item wise pre and post test practices on vaginal problems shows,** only 15.3% subjects in excellent category during pre test while 85.7% were found in the same category after post test.

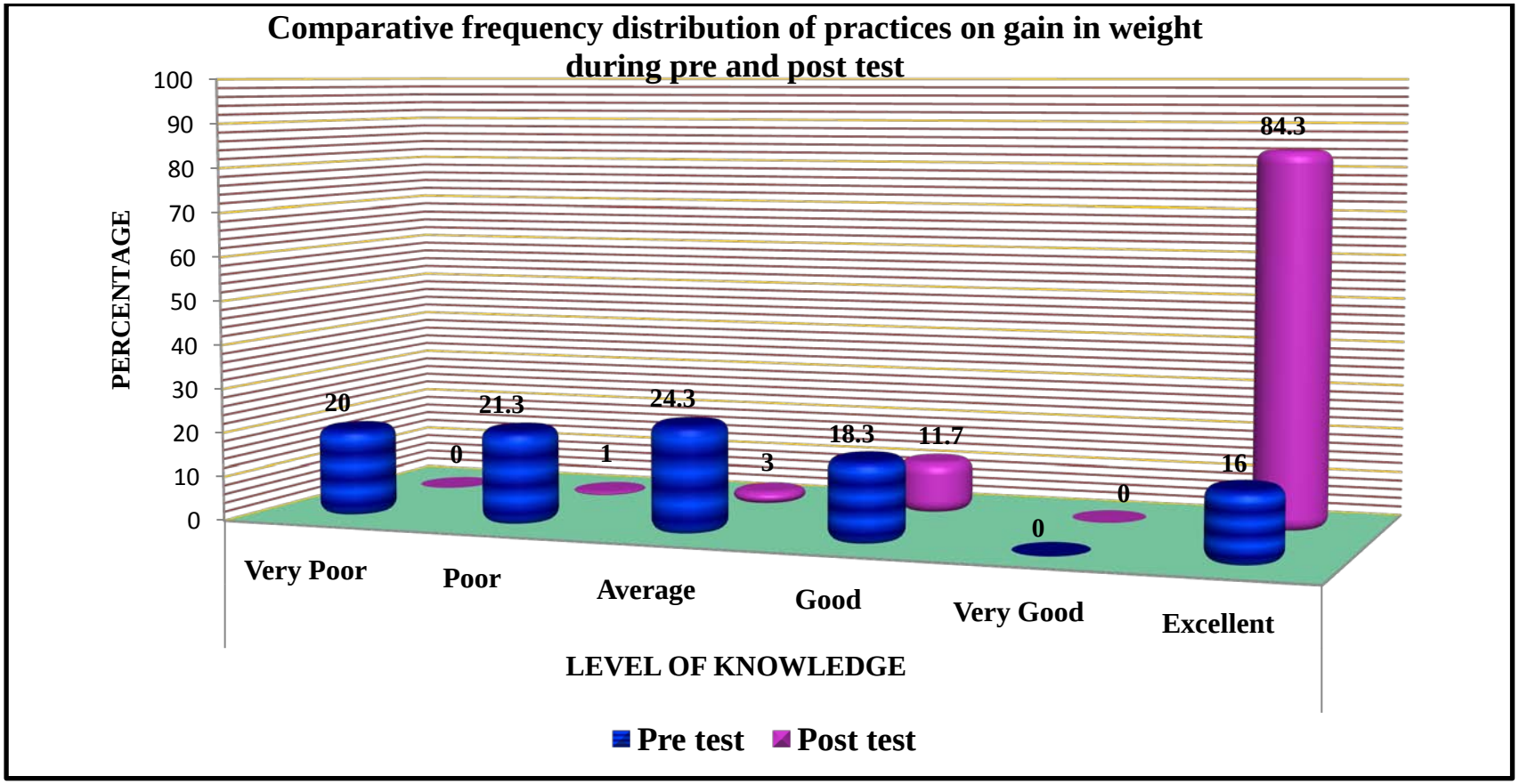

***Figure 28*: Distribution of subjects based on item wise pre and post test practices on gain in weight reveals that,** 41.3% subjects were in poor and very poor category during pretest whereas only 1% was found in the same category after post test.

Section – III D

This section deals with the comparison of mean scores on overall and item wise knowledge and practices in relation to management of selected physical components of menopause. Data are presented in table 21, 22, 23 and 29, 30. 31 and 32.

Description of tables

Table 21. Comparison of overall knowledge and practices mean scores in relation to management of selected physical components of menopause affecting HRQoL, during pre and post test.

Table 22. Mean scores differences on overall knowledge and practices, in relation to management of selected physical components of menopause affecting HRQoL during pre and post test.

Table 23. Comparison of mean scores on item wise knowledge in relation to management of selected physical components of menopause affecting HRQoL during pre test and post test.

Table 24. Comparison of mean scores, on item wise practices in relation to management of selected physical components of menopause, affecting HRQoL, during pre test and post test.

TABLE – 21

Comparison of pre test and post test mean score difference on overall knowledge and practices in relation to management of selected physical components of menopause affecting HRQoL. N= 300 + 300 =600

VARIABLES	PRE TEST				POST TEST			
	N	Mean	SD	Std. Mean error	N	Mean	SD	Std. Mean error
KNOWLEDGE	300	23.2472	17.81455	1.02852	300	76.4000	14.21742	.82084
PRACTICES	300	27.6333	20.54863	1.18638	300	82.0533	12.23504	.70639

***Table 21*: presents the overall knowledge and practices mean scores during the pre and post test.** It shows a significant increase in post test knowledge mean scores to 76.4 from pre test knowledge mean score of 23.2472. Similarly a significant increase in practice mean scores was also found from pre test mean scores of 20.54863 to post test mean scores of 82.0533.

Table 22

Mean scores differences on overall knowledge and practices, in relation to management of selected physical components of menopause affecting HRQoL during pre and post test. (N- 300 + 300 =600)

Variables	PRE TEST AND POST TEST							
	Mean difference	SD	Std. Error mean	95% Confidence interval of the Difference		**Paired t value**	**df**	**P value**
				Lower	Upper			
KNOWLEDGE	53.15278	20.78802	1.20020	55.51468	50.79087	44.287	299	.000
PRACTICES	54.42000	23.24618	1.34212	57.06120	51.77880	40.548	299	.000

Table 22 illustrates a highly significant difference ($P < 0.05$) was found between pre test and post test mean scores on overall knowledge and practices of subjects in relation to management of selected physical components of menopause.

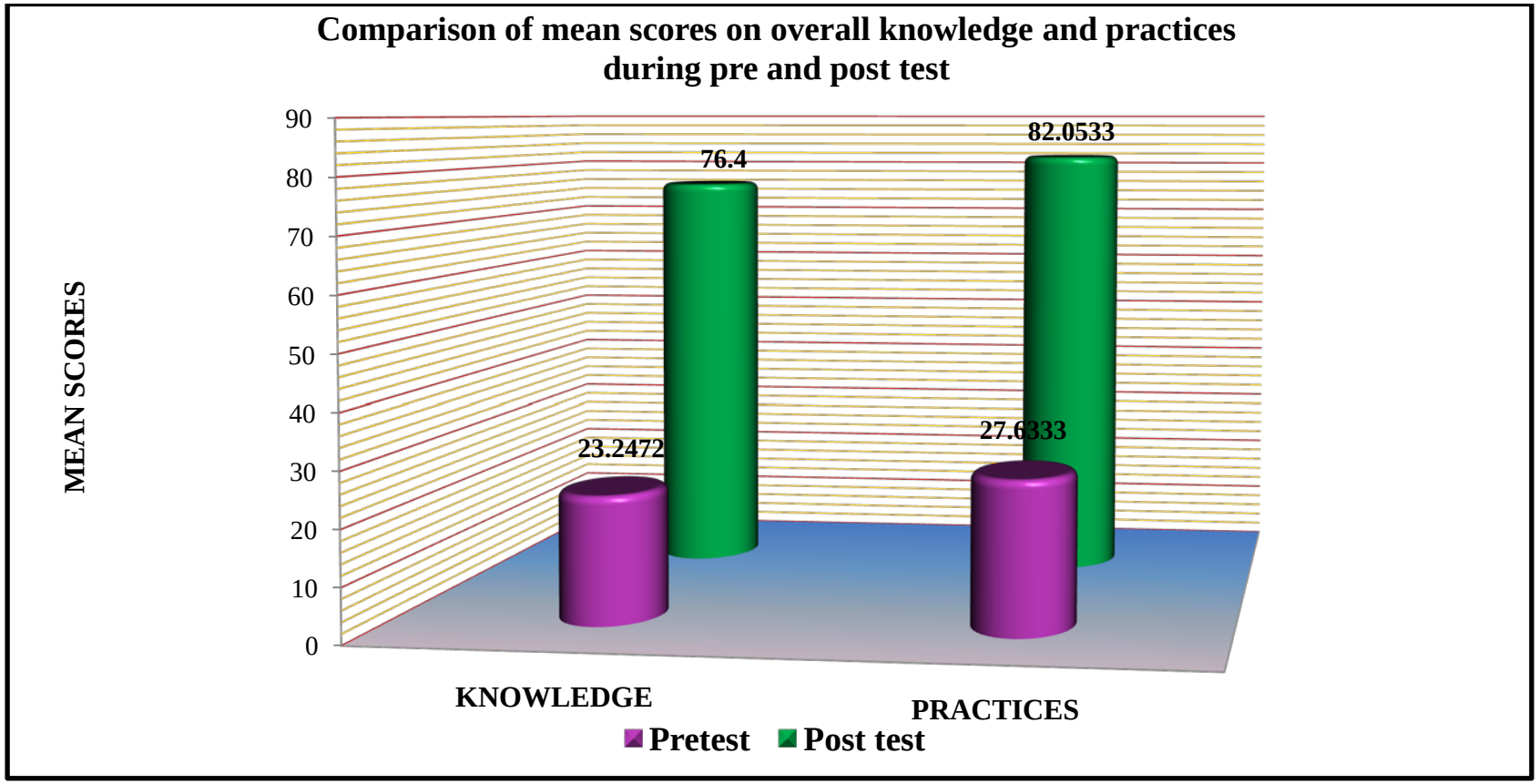

***Figure 29*: shows the comparison of mean scores on overall pre and post test knowledge and practices.** It indicates a significant increase in post test mean scores to 76.4 from pre test mean score of 23.2472 for overall knowledge and 27.6333 to 82.0533 for overall practices.

Table 23

Comparison of mean scores on item wise knowledge in relation to management of selected physical components of menopause affecting HRQoL during pre test and post test. (N = 300)

Sr. No	Variables	PRE TEST		POST TEST	
		Mean	Std. Deviation	Mean	Std. Deviation
1	Female Reproductive System	26.536	19.2575	68.507	17.5744
2	Menopause	20.133	24.2889	72.000	34.1059
3	Hot Flashes and Night sweats	18.956	19.2912	76.422	18.1926
4	Heart Discomfort	18.400	22.3705	80.400	20.7511
5	Sleep Disturbances	24.972	24.8602	79.056	20.5312
6	Joint Pain	18.286	21.6776	80.048	22.9816
7	Urinary Problem	22.524	25.5876	80.619	17.0285
8	Vaginal Problem	17.571	23.9036	74.952	21.5397
9	Sexual Problem	16.571	24.7893	77.143	21.6070
10	Gain in Weight	23.697	23.0943	76.909	18.1553
11	Health Hazards	22.444	20.9392	79.000	19.9856
12	Health Screening	44.952	34.3385	89.857	16.6010

Table 23 shows a significant increase in item wise mean scores on all knowledge items during post test in relation to management of selected physical components of menopause affecting HRQoL. The null hypotheses **Ho1 -** The planned teaching has no significant effect on the level of knowledge among women during perimenopause in relation to management of selected physical components of menopause affecting health related quality of life is rejected and is interpreted that planned teaching helps in improving knowledge on all components of menopause.

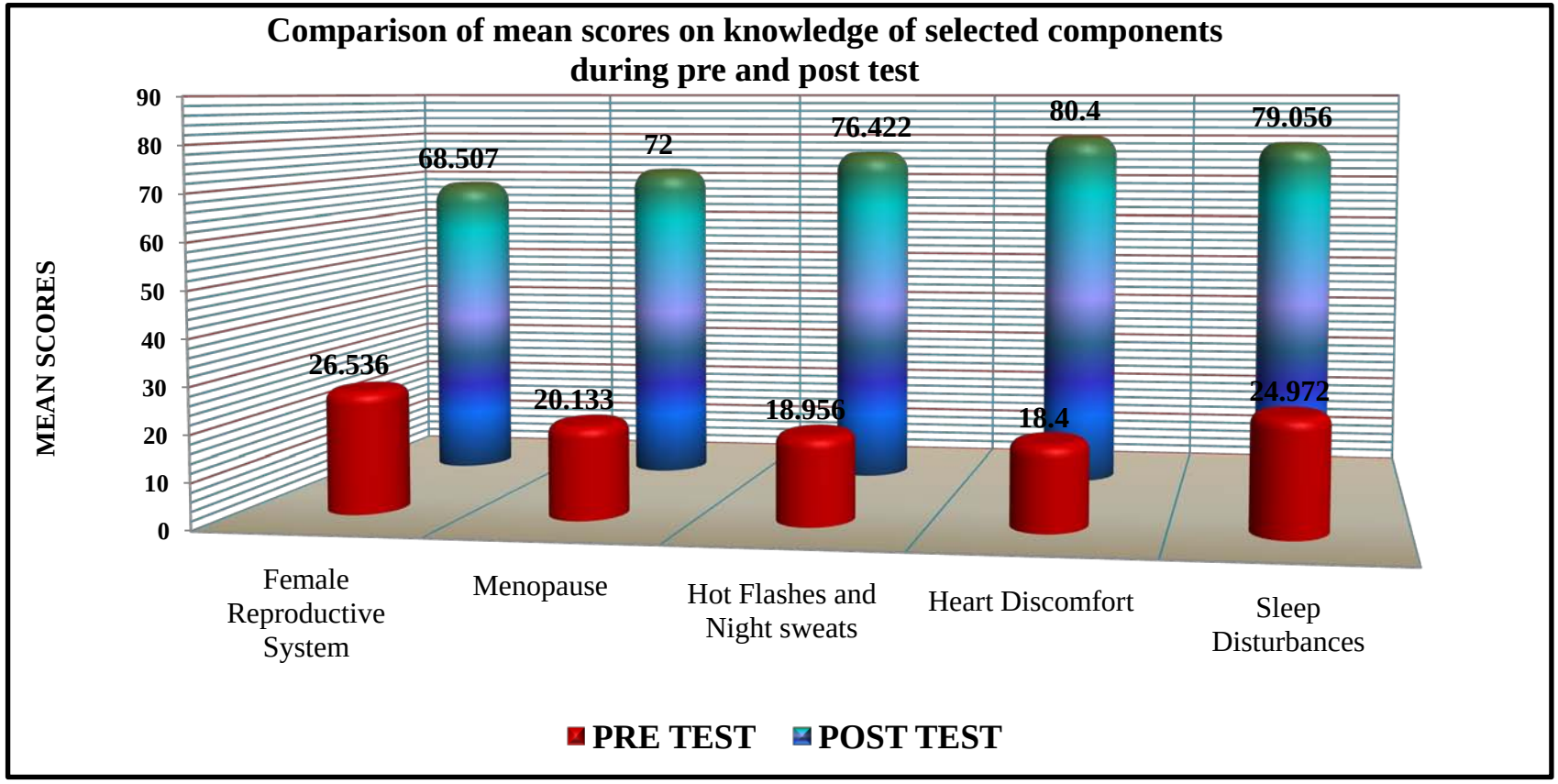

Figure 30 depicts an increase in item wise knowledge mean scores on all components during post test

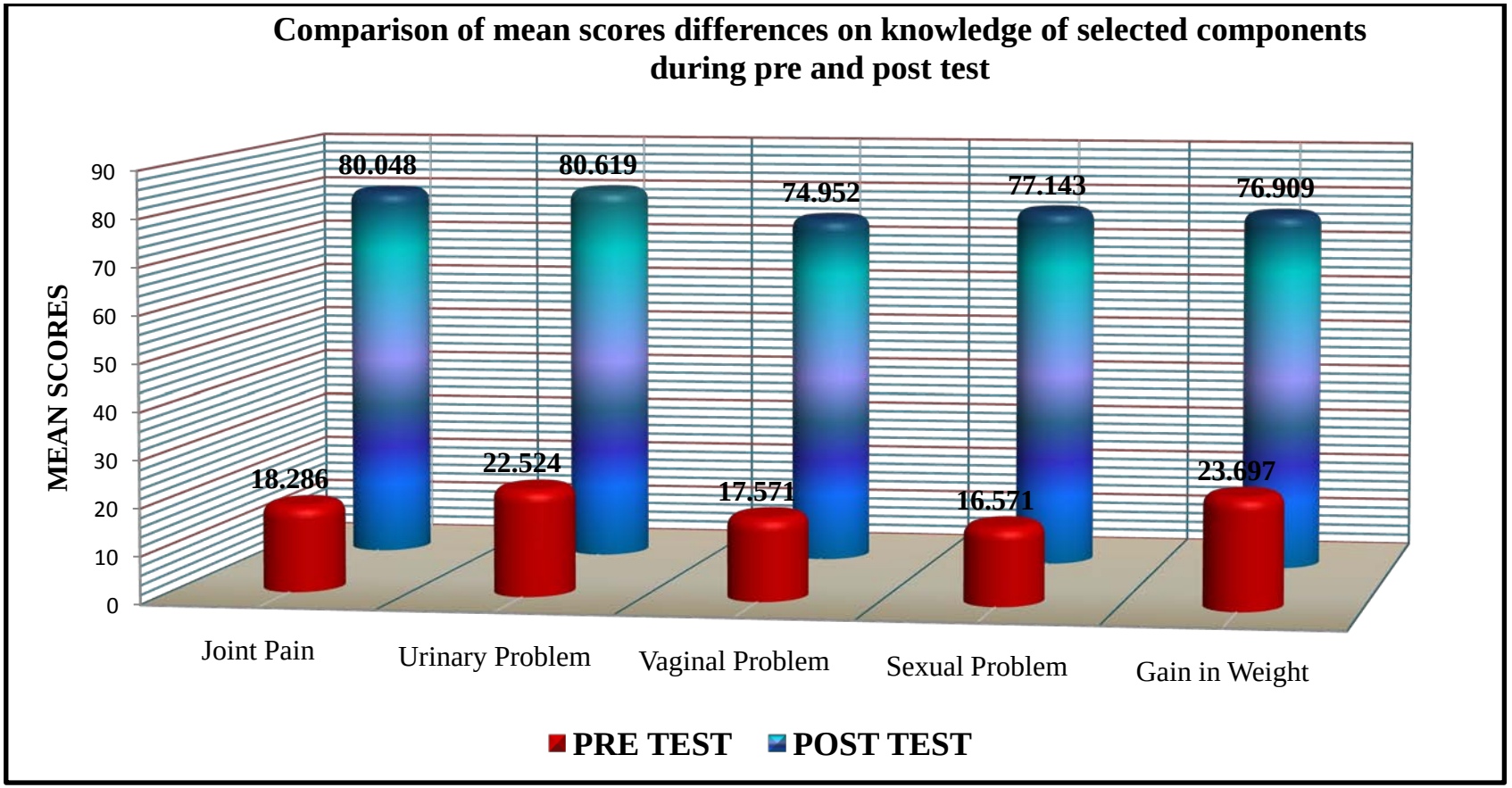

Figure 31 **illustrates** a significant increase in item wise knowledge mean scores on all the components during post test.

Table 24

Comparison of mean scores on item wise practices in relation to management of selected physical components of menopause affecting HRQoL during pre test and post test. N = 300

Sr. No	Variables	PRE TEST		POST TEST	
		Mean	Std. Deviation	Mean	Std. Deviation
1	Hot Flashes and Night sweats	26.143	26.8768	89.571	15.6128
2	Heart Discomfort	28.571	27.4008	83.952	16.8594
3	Sleep Disturbances	30.286	27.2218	73.857	18.4797
4	Joint Pain	35.278	29.4713	84.278	17.7736
5	Urinary Problem	11.111	21.3069	64.167	32.5757
6	Vaginal Problem	31.278	31.1199	89.333	16.5020
7	Sexual Problem	21.111	27.1710	84.500	20.0689
8	Gain in Weight	38.800	28.9139	87.467	17.5483

Table 24 indicates a statistically significant increase in item wise mean scores on all practice items after post test in relation to management of selected physical components of menopause affecting HRQoL. The null hypotheses **Ho2. -** The planned teaching has no significant effect on self expressed practices among women during perimenopause in relation to management of selected physical components of menopause affecting health related quality of life is rejected and interpreted that planned teaching improves practices on all components of menopause.

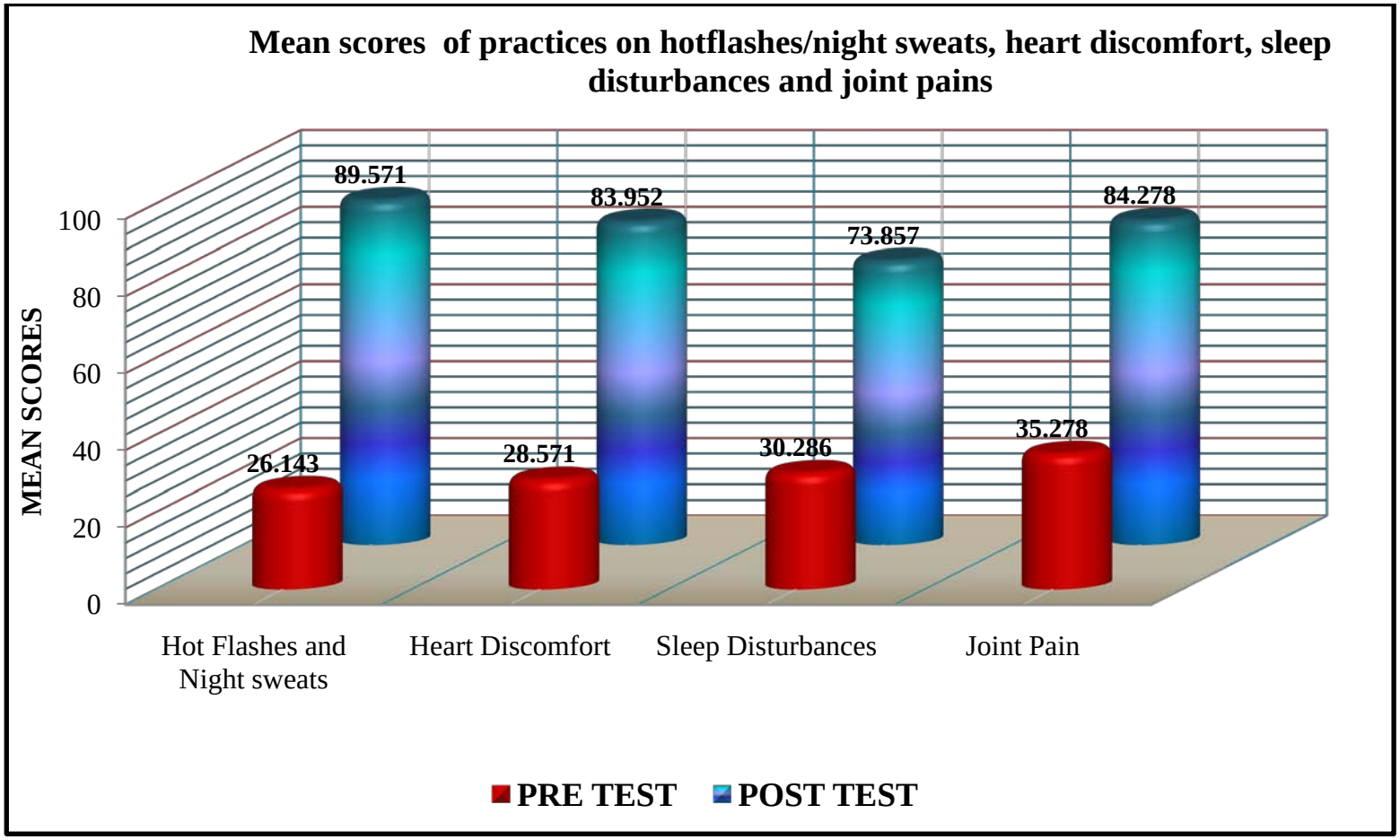

Figure 32 - shows that the level of knowledge on practices was improved significantly on all the items during post test.

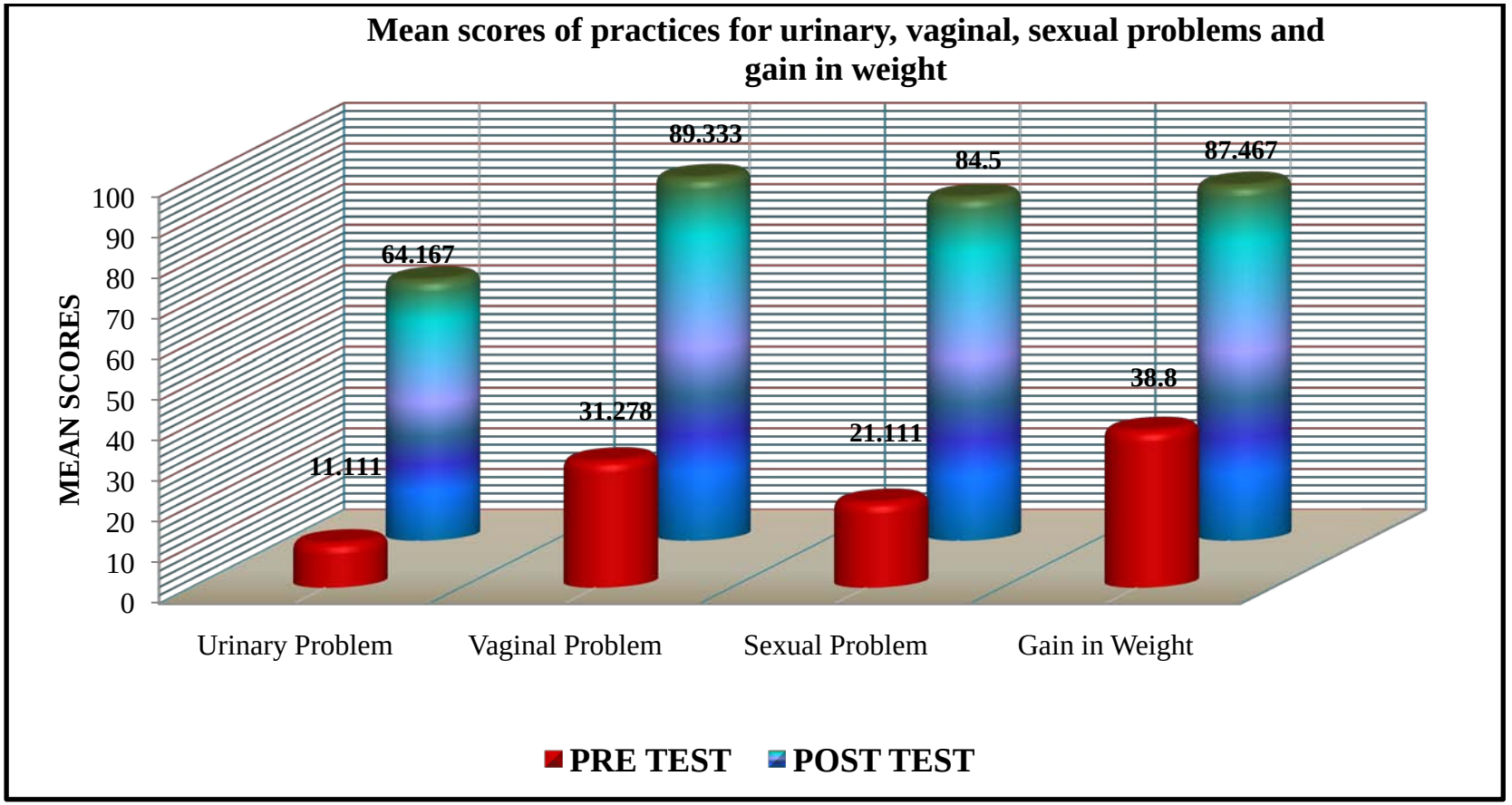

Figure 33 – A significant difference in the item wise mean scores on practices in relation to management of selected physical components of menopause was found after post test. The figure shows a high post test mean scores on all the items.

Section IV

This section presents the association between, knowledge of study subjects in relation to management of selected physical components of menopause and selected demographic and personal characteristics of subjects. In order to find the association ant test hypotheses the data is analyzed using Pearson Chi-square. The null hypotheses...

Ho3 The planned teaching has no significant association between knowledge of women and selected demographic characteristics (age, marital status, education,) and personal characteristics (medical checkup, breast self examination and PAP smear).

The data are presented as follows

IVA) Association between knowledge and demographic characteristics

IVB) Association between knowledge and personal characteristics

IV C) Association between practices and demographic characteristics

IVD) Association between practices and personal characteristics

Section IV - A

This section deals with association between, knowledge in relation to management of selected physical components of menopause and selected demographic characteristics of subjects like age, marital status, education. The data are presented in table 25, 26, 27 and 28

Description of tables

25 Association between pre test knowledge & Age

26 Association between pre test knowledge & marital status and education

27 Association between post test knowledge & Age

28 Association between post test knowledge & marital status and education

Table - 25

Association between pre test knowledge & selected demographic characteristics (Age) **N = 300**

Variables	LEVEL OF KNOWLEDGE												Pearson Chi-Square		
	Very Poor		Poor		Average		Good		Very Good		Excellent				
	N	%	N	%	N	%	N	%	N	%	N	%	Value	df	P value
Age															
40 to 42 Years	27	26.0	44	42.3	15	14.4	9	8.7	5	4.8	4	3.8			
43 to 45 Years	13	18.6	29	41.4	18	25.7	6	8.6	3	4.3	1	1.4	21.691[a]	20	**.357**
46 to 48 Years	18	32.1	24	42.9	12	21.4	1	1.8	1	1.8	0	0			
49 to 51 Years	5	13.2	20	52.6	11	28.9	1	2.6	0	0	1	2.6			
52 to 55 Years	9	28.1	14	43.8	4	12.5	3	9.4	2	6.3	0	0			

Table 25 indicates that there is no association between pre test knowledge of subjects and selected demographic characteristics like age ($P > 0.05$).

Table - 26

Association between pre test knowledge & selected demographic characteristics (marital status and education)

Variables	LEVEL OF KNOWLEDGE												Pearson Chi-Square		
	Very Poor		Poor		Average		Good		Very Good		Excellent				
	N	%	N	%	N	%	N	%	N	%	N	%	Value	df	P value
Marital Status															
Unmarried	0	0	1	25.0	1	25.0	1	25.0	1	25.0	0	-			
Married	65	23.6	126	44.7	57	20.2	18	6.4	10	3.5	6	2.1			
Divorced	0	-	1	100	0	-	0	-	0	-	0	-	16.911[a]	15	**.324**
Widow	7	53.8	3	23.1	2	15.4	1	7.7	0	-	0	-			
Education															
Primary	4	51.7	2	28.6	0	0	0	0	1	14.3	0	0			
Middle School	2	28.6	4	57.1	1	14.3	0	0	0	0	0	0			
High School	14	32.6	23	53.5	6	14.0	0	0	0	0	0	0	49.933[a]	30	**.013**
Higher Secondary	21	37.5	27	48.2	5	8.9	2	3.6	1	1.8	0	0			
Graduation	18	17.3	45	43.3	25	24.0	9	8.7	5	4.8	2	1.9			
Post Graduation	10	25.6	11	28.2	12	30.8	3	7.7	1	2.6	2	5.1			
Professional	3	6.8	19	43.2	11	25.0	6	13.6	3	6.8	2	4.5			

Table 26 indicates that there is no association between pre test knowledge of subjects and selected demographic characteristics like marital status and education ($P > 0.05$).

Table - 27

Association between post test knowledge & selected demographic characteristics (Age) N = 300

Variables	LEVEL OF KNOWLEDGE												Pearson Chi-Square		
	Very Poor		Poor		Average		Good		Very Good		Excellent				
	N	%	N	%	N	%	N	%	N	%	N	%	Value	df	P value
Age															
40 to 42 Years	-	-	1	1	6	5.8	14	13.5	23	22.1	60	57.7			
43 to 45 Years	-	-	0	0	1	1.4	4	5.7	25	35.7	40	57.1			
46 to 48 Years	-	-	0	0	1	1.8	2	3.6	19	33.9	34	60.7			
49 to 51 Years	-	-	0	0	0	0	3	7.9	15	39.5	20	52.6	18.542[a]	16	**.293**
52 to 55 years	-	-	0	0	1	3.1	1	3.1	13	40.6	17	53.1			

Table 27 shows that there is no association between pre test knowledge and selected demographic characteristics like age of the study subjects (P > 0.05).

Table - 28

Association between post test knowledge & selected demographic characteristics (marital status and education) N = 300

Variables	LEVEL OF KNOWLEDGE												Pearson Chi-Square		
	Very Poor		Poor		Average		Good		Very Good		Excellent				
	N	%	N	%	N	%	N	%	N	%	N	%	Value	df	P value
Marital Status															
Unmarried	-	-	0	0	0	0	0	0	1	25.0	3	75.0			
Married	-	-	1	0.4	9	3.2	24	8.5	87	30.9	161	57.1	5.442[a]	12	**.942**
Divorced	-	-	0	0	0	0	0	0	0	0	1	100			
Widow	-	-	0	0	0	0	0	0	7	53.8	6	46.2			
Education															
Primary	-	-	0	0	0	0	0	0	4	57.1	3	42.9			
Middle School	-	-	0	0	0	0	1	14.3	2	28.6	4	57.1			
High School	-	-	0	0	2	4.7	4	9.3	13	30.2	24	55.8			
Higher Secondary	-	-	0	0	3	5.4	6	10.7	19	33.9	28	50.0	15.843[a]	24	**.894**
Graduation	-	-	1	1.0	2	1.9	6	5.8	30	28.8	65	62.5			
Post Graduation	-	-	0	0	0	0	5	12.8	16	41.0	18	46.2			
Professional	-	-	0	0	2	4.5	2	4.5	11	25.0	29	65.9			

Table 28 depicts that there is no association between post test knowledge of subjects and selected demographic characteristics like marital status and education ($P > 0.05$).

Section IV - B

This section presents the data illustrating association between, knowledge in relation to management of selected physical components of menopause and selected personal characteristics of subjects like regular medical checkup, self breast examination, lipid profile and PAP smear examination during pretest and post test. The data are presented in table 29 and 30.

Description of tables

Table 29 Association between pre test knowledge & personal characteristics.

Table 30 Association between post test knowledge & personal characteristics.

Table – 29

Association between pre test knowledge & selected personal characteristics **N = 300**

Variables	LEVEL OF KNOWLEDGE												Pearson Chi-Square		
	Very Poor		Poor		Average		Good		Very Good		Excellent				
	N	%	N	%	N	%	N	%	N	%	N	%	Value	df	P value
Regular medical check up	15	14.7	43	42.2	25	24.5	8	7.8	7	6.9	4	3.9	14.694[a]	5	**.012**
No medical check up	57	28.8	88	44.4	35	17.7	12	6.1	4	2	2	1.0			
Breast Self Examination	19	14.8	55	43.0	34	26.6	8	6.3	9	7.0	3	3	19.714[a]	5	**.001**
No Breast Self Examination	53	30.8	76	44.2	26	15.1	12	7.0	2	1.2	2.3	1.7			
Regular checking of Lipid Profile	12	17.4	22	31.9	19	27.5	6	8.7	12	17.4	22	31.9	23.042[a]	5	**.000**
No checking of Lipid Profile	60	26.0	109	47.2	41	17.7	14	6.1	60	26.0	109	47.2			
PAP Smear	2	5.9	13	38	7	20.6	3	8.8	7	20	2	5.9	38.613[a]	5	**.000**
No PAP Smear	70	26.3	118	44.4	53	19.9	17	6.4	4	1.5	4	1.5			

Table 29 indicates a significant association between pre test knowledge of study subjects and selected personal characteristics like regular medical check up, breast self examination, regular lipid profile, and PAP smear (< 0.05).

Table –30

Association between post test knowledge & selected personal characteristics **N = 300**

Variables	LEVEL OF KNOWLEDGE										Pearson Chi-Square		
	Poor		Average		Good		Very Good		Excellent				
	N	%	N	%	N	%	N	%	N	%	Value	df	P value
Regular medical check up	0	0	3	2.9	11	10.8	33	32.4	55	53.9			
No medical check up	1	0.5	6	3.0	13	6.6	62	31.3	116	58.6	2.294[a]	4	**.682**
Breast Self Examination	0	0	2	1.6	12	9.4	32	25	82	64.1	7.897[a]	4	**.095**
No Breast Self Examination	1	0.6	7	4.1	12	7.0	63	36.6	89	51.7			
Regular checking of Lipid Profile	0	0	1	1.4	8	11.6	20	29.0	40	58.0			
No checking of Lipid Profile	1	0.4	8	3.5	16	6.9	75	32.5	131	56.7	2.682[a]	4	**.612**
PAP Smear	0	0	1	2.9	4	11.8	5	14.7	24	70.6			
No PAP Smear	1	0.4	8	3.0	20	7.5	90	33.8	147	55.3	5.533[a]	4	**.237**

Table 30 shows that there is no association between post test knowledge of perimenopausal women and selected personal characteristics like regular medical checkup, breast self examination, regular lipid profile, and PAP smear as P value is > 0.05.

Section IV - C

This section deals with the association between, knowledge in relation to management of selected physical components of menopause and selected demographic characteristics of subjects like age, marital status, education. The data are presented in table 31, 32, 33 and 34

Description of tables

31 Association between pre test practices & Age

32 Association between pre test practices & marital status and education

33 Association between post test practices & Age

34 Association between post test practices & marital status and education.

Table –31

Association between pre test practices and selected demographic characteristics (age) N = 300

Variables	LEVEL OF KNOWLEDGE												Pearson Chi-Square		
	Very Poor		Poor		Average		Good		Very Good		Excellent				
	N	%	N	%	N	%	N	%	N	%	N	%	Value	df	P value
Age															
40 to 42 Years	21	20.2	32	30.8	24	23.1	16	15.4	8	7.7	3	2.9			
43 to 45 Years	12	17.1	25	35.7	18	25.7	9	12.9	4	5.7	2	2.9			
46 to 48 Years	20	35.7	19	33.9	9	16.1	7	12.5	1	1.8	0	0	26.656[a]	20	**.145**
49 to 51 Years	7	18.4	8	21.1	16	42.1	5	13.2	1	2.6	1	2.6			
52 to 55 Years	12	37.5	10	31.3	5	15.6	1	3.1	2	6.3	2	6.3			

Table 31 indicates that there is no association between pre test practices and age of subjects (P > 0.05).

Table - 32

Association between pre test practices and selected demographic characteristics (marital status, education) N = 300

Variables	LEVEL OF KNOWLEDGE												Pearson Chi-Square		
	Very Poor		Poor		Average		Good		Very Good		Excellent		Value	df	P value
	N	%	N	%	N	%	N	%	N	%	N	%			
Marital Status															
Unmarried	1.0	25.0	0	0	1.0	25.0	0	0	0	0	2.0	50.0			
Married	56.0	19.9	97.0	34.4	60	21.3	32.0	11.3	25.0	8.9	12.0	4.3			
Divorced	0	0	0	0	0	0	0	0	1.0	100	0	0	36.359[a]	15	**.002**
Widow	3.0	23.1	3.0	23.1	6.0	46.2	1.0	7.7	0	0	0	0			
Education															
Primary	1	14.3	3	42.9	1	14.3	0	0	2	28.6	0	0			
Middle School	4	57.1	1	14.3	1	14.3	1	14.3	0	0	0	0			
High School	13	30.2	20	46.5	7	16.3	2	4.7	1	2.3	0	0	38.564[a]	30	**.136**
Higher Secondary	14	25.0	19	33.9	14	25.0	4	7.1	4	7.1	1	1.8			
Graduation	17	16.3	28	26.9	25	24.0	13	12.5	13	12.5	8	7.7			
Post Graduation	5	12.8	16	41.0	6	15.4	6	15.4	3	7.7	3	7.7			
Professional	6	13.6	13	29.5	13	29.5	7	15.9	3	6.8	2	4.5			

Table 32 indicates that there is no association between pre test practices and marital status as the samples were inadequate under unmarried, divorced and widow categories. No association was found between pretest practices and education.

Table - 33

Association between post test practices and selected demographic characteristics (age) **N = 300**

Variables	LEVEL OF KNOWLEDGE												Pearson Chi-Square		
	Very Poor		Poor		Average		Good		Very Good		Excellent				
	N	%	N	%	N	%	N	%	N	%	N	%	Value	df	P value
Age															
40 to 43 Years	-	-	1	1	4	3.8	5	4.8	19	18.3	75	72.1			
44 to 46 Years	-	-	0	0	0	0	3	4.3	14	20.0	53	75.7			
47 to 49 Years	-	-	0	0	0	0	0	0	13	23.6	43	76.8	13.427[a]	16	**.641**
50 to 52 Years	-	-	0	0	0	0	1	2.6	5	13.2	23	84.2			
53 to 55 years	-	-	0	0	1	3.1	1	3.1	4	12.5	26	81.3			

Table 33 shows that there is no association between post test practices and age of the subjects (P > 0.05).

Table - 34

Association between post test practices and selected demographic characteristics (marital status, education) **N = 300**

Variables	LEVEL OF KNOWLEDGE												Pearson Chi-Square		
	Very Poor		Poor		Average		Good		Very Good		Excellent				P
	N	%	N	%	N	%	N	%	N	%	N	%	Value	df	value
Marital Status															
Unmarried	-	-	0	0	0	0	0	0	0	0	4.0	100	3.869[a]	12	**.986**
Married	-	-	2.0	0.7	5.0	1.8	8.0	2.8	57	20.2	210	74.5			
Divorced	-	-	0	0	0	0	0	0	0	0	1.0	100			
Widow	-	-	0	0	0	0	0	0	1.0	7.7	12.0	92.3			
Education															
Primary	-	-	0	0	0	0	0	0	4.0	57.1	3.0	42.9	25.135[a]	24	**.398**
Middle School	-	-	0	0	0	0	0	0	2.0	28.6	5.0	71.4			
High School	-	-	1.0	2.3	1.0	2.3	0	0	11.0	25.6	30	69.8			
Higher Secondary	-	-	0	0	0	0	2.0	3.6	12.0	21.4	42.0	75.0			
Graduation	-	-	0	0	2.0	1.9	2.0	1.9	17.0	16.3	83.0	79.8			
Post Graduation	-	-	1.0	2.6	2.0	5.1	1.0	2.6	7.0	17.9	28.0	71.8			
Professional	-	-	0	0	0	0	3.0	6.8	5.0	11.4	36.0	81.8			

Table 34 shows that there is no association between post test practices, marital status and education p (> 0.05)

Section IV - D

This section presents the data illustrating association between, knowledge in relation to management of selected physical components of menopause and selected personal characteristics of the subjects like regular medical checkup, self breast examination, lipid profile and PAP smear examination during pretest and post test. The data are presented in table 35 and 36.

Description of tables

Table 35 Association between pre test knowledge & personal characteristics

Table 36 Association between post test knowledge & personal characteristics

Table – 35

Association between pre test practices and selected personal characteristics **N = 300**

Variables	LEVEL OF KNOWLEDGE												Pearson Chi-Square		
	Very Poor		Poor		Average		Good		Very Good		Excellent				
	N	%	N	%	N	%	N	%	N	%	N	%	Value	df	P value
Regular medical check up	17	16.7	30	29.4	27	26.5	12	11.8	10	9.8	6	5.9	3.558[a]	5	**.615**
No medical check up	43	21.7	70	35.4	40	20.2	21	10.6	16	8.1	8	4.0			
Breast Self Examination	20	15.6	36	28.1	37	28.9	13	10.2	13	10.2	9	7.0	11.663[a]	5	**.040**
No Breast Self Examination	40	23.3	64	37.2	30	17.4	20	11.6	13	7.6	5	2.9			
Regular checking of Lipid Profile	12	17.4	18	26.1	16	23.2	10	14.5	8	11.6	5	7.2	4.904[a]	5	**.428**
No checking of Lipid Profile	14	20.8	82	35.5	51	22.1	23	10.0	18	7.8	9	3.9			
PAP Smear	6	17.6	8	23.5	5	14.7	5	14.7	6	17.6	4	11.8	10.398[a]	5	**.065**
No PAP Smear	54	20.3	92	34.6	62	23.3	28	10.5	20	7.5	10	3.8			

Table 35 illustrates that there is no association between pre test practices and regular medical check up, breast self examination, regular lipid profile, and PAP smear of the subjects as the P value is > 0.05.

Table –36

Association between posts test practices and selected personal characteristics **N = 300**

Variables	LEVEL OF KNOWLEDGE										Pearson Chi-Square		
	Poor		Average		Good		Very Good		Excellent				
	N	%	N	%	N	%	N	%	N	%	Value	df	P value
Regular medical check up	0	0	1	1.0	4	3.9	24	23.5	73	71.6	4.130[a]	4	.389
No medical check up	2.0	1.0	4	2.0	4	2.0	34	17.2	154	77.8			
Breast Self Examination	0	0	1	0.4	5	3.9	18	14.1	104	81.3	7.953[a]	4	.093
No Breast Self Examination	2	1.2	4	2.3	3	1.7	40	23.3	123	71.5			
Regular checking of Lipid Profile	0	0	1	1.4	4	5.8	10	14.5	54	78.3	5.082[a]	4	.279
No checking of Lipid Profile	2	0.9	4	1.7	4	1.7	48	20.8	173	74.9			
PAP Smear	0	0	0	0	1	2.9	4	11.8	29	85.3	2.511[a]	4	.643
No PAP Smear	2	0.8	5	1.9	7	2.6	54	20.3	198	74.4			

Table 36 indicates that there is no association between post test practices and marital status as well as education (P > 0.05). No association has been found between planned teaching and demographic and personal characteristics of the subjects. The null hypotheses **Ho 3** The planned teaching has no significant association between knowledge, practices and selected demographic characteristics (age, marital status, education,) and personal characteristics (medical checkup, breast self examination and PAP smear) of women is accepted and being interpreted that the knowledge and practices on management of menopause has no relationship with age, marital status and education. It is also understood that basic knowledge of self care encourages women to participate in health assessment practices.

4.5 Section V

This section describes the views of study participants regarding the information booklet.

Table – 37

Distribution of perimenopausal women based on views regarding information booklet (N = 297)

Variables	Strongly Agree		Agree		Neutral		Disagree		Strongly Agree	
	N	%	N	%	N	%	N	%	N	%
Content										
Appropriate	128	43.1	161	54.2	7	2.4	0	0	0	0
Adequate	130	43.7	159	53.5	8	2.7	0	0	0	0
Useful	144	48.1	150	50.5	3	1.0	0	0	0	0
Comprehensive	150	50.6	136	45.8	11	3.7	0	0	0	0
Language										
Clear	148	49.9	143	48.1	6	2.0	0	0	0	0
Simple	159	32.1	132	44.4	6	2.0	0	0	0	0
Easy to understand	166	55.9	126	42.4	5	1.7	0	0	0	0
Presentation										
Simple to understand	161	54.2	123	44.1	5	1.7	0	0	0	0
Informative	160	53.9	132	44.5	5	1.7	0	0	0	0
Attractive pictures	158	53.2	132	44.5	7	2.4	0	0	0	0
Interesting	169	56.9	125	42.1	3	1.0	0	0	0	0

Table 37 indicates majority of subjects strongly agreed that the booklet was comprehensive, simple to understand, informative and interesting. They had also agreed that the booklet was appropriate and useful for them.