

## RESULTS

**Results of this study are displayed under the following parts.**

**Part I:** Socio-demographic and physical characteristics of study sample (Table 1, 2).

**Part II:** Study sample knowledge about polycystic ovarian syndrome before and after application of guidelines (Table 3).

**Part III:** study sample life style before and after application of guidelines (Table 4, 5).

**Part IV:** Study sample quality of life for girls with PCOS (Table 6, 7, 8).

- Tables (2, 3, 4, 5, 6, 7, 8) answer the study hypothesis; girls' knowledge and practice will be improved after application of guidelines.

**Part (I): Socio-demographic characteristics of study sample in (n=84).**

**Table (1): Socio-demographic characteristics of study sample**

Characteristics of the girls	No.	%
<b>Age</b>		
< 20 years	38	45.24
20 - 25 years	46	54.76
<b>Mean <math>\pm</math> SD</b>	21.5 $\pm$ 2.6	
<b>Grade</b>		
1 <sup>st</sup> grade	3	3.57
2 <sup>nd</sup> grade	31	36.90
3 <sup>rd</sup> grade	26	30.95
4 <sup>th</sup> grade	24	28.57
<b>Residence</b>		
Urban	18	21.43
Rural	66	78.57
<b>Height(cm)</b>		
< 155 cm	21	17.14
156 - 165	46	48.57
> 165	17	12.86
<b>Mean <math>\pm</math> SD</b>	160.3 $\pm$ 6.4	

This table shows that, the total study sample was 84 girls, (54.76 %) of them were between 20 - 25 years & the mean  $\pm$  SD of age was 21.57  $\pm$  2.6. Regarding grade, about two thirds of the studied girls (36.90 %) had 2<sup>nd</sup> grade, while the minority (3.57 %) had 1<sup>st</sup> grade. The majority of girls live at rural area. While (21.43 %) of the sample live at urban area. Mean Height  $\pm$ SD was (160.32 $\pm$ . 6.4 cm).

**Table (2): Physical characteristics of study sample with PCOS before and after application guidelines (n= 84).**

	Pre intervention		Post intervention		X <sup>2</sup>	P value
	No	%	No	%		
<b>Weight (Kg)</b>					854.60	0.000**
45-60	32	38.1	40	47.6		
61-75	36	42.9	41	48.8		
>75	16	19	3	3.6		
<b>Mean ±SD</b>	65.90±10.9		60.90±7.2			
<b>Body Mass index (kg / m<sup>2</sup>)</b>					273.85	0.000**
Under weight(<18.5)	1	1.2	2	2.4		
Normal (18.5-25)	38	45.2	61	72.6		
Over weight(25-30)	19	22.6	20	23.8		
Obese (>30)	26	31	1	1.2		
<b>Mean ±SD</b>	25.81±4.7		24.80±2.57			

A highly statistical significant difference ( $P \leq 0.001$ )

As regarding Weight and Body Mass Index there was a high significant difference before and after guidelines, Mean Weight ±SD was (65.90±10.9 Kg). Mean Body Mass Index ±SD was (25.81±4.7 kg / m<sup>2</sup>) before guidelines. While Mean Weight ± SD was (60.90 ±7.2 Kg). Mean Body Mass Index was ±SD was (24.80±2.57kg / m<sup>2</sup>).

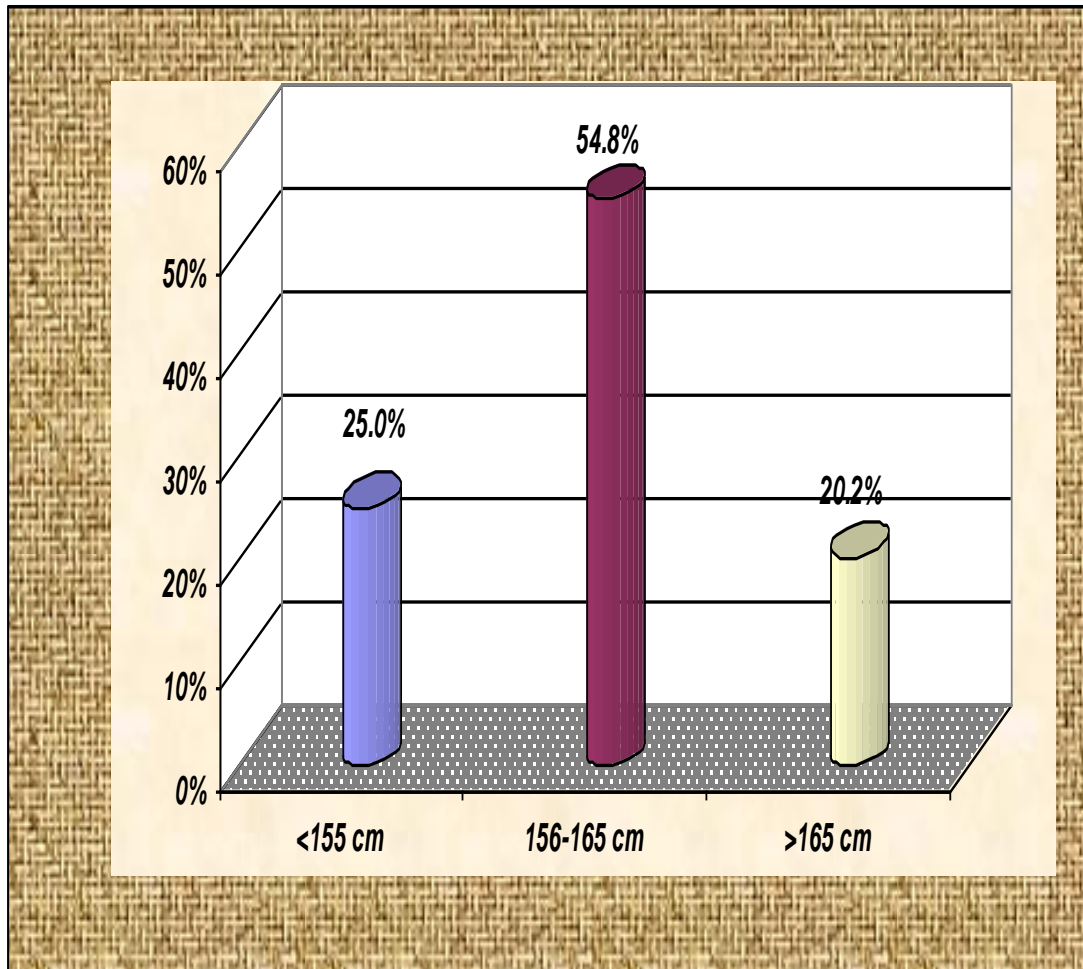


Figure (1): Percentage distribution of the study sample in relation to their height measurements

## Part II: Study sample knowledge about PCOS before and after application guidelines.

**Table (3): Comparison of the study sample knowledge regarding PCOS.**

Items	Pre intervention						Post intervention						X <sup>2</sup>	P value
	Complete correct		Incomplete correct		Don't know		Complete correct		Incomplete correct		Don't know			
	No	%	No	%	No	%	No	%	No	%	No	%		
Definition of PCOS	0	0.0	11	13.1	73	86.9	81	96.4	3	3.6	0	0.0	20.64	0.002*
Causes of PCOS	0	0.0	4	4.8	80	95.2	79	94	5	6	0	0.0	14.55	0.016*
Signs &symptoms of PCOS	0	0.0	5	6	79	94	79	94	5	6	0	0.0	11.00	0.027*
Complications of PCOS	0	0.0	10	11.9	74	88.1	81	96.4	3	3.6	0	0.0	23.02	0.000**

**A statistical significant difference ( $P \leq 0.05$ )**

**A highly statistical significant difference ( $P \leq 0.001$ )**

This table reveals that, there was a significant difference in studied students' knowledge regarding definition, causes, and signs & symptoms of PCOS ( $p < 0.05$ ). While there was a high significant difference regarding their knowledge about complication of PCOS as compared before and after application ( $p < 0.001$ ).

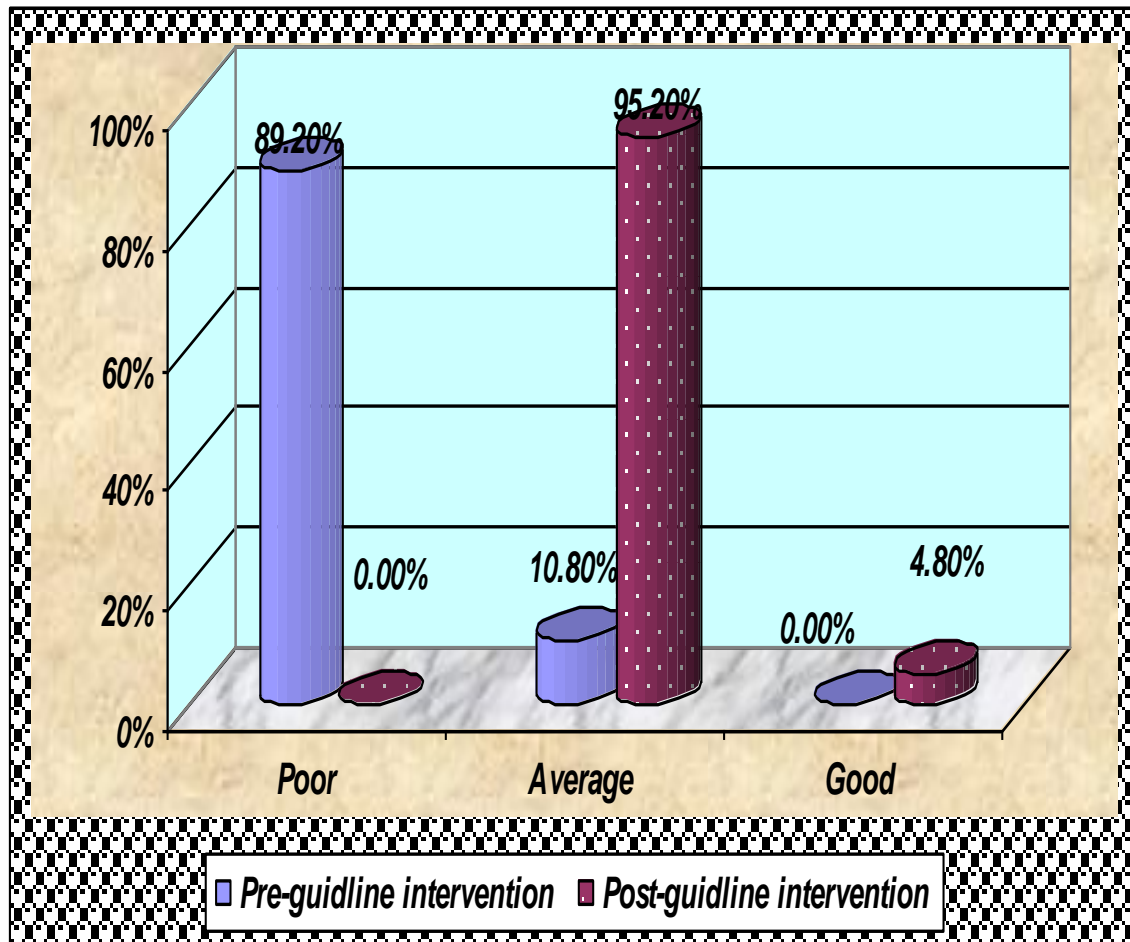


Figure (2): percentage distribution of the study sample total knowledge score regarding polycystic ovarian syndrome.

### Part III: study sample life style before and after application guidelines.

**Table (4): Comparison of the study sample according to their nutritional habits (n=84).**

Items		Pre intervention		Post intervention		X <sup>2</sup>	P-value
		No	%	No	%		
Eat a balance diet	Never	12	14.3	0	0.0	84.00	0.000**
	Rarely	48	57.1	0	0.0		
	Sometime	24	28.6	36	42.9		
	Usually	0	0.0	0	0.0		
	Always	0	0.0	48	57.1		
Eat spicy food	Never	0	0.0	0	0.0	84.00	0.000**
	Rarely	0	0.0	35	41.7		
	Sometime	26	31	49	58.4		
	Usually	35	41.6	0	0.0		
	Always	23	27.4	0	0.0		
Eat take-away foods	Never	4	4.8	16	19	92.02	0.000**
	Rarely	9	10.7	30	35.7		
	Sometime	17	20.2	38	45.2		
	Usually	28	33.3	0	0.0		
	Always	26	31	0	0.0		
Increase fat in diet	Never	27	32.1	27	32.7	168.00	0.000**
	Rarely	18	21.4	18	21.4		
	Sometime	39	46.4	39	46.5		
	Usually	0	0.0	0	0.0		
	Always	0	0.0	0	0.0		
Drink water with food	Never	23	27.4	24	28.6	118.8	0.000**
	Rarely	18	21.4	33	39.4		
	Sometime	19	22.6	27	32.1		
	Usually	15	17.9	0	0.0		
	Always	9	10.7	0	0.0		
Increase intake of sweet foods	Never	0	0.0	14	16.7	70.98	0.000**
	Rarely	17	20.2	25	29.8		
	Sometime	42	50	45	53.6		
	Usually	17	20.2	0	0.0		
	Always	8	9.5	0	0.0		
Eat more snacks	Never	0	0.0	6	7.1	78.64	0.000**
	Rarely	0	0.0	44	52.4		
	Sometime	36	42.9	34	40.5		
	Usually	21	25	0	0.0		
	Always	27	32.1	0	0.0		
Eat more during angry	Never	25	29.7	25	29.8	168.00	0.000**
	Rarely	22	26.2	26	31		
	Sometime	22	26.2	33	39.3		
	Usually	11	13.1	0	0.0		
	Always	4	4.8	0	0.0		
Eat immediately sleeping.	Never	32	38.1	33	49.4	150.58	0.000**
	Rarely	20	23.8	22	26.2		
	Sometime	20	23.8	29	34.5		
	Usually	12	14.3	0	0.0		
	Always	0	0.0	0	0.0		

A statistical significant difference ( $P \leq 0.05$ )

A highly statistical significant difference ( $P \leq 0.001$ )

This table reveals that, there was a high significant difference regarding their nutritional habits after application as compared with before application ( $p < 0.001$ ).

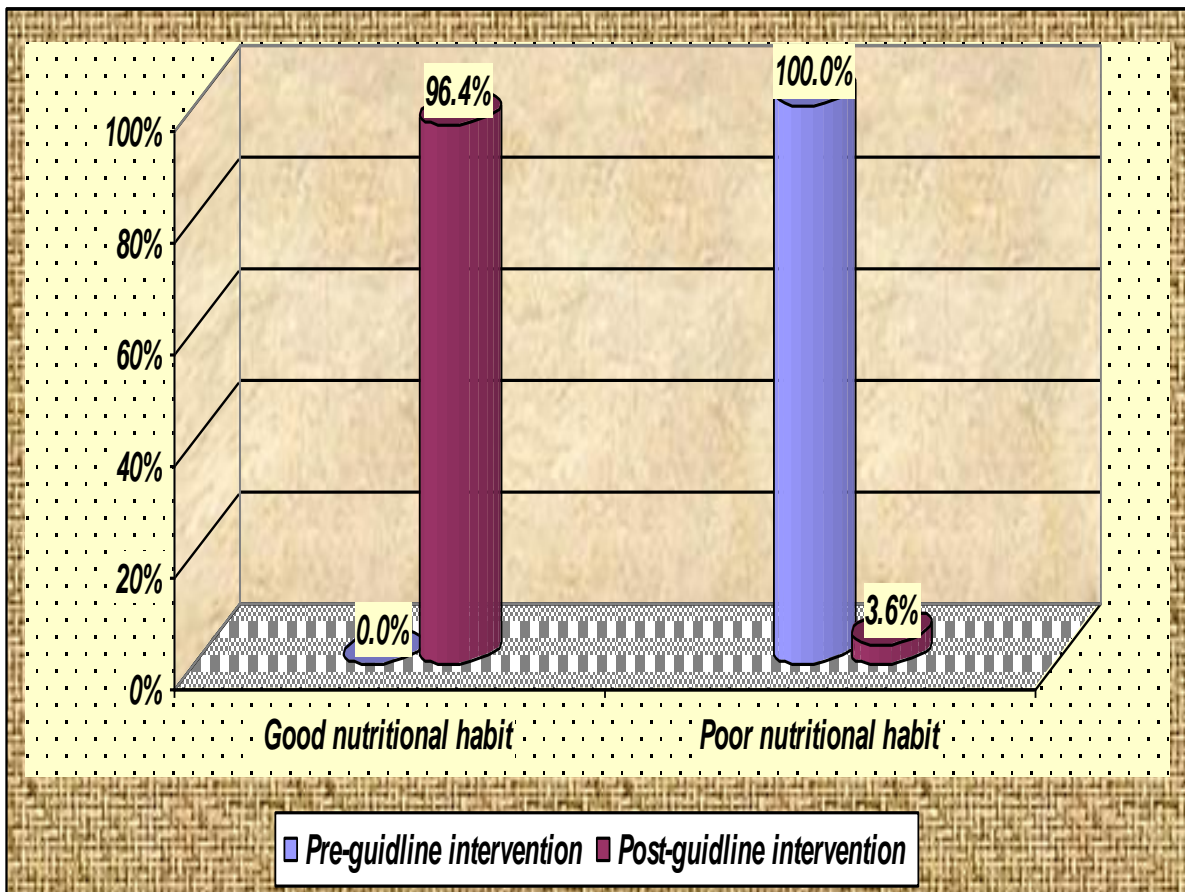


Figure (3): percentage distribution of the study sample total score of their nutritional habits before and after application.

**Table (5): Comparison of the studied students according to their physical fitness practice.**

Items		Pre intervention		Post intervention		X <sup>2</sup>	P-value
		No	%	No	%		
Regular practice of physical exercises.	Never	21	25	3	3.6	168.00	0.000**
	Rarely	42	50	2	2.4		
	Sometime	21	25	18	21.4		
	Usually	0	0.0	21	25		
	Always	0	0.0	40	47.6		
Regular walking	Never	0	0.0	7	8.3	73.39	0.000**
	Rarely	28	33.3	7	8.3		
	Sometime	56	66.7	31	36.9		
	Usually	0	0.0	14	16.7		
	Always	0	0.0	25	29.8		
Adequate rest and sleep.	Never	15	17.9	9	10.7	211.36	0.000**
	Rarely	24	28.6	0	0.0		
	Sometime	37	44	43	51.2		
	Usually	8	9.5	8	9.5		
	Always	0	0.0	24	28.6		
Tolerance to do heavy works	Never	23	27.4	5	6	147.09	0.000**
	Rarely	27	32.1	18	21.4		
	Sometime	34	40.5	27	32.1		
	Usually	0	0.0	23	27.4		
	Always	0	0.0	11	13.1		
Difficult to do daily activities	Never	1	1.2	27	32.1	97.33	0.000**
	Rarely	30	35.6	25	29.8		
	Sometime	42	50	32	38.1		
	Usually	11	13.1	0	0.0		
	Always	0	0.0	0	0.0		

**A statistical significant difference ( $P \leq 0.05$ )**

**A highly statistical significant difference ( $P \leq 0.001$ )**

This table reveals that, there was a high significant difference regarding their physical fitness practice after application as compared with before application ( $p < 0.001$ ).

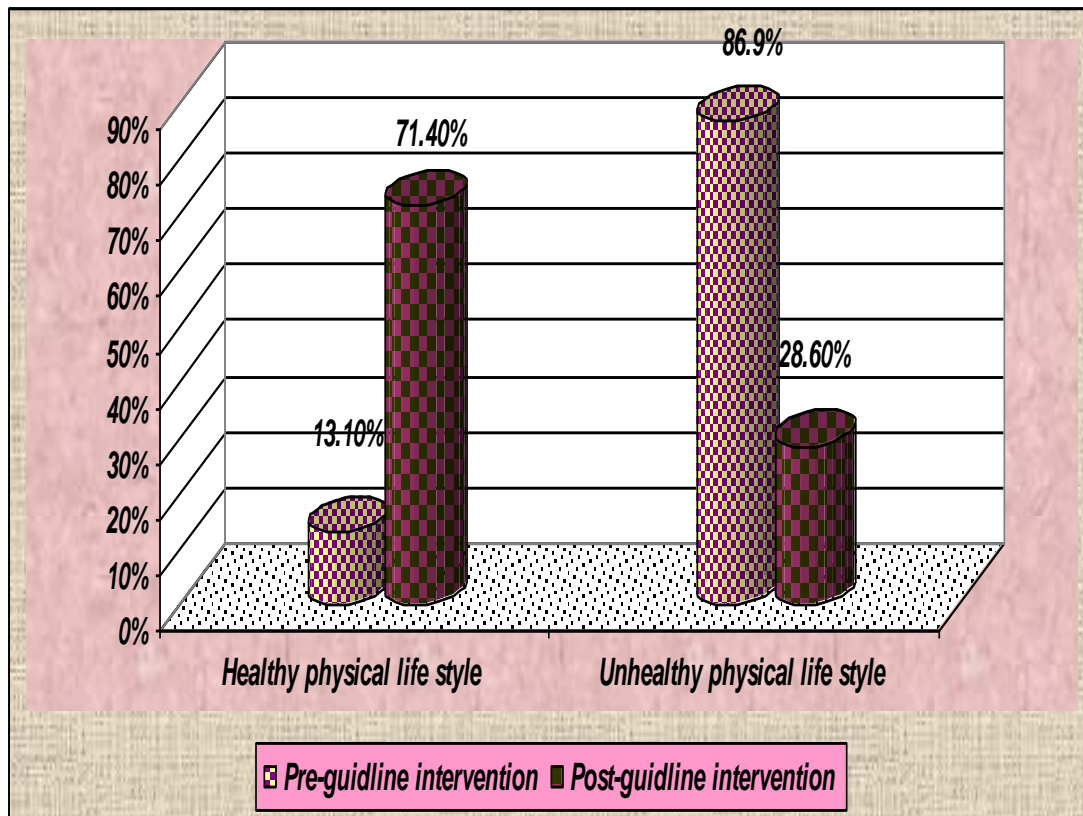


Figure (4): percentage distribution of the study sample total score of their life style before and after application.

## Part IV: Study sample quality of life for girls with PCOS before and after application guidelines.

**Table (6): Comparison of the study sample physical activities.**

Items		Pre intervention		Post intervention		X <sup>2</sup>	P-value
		No	%	No	%		
1. I feel sick.	Never	5	6	31	36.9	15.38	0.048*
	Rarely	4	4.8	32	38.1		
	Sometime	9	10.7	21	25		
	Usually	23	27.4	0	0.0		
	Always	43	51.2	0	0.0		
2. I feel strong and full of vitality.	Never	1	1.2	0	0.0	6.75	0.227
	Rarely	26	31	4	4.8		
	Sometime	53	63.1	13	15.5		
	Usually	4	4.8	34	40.5		
	Always	0	0.0	33	39.3		
3. Do you do your work normally?	Never	2	2.4	2	2.4	18.04	0.033*
	Rarely	3	3.6	4	4.8		
	Sometime	16	19	6	7.1		
	Usually	39	46.4	26	31		
	Always	24	28.6	46	54.8		
4. I feel the accumulation of fat in the abdominal area.	Never	29	34.5	30	35.7	23.94	0.026
	Rarely	7	8.3	16	19		
	Sometime	16	19	20	23.8		
	Usually	13	15.5	10	11.9		
	Always	19	22.6	8	9.5		
5. I feel tired and stress.	Never	7	8.3	6	7.1	15.95	0.045*
	Rarely	9	10.7	23	27.4		
	Sometime	43	51.2	39	46.4		
	Usually	14	16.7	12	14.3		
	Always	11	13.1	4	4.8		
6. I feel cold and flu.	Never	8	9.5	5	6	20.02	0.039*
	Rarely	22	26.2	26	31		
	Sometime	35	41.7	29	34.5		
	Usually	9	10.7	18	21.4		
	Always	10	11.9	6	7.1		
7. I feel tired and headaches during deliberations.	Never	6	7.1	6	7.1	19.84	0.042*
	Rarely	16	19	24	28.6		
	Sometime	22	16.2	31	36.9		
	Usually	20	23.8	19	22.6		
	Always	20	23.8	4	4.8		
8. I feel nausea or constipation.	Never	13	15.5	12	14.3	25.39	0.022*
	Rarely	38	45.2	31	36.9		
	Sometime	13	15.5	24	28.6		
	Usually	15	17.9	14	16.7		

	Always	5	6	3	3.6		
9. I feel pain in the menstrual cycle.	Never	5	6	10	11.9	21.50	0.037*
	Rarely	11	13.1	15	17.9		
	Sometime	17	20.2	17	20.2		
	Usually	21	25	27	32.1		
	Always	30	35.7	15	17.9		
10. I feel sensitive skin.	Never	49	58.3	53	63.1	22.30	0.036*
	Rarely	17	20.2	16	19		
	Sometime	8	9.5	8	9.5		
	Usually	8	9.5	4	4.8		
	Always	2	2.4	3	3.6		

**Non statistical significant difference ( $P > 0.05$ )**

**A statistical significant difference ( $P \leq 0.05$ )**

This table illustrates that, there was statistically significance difference regarding physical activities before and after guidelines ( $p < 0.05$ ).

**Table (7): Comparison of the study sample psychological and emotional before and after application guidelines.**

Items		Pre intervention		Post intervention		X <sup>2</sup>	P-value
		No	%	No	%		
1. Quick anger.	Never	8	9.5	8	9.5	15.88	0.045*
	Rarely	6	7.1	6	7.1		
	Sometime	24	26.6	29	29		
	Usually	21	25	24	28.6		
	Always	25	29.8	17	20.2		
2. I feel I am alone.	Never	15	17.9	25	29.8	16.40	0.040*
	Rarely	13	15.5	16	19		
	Sometime	26	31	24	28.6		
	Usually	16	19	16	19		
	Always	14	16.7	3	3.6		
3. I don't feel self-confidence.	Never	22	26.2	29	34.5	10.5	0.092
	Rarely	17	20.2	28	33.3		
	Sometime	26	31	18	21.4		
	Usually	13	15.5	8	9.5		
	Always	6	7.1	1	1.2		
4. Could you communicate with others easily?	Never	4	4.8	1	1.2	19.79	0.043*
	Rarely	9	10.7	3	3.6		
	Sometime	17	20.2	7	8.3		
	Usually	28	33.3	31	36.9		
	Always	26	31	42	50		
5. The presence of negative or critical feelings about yourself or critical.	Never	11	13.1	37	44	5.97	0.234
	Rarely	18	21.4	34	40.5		
	Sometime	30	35.7	12	14.3		
	Usually	16	19	0	0.0		
	Always	9	10.7	1	1.2		
6. I feel depressed symptoms of the disease and the side effects.	Never	23	27.4	41	48.8	15.50	0.062
	Rarely	18	21.4	33	39.3		
	Sometime	19	22.6	7	8.3		
	Usually	15	17.9	3	3.6		
	Always	9	10.7	0	0.0		
7. I am concerned about	Never	17	20.2	37	44	8.81	0.098
	Rarely	21	25	28	33.3		
	Sometime	21	25	15	17.9		
	Usually	17	20.2	4	4.8		

the growing fear and worry even with simple things.	Always	8	9.6	0	0.0		
8. Find difficulty in thinking or concentration or decision-making.	Never Rarely Sometime Usually Always	5 19 31 21 8	6 22.6 36.9 25 9.5	32 23 20 9 0	38.1 27.4 23.8 10.7 0.0	14.17	0.066
9. Is that hard for you to adapt to your illness?	Never Rarely Sometime Usually Always	20 23 24 12 5	23.8 27.4 28.6 14.3 6	49 20 8 6 1	58.3 23.8 9.5 7.1 1.2	21.84	0.032*
10. Avoid people who I disagreed with them.	Never Rarely Sometime Usually Always	27 21 21 14 1	32.1 25 25 16.7 1.2	47 20 10 7 0	56 23.8 11.7 8.3 0.0	15.91	0.043*

**Non statistical significant difference ( $P > 0.05$ )**

**A statistical significant difference ( $P \leq 0.05$ )**

This table illustrates that, there was statistically significance difference regarding psychological and emotional before and after guidelines for some items ( $p < 0.05$ ) while there was none statistically significance difference regarding another items ( $P > 0.05$ ).

**Table (8): Comparison the study sample quality of life index before and after application guidelines.**

Items		Pre intervention		Post intervention		X <sup>2</sup>	P-value
		No	%	No	%		
1. Is syndrome of ovarian cysts affecting your work at home?	Never	42	50	50	59.5	23.19	0.016*
	Rarely	19	22.6	28	33.3		
	Sometime	8	9.5	4	4.8		
	Usually	8	9.5	2	2.4		
	Always	7	8.3	0	0.0		
2. Does it affect ovary syndrome cysts on your physical activity?	Never	36	42.9	51	60.7	19.82	0.040*
	Rarely	20	23.8	25	29.8		
	Sometime	16	19	7	8.3		
	Usually	8	9.5	1	1.2		
	Always	4	4.8	0	0.0		
3. Does it affect the symptoms of ovarian cysts syndrome at leisure activity.	Never	42	50	56	66.7	8.00	0.123
	Rarely	17	20.2	21	25		
	Sometime	11	13.1	5	6		
	Usually	13	15.5	2	2.4		
	Always	1	1.2	0	0.0		
4. Does it affect ovary syndrome cysts on your relationship with the others?	Never	44	52.4	60	71.4	8.30	0.221
	Rarely	20	23.8	23	27.4		
	Sometime	9	10.7	0	0.0		
	Usually	6	7.1	1	1.2		
	Always	5	6	0	0.0		
5. Does it affect ovary syndrome cysts on your family life?	Never	35	41.7	47	56	7.09	0.143
	Rarely	19	22.6	32	38.1		
	Sometime	19	22.6	5	6		
	Usually	4	4.8	0	0.0		
	Always	7	8.3	0	0.0		
6. Is syndrome of ovarian cysts affecting your sleep?	Never	35	41.7	40	47.6	16.66	0.038*
	Rarely	20	23.8	30	35.7		
	Sometime	17	20.2	8	9.5		
	Usually	6	7.1	5	6		
	Always	6	7.1	1	1.2		
7. Is syndrome of ovarian cysts affecting the normal diet?	Never	33	39.3	22	26.2	18.57	0.021*
	Rarely	19	22.6	10	11.9		
	Sometime	17	20.2	11	13.1		
	Usually	8	9.5	16	19		
	Always	7	8.3	25	29.8		
8. Do you care, maintaining a healthy lifestyle such as food, physical fitness, etc.)?	Never	13	15.5	6	7.1	17.51	0.027*
	Rarely	9	10.7	3	3.6		
	Sometime	19	22.6	1	1.2		
	Usually	25	29.8	8	9.5		
	Always	18	21.4	66	78.6		

9. Do you care, the need to maintain appropriate weight.	Never	12	14.3	5	6	15.45	0.046*
	Rarely	8	9.5	2	2.4		
	Sometime	19	22.6	2	2.4		
	Usually	18	21.4	7	8.3		
	Always	27	32.1	68	81		
10. Experience of the disease does not change your outlook on life (i.e. still life by the nice things).	Never	14	16.7	9	10.7	11.71	0.082
	Rarely	8	9.5	3	3.6		
	Sometime	19	22.6	2	2.4		
	Usually	21	25	7	8.3		
	Always	22	26.2	63	75		
11. Polycystic ovarian syndrome can be cured.	Never	14	16.7	7	8.3	10.88	0.084
	Rarely	11	13.1	14	16.7		
	Sometime	19	22.6	5	6		
	Usually	21	25	7	8.3		
	Always	19	22.6	51	60.7		
12. Like stand out and sit on your own.	Never	15	17.9	27	32.1	14.9	0.071
	Rarely	11	13.1	25	29.8		
	Sometime	26	31	18	21.4		
	Usually	15	17.9	11	13.1		
	Always	17	20.2	3	3.6		
13. Complain about something bothering you for a particular person, your parents or friends.	Never	11	13.1	7	8.3	8.41	0.118
	Rarely	10	11.9	4	4.8		
	Sometime	20	23.8	18	21.4		
	Usually	14	16.7	27	32.1		
	Always	29	34.5	28	33.3		
14. I feel the awareness and integration when I deal with others.	Never	6	7.1	5	6	30.30	0.000*
	Rarely	6	7.1	3	36		
	Sometime	17	20.2	12	14.3		
	Usually	22	26.2	16	19		
	Always	33	39.3	48	57.1		
15. You give yourself hope of tomorrow to be better.	Never	4	4.8	7	8.3	24.25	0.001*
	Rarely	5	6	0	0.0		
	Sometime	10	11.9	6	71		
	Usually	16	19	9	10.7		
	Always	49	58.3	62	73.8		

**Non statistical significant difference ( $P > 0.05$ )**

**A statistical significant difference ( $P \leq 0.05$ )**

**A highly statistical significant difference ( $P \leq 0.001$ )**

This table illustrates that, there was statistically significance difference regarding quality of life index for some items ( $p < 0.05$ ) and there was none statistically significance difference regarding another items ( $P > 0.05$ ), while there was a high significance difference regarding two items as compared before and after guidelines ( $p < 0.001$ ).