Results

The result of this study will be presented in four parts. First part will include the demographic data. The second part will include the clinical and laboratory data. The third part will include the result of measurement of quality of life of the patients and comparison between males and females patients. Finally, the fourth part will include the correlation of different subscales of both PedsQL and ESRD scales with different variables (as age, hemoglobin, frequency of dialysis …….).

1- Demographic data:

Table (1) shows demographic data of studied group

Age in years (Mean + SD)		11.50 ± 1.69
sex	Male patients (NO. + %)	12 (40%)
	Female patients (NO. + %)	18 (60%)
Learning status	Attending school (NO. + %)	14 (46.7%)
	Missing school (NO. + %)	16 (53.3%)

Table (1) shows that the mean age of patients was (11.5±1.69) years. Also this table shows that the studied group included 12 male patients (40%) and 18 female patients (60%). The above table also shows that 14 patients (46.7%) was attending school and 16 patients (53.3%) were missing school.

2- Clinical and laboratory data:

a- Etiology;

Table (2) shows possible etiology of CRF.

Etiology	Number	Percent
Neurogenic bladder	9	30%
Posterior urethral valve	6	20%
Nephritic – nephrotic	4	13.33%
Bilateral atrophic kidney	3	10%
Cystinosis	1	3.33%
Systemic lupus erythematusis	1	3.33%
Unknown	6	20%
Total	30	100%

Table (2) shows the etiological diagnosis (primary renal disease) in studied patients. In the studied patients there were 20% with no identifiable primary renal disease.

b- Anthropometric measurement:

Table (3) shows height and weight of studied group.

height and weight	Mean	SD (±)
Height in cm	121.06	13.19
Weight in kg	26.58	8.07

Table (3) shows that the mean of the height was (121.o6±13.19) cm and the mean of the weight was (26.58±8.07) kg..

c- Course of the illness;

Table (4) shows the course of the illness.

The course of the illness	Mean in years	SD (±)
Duration of the illness	5.43	2.45
Duration of the conservative treatment	2.67	1.53
Duration of dialysis	2.76	1.74

This table shows that the mean of the duration of the illness was (5.43±2.45) years, duration of conservative treatment was (2.67±1.53) years and the mean duration of dialysis was (2.76±1.74) years.

d- Dialysis:

Table (5) shows the frequency and efficiency of dialysis

Frequency and efficiency of dialysis	Mean	SD (±)
Frequency of dialysis	3.4	0.49
Efficiency of dialysis	58 %	21

This table shows that the mean of frequency of dialysis was (3.4±0.49) times/week and the mean efficiency of dialysis was (58±21%).

e- Complication:

Table (6) shows the complications detected in the patients.

Complications	Number	Percent
1- renal osteodystrophy	8	26.67%
2- cardiomyopathy	4	13.33%
3- hypertension	3	10%
4- myopathy	1	3.33%
5- uncomplicated	14	46.67%
Total	30	100%

This table shows the complications observed in the patients. It also shows that there were 14 patients (46.67%) without complications.

f- Laboratory measurement:

Table (7)shows laboratory investigation.

laboratory investigation	Mean in years	SD (±)
eGFR (ml/min/1.73m²)	5.8	1.7
eUREA predialysis (mg/dl)	98	17.25
eUrea postdialysis (mg/dl)	41.16	12.26
eEfficiency of dialysis (mg/dl)	58	21.54
eHemoglobin level (mg/dl)	9.09	1.51

Laboratory data of patients show low GFR (5.8±1.7) ml/min/1.73m² in all studied patients that means that ESRD established in these patients.

3- MEASUREMENT OF QUALITY OF LIFE:

In the following part we will present the results of measurement of quality of life of patients with ESRD and the result of comparison between males and females patients.

A- Pediatric Quality of Life Inventory VERSION 4.0 GENERIC CORE SCALE:

a) Child self report;

Table (8) shows the mean of scores of PedsQL child report.

PedsQL Child report	No.	Mean	SD (±)
Physical functioning	30	46.76	16.49
Emotional functioning	30	43.70	15.6
Social functioning	30	50.43	17.2
School functioning	14	46.8	16.5
Total	30	46.73	17.12

This table shows that the social functioning, school functioning, physical functioning and emotional functioning are impaired in patients with ESRD. It also shows that the total score is (46.73±17.12) which means that patients had bad quality of life.

Table (9) shows the mean of scores of PedsQL child report in the 3 groups of patients (good, fair, and bad quality of life).

PedsQL Child report	Physical functioning		Emotional functioning		Social functioning		School functioning		Total	
	Mean	SD (±)	Mean	SD (±)	Mean	SD (±)	Mean	SD (±)	Mean	SD (±)
Good (No =5) (16.7%)	75.8	1.6	75.6	4.4	78.2	4.1	77.0	1.8	76.1	0.6
Fair (No=5) (16.7%)	59.4	6.1	58.6	5.5	57.6	6.3	59.6	8.3	58.7	6.7
Bad (No=20) (67.6%	36.4	7.2	36.5	7.9	37.2	8.9	39.0	9.1	36.4	7.9
P	0.000		0.000		0.004		0.003		0.000	

Quality of life is classified by this method into, Good quality of life when the scores in the range (75 – 100), Fair quality of life when the scores in the range (50-74) and Bad quality of life when the scores in the range (0-49). Table (9) shows that the differences between the three groups were statistically significant as $P < 0.01$.

b) Parent report of PedsQL;

Table (10) shows the mean of scores of PedsQL parent report.

PedsQL parent report	No.	Mean	SD (±)
Physical functioning	30	47.43	17.02
Emotional functioning	30	46.93	17.89
Social functioning	30	49.33	16.22
School functioning	14	43.33	15
Total	30	46.25	17.1

This table shows that the social functioning, school functioning, physical functioning and emotional functioning are impaired in patients with ESRD. It also shows that the total score is (46.25±17.1) which means that patients had bad quality of life.

B- End Stage Renal Disease Specific Module version 3.0 (ESRD 3 .0):

a) Child self-report of ESRD 3.0 ;

Table (11) shows the mean of scores of ESRD module child self-report.

ESRD Child report	No.	Mean	SD (±)
General fatigue	30	44.50	19.46
About my kidney disease	30	49.46	16.71
Treatment problems	30	44.70	15.42
Family and peer interaction	30	47.16	17.91
Worry	30	38.50	17.8
Perceived physical appearance	30	37.33	18.01
Communication	30	48.50	16.50
Total	30	44.45	17.23

This table shows that the mean of the total score was (44.45±17.23). It also shows that the mean of all subscale domains were below 50. And this means that there was bad quality of life in the patients.

b) Parent report ESRD;

Table (12) shows the mean scores of ESRD parent report.

ESRD parent report	No.	Mean	SD (±)
General fatigue	30	42.63	17.24
About my kidney disease	30	48.03	18.9
Treatment problems	30	42.13	15.32
Family and peer interaction	30	37.70	19.91
Worry	30	41.1	16.76
Perceived physical appearance	30	35.03	17.57
communication	30	49.56	17.85
Total	30	42.40	17.29

This table shows that the mean of the total score was (42.40±17.29). It also shows that the mean of all subscale domains were below 50. And this means that there was bad quality of life in the patients.

C) Comparison of male and female:

a) PedsQL child report;

Table (13) shows the mean scores of PedsQL in both male and female groups and comparison between both groups.

PedsQL Child report	Group	Number	Mean	SD	P- value
Physical functioning	Male	12	56.91	18.59	0.005
	Female	18	40	12.04	
Emotional functioning	Male	12	57.08	18.08	0.004
	Female	18	39.77	13.5	
Social functioning	Male	12	59.75	17.9	0.001
	Female	18	39.22	12.72	
School functioning	Male	9	53.2	14.23	0.302
	Female	5	42.35.	13.45	
Total	Male	12	57.69	16.3	0.003
	Female	18	39.42	12.8	

This table shows that the quality of life in female patients were impaired than in the male patients and the differences were statistically significant (as $P < 0.01$) except for school functioning subscale where the difference between both was statistically not significant as the P > o.o1.

b) PedsQL parent report;

Table (14) shows the mean scores of PedsQL (parent report) in both male and female groups and comparison between both groups.

PedsQL parent report	Group	Number	Mean	SD	P- value
Physical functioning	Male	12	58.83	18.75	0.001
	Female	18	39.81	10.67	
Emotional functioning	Male	12	60.25	18.66	0.003
	Female	18	42.38	13.05	
Social functioning	Male	12	57.33	17.77	0.003
	Female	18	39	12.17	
School functioning	Male	9	56.12	17.4	0.356
	Female	5	36.01	11.5	
Total	Male	12	57.79	18.08	0.001
	Female	18	38.34	11.64	

This table shows that the quality of life in female patients were impaired than in the male patients and the differences were statistically significant (as $P < 0.01$) except for school functioning subscale where the difference between both was statistically not significant as the P > o.o1.

c) ESRD child self-report;

Table (15) shows the mean scores of ESRD (child report) in both male and female groups and comparison between both groups.

ESRD child report	Group	Number	Mean	SD	P-value
General fatigue	Male	12	54.16	19.10	0.004
	Female	18	38.38	12.26	
About my kidney disease	Male	12	56.91	17.58	0.003
	Female	18	36.38	12.1	
Treatment problems	Male	12	56.83	18.48	0.007
	Female	18	38.4	13.27	
Family and peer interaction	Male	12	51.25	18.96	0.001
	Female	18	38.11	11.5	
worry	Male	12	55.83	19.36	0.003
	Female	18	38.94	12.05	
Perceived physical appearance	Male	12	55.41	17.35	0.002
	Female	18	30.94	12.42	
communication	Male	12	58.08	18.7	0.002
	Female	18	37.77	11.7	
Total	Male	12	55.49	18.25	0.002
	Female	18	37.09	12.14	

Table (15) shows that the qualities of life in female patients were impaired than in the male patients and the differences were statistically significant (as $P < 0.01$).

c) ESRD parent report;

Table (16) shows the mean scores of ESRD (parent report) in both male and female groups and comparison between both groups.

ESRD parent report	Group	Number	Mean	SD	P-value
General fatigue	Male	12	57.16	18.41	0.004
	Female	18	35.61	12.54	
About my kidney disease	Male	12	55.08	19.82	0.002
	Female	18	36.54	11.54	
Treatment problems	Male	12	53	17.62	0.001
	Female	18	38.22	12.05	
Family and peer interaction	Male	12	54	16.98	0.001
	Female	18	34	12.01	
worry	Male	12	50	19.06	0.004
	Female	18	31	12.86	
Perceived physical appearance	Male	12	55	19.39	0.005
	Female	18	39.05	12.44	
communication	Male	12	56	19.10	0.004
	Female	18	37.22	12.85	
Total	Male	12	54	18.35	0.002
	Female	18	37.01	12.17	

Table (16) shows that the qualities of life in female patients were impaired than in the male patients and the differences were statistically significant (as $P < 0.01$).

3- Results of Correlations:

In this part we will present the results of the correlation of different subscales of both PedsQL and ESRD scales with different variables (as age, hemoglobin, frequency of dialysis …….).

a) Age;

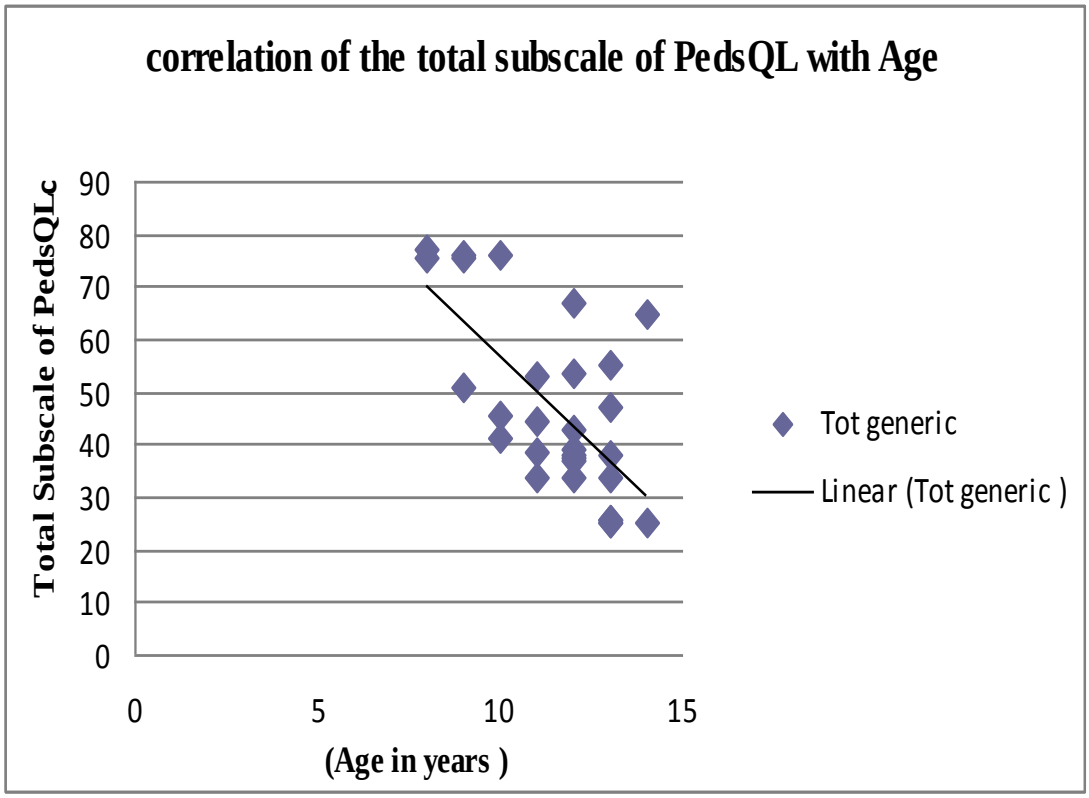
- PedsQL;

Table (17) shows the correlations of PedsQL scores with age.

Peds QL	Group	Total No.	R	P
Physical functioning	Child report	30	- 0.646	0.000
	Parent report	30	- 0.656	0.000
Emotional functioning	Child report	30	- 0.644	0.000
	Parent report	30	-0.694	0.000
Social functioning	Child report	30	- 0.701	0.000
	Parent report	30	-0. 666	0.000
School functioning	Child report	14	- 0.566	0.000
	Parent report	14	- 0.656	0.001
Total	Child report	30	- 0.663	0.000
	Parent report	30	- 0.659	0.000

Table (17) shows that mean of age was inversely correlated with scores of the PedsQL scores of different subscales in the patients group. This correlation was significant statistically as $P < 0.01$.

Figure (1) shows the correlation of the total subscale of PedsQL with the age.



- ESRD;

Table (18) shows the correlations of ESRD scores with age.

ESRD	VERSION	Total No.	R	P
General fatigue	Child report	30	- 0.644	0.000
	Parent report	30	- 0.651	0.000
About my kidney	Child report	30	- 0.670	0.000
	Parent report	30	- 0.671	0.000
Treatment problems	Child report	30	-0. 645	0.000
	Parent report	30	- 0.660	0.000
Family and peer interaction	Child report	30	- 0.648	0.000
	Parent report	30	-0. 658	0.000
Worry	Child report	30	- 0.682	0.000
	Parent report	30	- 0.661	0.000
Perceived physical appearance	Child report	30	- 0.644	0.000
	Parent report	30	- 0.673	0.000
Communication	Child report	30	- 0.646	0.000
	Parent report	30	- 0.691	0.000
Total	Child report	30	-0.661	0.000
	Parent report	30	- 0.672	0.000

Table (18) shows that mean of age was inversely correlated with scores of the PedsQL scores of different subscales in the patients group. This correlation was significant statistically as $P < 0.01$

b) Hemoglobin level;

-PedsQL;

Table (19) shows the correlations of PedsQL scores with Hb level.

PedsQL	Group	Total No.	R	P
Physical functioning	Child report	30	0.561	0.001
	Parent report	30	0.622	0.000
Emotional functioning	Child report	30	0.607	0.000
	Parent report	30	0.564	0.001
Social functioning	Child report	30	0.599	0.000
	Parent report	30	0.582	0.001
School functioning	Child report	14	0.578	0.001
	Parent report	14	0.569	0.002
Total	Child report	30	0.590	0.001
	Parent report	30	0.621	0.000

Table (19) shows that mean of Hb level was directly correlated with scores of the PedsQL scores of different subscales in the patients group. This correlation was significant statistically as $P < 0.01$.

-ESRD

Table (20) shows the correlations of ESRD scores with Hb level.

ESRD	VERSION	Total No.	R	P
General fatigue	Child report	30	0.056	0.001
	Parent report	30	0.534	0.002
About my kidney	Child report	30	0.603	0.000
	Parent report	30	0.611	0.000
Treatment problems	Child report	30	0.595	0.001
	Parent report	30	0.557	0.001
Family and peer interaction	Child report	30	0.606	0.000
	Parent report	30	0.620	0.000
Worry	Child report	30	0.558	0.001
	Parent report	30	0.550	0.002
Perceived physical appearance	Child report	30	0.569	0.001
	Parent report	30	0.567	0.001
Communication	Child report	30	0.592	0.001
	Parent report	30	0.548	0.002
Total	Child report	30	0.586	0.001
	Parent report	30	0.574	0.001

Table (20) shows that mean of Hb level was directly correlated with scores of the ESRD scores of different subscales in the patients group. This correlation was significant statistically as $P < 0.01$

c) Duration of dialysis;

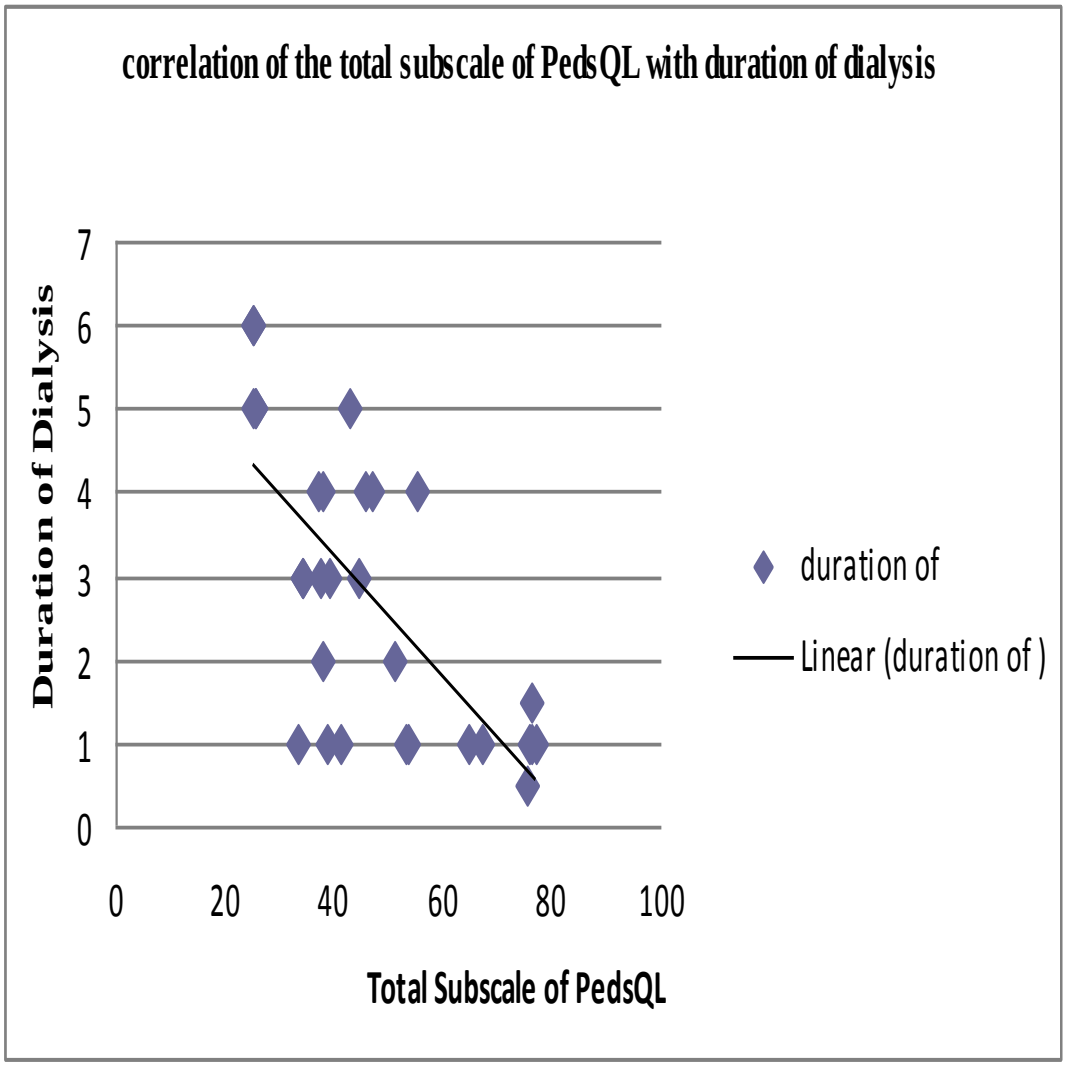
- PedsQL;

Table (21) shows the correlations of PedsQL scores with duration of dialysis.

Peds QL	Group	Total No.	R	P
Physical functioning	Child report	30	-0.707	0.000
	Parent report	30	- 0.721	0.000
Emotional functioning	Child report	30	- 0.703	0.000
	Parent report	30	- 0.724	0.000
Social functioning	Child report	30	- 0.701	0.000
	Parent report	30	- 0.709	0.000
School functioning	Child report	14	- 0.556	0.000
	Parent report	14	- 0.678	0.000
Total	Child report	30	- 0.710	0.000
	Parent report	30	- 0.681	0.000

Table (21) shows that mean of duration of dialysis was inversely correlated with scores of the PedsQL scores of different subscales in the patients group. This correlation was significant statistically as $P < 0.01$.

Figure (2) shows the correlation of the total subscale of PedsQL with duration of dialysis.


correlation of the total subscale of PedsQL with duration of dialysis
Duration of Dialysis
0
1
2
3
4
5
6
7
0
20
40
60
80
100
Total Subscale of PedsQL
duration of
Linear (duration of)

- ESRD;

Table (22) shows the correlations of ESRD scores with duration of dialysis.

ESRD	VERSION	Total No.	R	P
General fatigue	Child report	30	- 0.657	0.000
	Parent report	30	- 0.745	0.000
About my kidney	Child report	30	- 0.704	0.000
	Parent report	30	- 0.708	0.000
Treatment problems	Child report	30	- 713	0.000
	Parent report	30	- 0.702	0.000
Family and peer interaction	Child report	30	- 0.705	0.000
	Parent report	30	- 0.726	0.000
Worry	Child report	30	- 0.685	0.000
	Parent report	30	- 0.659	0.000
Perceived physical appearance	Child report	30	- 0.711	0.000
	Parent report	30	- 0.689	0.000
Communication	Child report	30	- 0.709	0.000
	Parent report	30	- 0.712	0.000
Total	Child report	30	- 0.705	0.000
	Parent report	30	- 0.718	0.000

Table (22) shows that mean of duration of dialysis was inversely correlated with scores of the ESRD scores of different subscales in the patients group. This correlation was significant statistically as $P < 0.01$.

d) Frequency of dialysis;

-PedsQL;

Table (23) shows the correlations of PedsQL scores with frequency of dialysis.

Peds QL	Group	Total No.	R	P
Physical functioning	Child report	30	0.795	0.000
	Parent report	30	0.796	0.000
Emotional functioning	Child report	30	0.756	0.000
	Parent report	30	0.792	0.000
Social functioning	Child report	30	0.782	0.000
	Parent report	30	0.786	0.000
School functioning	Child report	14	0.790	0.001
	Parent report	14	0.776	0.000
Total	Child report	30	0.786	0.000
	Parent report	30	0.754	0.000

Table (23) shows that mean of frequency of dialysis was directly correlated with scores of the PedsQL scores of different subscales in the patients group. This correlation was significant statistically as $P < 0.01$.

- ESRD;

Table (24) shows the correlations of ESRD scores with frequency of dialysis**.**

ESRD	VERSION	Total No.	R	P
General fatigue	Child report	30	0.769	0.000
	Parent report	30	0.820	0.000
About my kidney	Child report	30	0.771	0.000
	Parent report	30	0.790	0.000
Treatment problems	Child report	30	0.761	0.000
	Parent report	30	0.813	0.000
Family and peer interaction	Child report	30	0.765	0.000
	Parent report	30	0.772	0.000
Worry	Child report	30	0.790	0.000
	Parent report	30	0.782	0.000
Perceived physical appearance	Child report	30	0.814	0.000
	Parent report	30	0.774	0.000
Communication	Child report	30	0.783	0.000
	Parent report	30	0.787	0.000
Total	Child report	30	0.788	0.000
	Parent report	30	0.802	0.000

Table (24) shows that mean of frequency of dialysis was directly correlated with scores of the ESRD scores of different subscales in the patients group. This correlation was significant statistically as $P < 0.01$.

e) Efficiency of dialysis;

-PedsQL;

Table (25) shows the correlations of PedsQL scores with efficiency of dialysis.

Peds QL	Group	Total No.	R	P
Physical functioning	Child report	30	0.743	0.000
	Parent report	30	0.763	0.000
Emotional functioning	Child report	30	0.736	0.000
	Parent report	30	0.767	0.000
Social functioning	Child report	30	0.769	0.000
	Parent report	30	0.756	0.000
School functioning	Child report	14	0.675	0.006
	Parent report	14	0.690	0.008
Total	Child report	30	0.756	0.000
	Parent report	30	0.736	0.000

Table (25) shows that mean of efficiency of dialysis was directly correlated with scores of PedsQL scores of different subscales in the patients group. This correlation was significant statistically as $P < 0.01$.

-ESRD;

Table (26) shows the correlations of ESRD scores with efficiency of dialysis.

ESRD	VERSION	Total No.	R	P
General fatigue	Child report	30	0.726	0.000
	Parent report	30	0.756	0.000
About my kidney	Child report	30	0.762	0.000
	Parent report	30	0.770	0.000
Treatment problems	Child report	30	0.741	0.000
	Parent report	30	0.767	0.000
Family and peer interaction	Child report	30	0.749	0.000
	Parent report	30	0.752	0.000
Worry	Child report	30	0.756	0.000
	Parent report	30	0.749	0.000
Perceived physical appearance	Child report	30	0.775	0.000
	Parent report	30	0.753	0.000
Communication	Child report	30	0.742	0.000
	Parent report	30	0.796	0.000
Total	Child report	30	0.757	0.000
	Parent report	30	0.767	0.000

Table (26) shows that mean of efficiency of dialysis was directly correlated with scores of ESRD scores of different subscales in the patients group. This correlation was significant statistically as $P < 0.01$