

RESULTS

The results of the study are presented in the following sequence :

- PART I** **Characteristics of the Studied Subjects** (Tables 1-6)
- PART II** **Mothers' knowledge related to nephrotic syndrome before, immediate and after immediate discharge program implementation**(Tables 7-12)
- PART III** **Mothers' practice related to nephrotic syndrome Pre, immediately after discharge guide program implementation and after 3 months** (Table 13-17)
- PART IV** **Correlation between mothers' knowledge and practice in relation to their characteristics Pre, immediately after discharge guide program implementation and after 3 months** (Tables 18-19)
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PART [I]: Characteristics of the Studied Subjects

Table (1): Percentage distribution of the studied children regarding to their characteristics (n=80)

Characteristics of Children	No.	%
- Age (in years):		
2- < 5	29	36.3
5 -< 8	33	41.3
8- 12	18	22.5
$\bar{X} \pm SD$	6.29 ± 2.41	
- Sex:		
• Male	40	50.0
• Female	40	50.0
-Birth Order:		
• The first	39	48.8
• The second	23	28.8
• The third	12	15.0
• The fourth & more	6	7.4
- School Stage:		
• Nursery school	10	12.5
• Primary school	54	67.5
• Preparatory school	16	20.0

Table (1) shows the socio-demographic data of children, where their mean age is 6.29 ± 2.41 years. Regarding to children sex, this table reveals that 50% of them are females. As regards birth order, less than half (48.8%) of children are the first child in the family. In relation to child's school stage, this table reflects that the highest percentage (67.5%) of them are in primary school.

Table (2): Percentage distribution of the studied mothers by their characteristics (n=80)

Characteristics of Mothers	No.	%
*Age (years):		
< 20	6	7.5
20 - < 30	43	53.8
30 ±	31	38.7
$\bar{X} \pm SD$	28.80 ± 5.61	
*Level of education:		
-Illiterate	18	22.5
-Technical education	35	43.8
-High education	27	33.7
*Working status:		
-Not working	22	27.5
-Working	58	72.5

Table (2) describes characteristics of the studied mothers, where their mean age is 28.80 ± 5.61 years. Regarding the level of education, more than two fifths (43.8%) of the mothers had technical education. As regards working status of mothers, this table shows that less than three quarters (72.5%) of them are working.

Table (3): Number and percentage distribution of children regarding to time and symptoms of children with nephrotic syndrome (n=80)

Nephrotic Syndrome Characteristics	Total	
	No.	%
Onset of child`s nephrotic syndrome complaints :		
2 – < 4 years	19	23.7
4 – < 6 years	21	26.3
6 – < 8 years	16	20.0
8 – < 10 years	14	17.5
10 –< 12 years	10	12.5
Symptoms occur by child during nephrotic syndrome:		
- Odema, chest pain and restlessness.	42	52.5
- Odema, oliguria, hematuria, fatigue and irritability.	21	26.3
- Odema, abdominal pain, anorexia diarrhea and vomiting.	8	10.0
- Odema, hypertension, tachycardia and shortness of breathing	9	11.2

Table (3) presents the onset of child complaints from nephrotic syndrome, 26.3% of children were complaining from nephrotic syndrome symptoms their age ranged from 4-< 6 years. According to symptoms felt by the child during nephrotic syndrome relapse, this table also shows that more than half (52.5%) of children complaint from edema, chest pain and restlessness.

Table (4): Percentage distribution of children`s relatives regarding to kidney disease (n=80)

Children Relatives` Disease	Total	
	No.	%
- Relatives` complaints from kidney disease:		
• Relative disease	32	40.0
• No disease.	48	60.0
- Degree of kinship to the child:		
• Relative from first degree.	12	37.5
• Relative from second degree.	10	31.5
• Relative from third degree.	10	31.5
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Table (4) shows that two fifths (40 %) of children's relatives are complaining from kidney disease, 37.5% of children's relatives are from the first degree and 60.0% of them have no relative disease.

Table (5): Percentage distribution of children regarding the effect of nephrotic syndrome on physical health (n=80)

Effect of Nephrotic Syndrome on Child	Total	
	No.	%
<u>Nephrotic syndrome effect:</u>		
○ Limitation of activity	6	7.5
○ Sleep disturbance	10	12.5
○ Difficult to concentrate on schoolwork	13	16.3
○ School absenteeism	19	23.8
○ Emotional and psychological problems	7	8.8
○ Afraid of any social interaction and interpersonal relationships	5	6.3
○ High risk of infection during treatment program	20	25

Table (5) reflects that all studied children their health is affected by nephrotic syndrome, where one quarter (25%) and 23.8% of children are having high risk of infection during treatment program and missed school days respectively.

Table (6): Percentage distribution of the studied mothers regarding the Source of their information about nephrotic syndrome

Sources of Mothers' Information	No. (N=80)	% (100.0)
-Doctor	52	65.0
-Nurse	2	2.5
-Relatives	3	3.8
-Books & TV	10	12.5
-Other mothers in similar situation	13	16.2

As regards source of mothers' knowledge about nephrotic syndrome, table (6) shows that approximately two thirds (65 %) of them acquired their information from child's doctor.

PART [II] Mothers' Knowledge about Nephrotic syndrome before and after Discharge Program Implementation

Table (7): Mean scores of the studied mothers' knowledge regarding to nephrotic syndrome during Pre/Post discharge guide program implementation

Knowledge about <i>Satisfactory (60% +)</i> <i>Unsatisfactory (<60%)</i>	n = 80		100%		
	Pre Total Knowledge		immediately After	F test	P value
	Satisfactory		Satisfactory		
	\bar{x}	SD	\bar{x} SD		
Definition of nephrotic syndrome	1.58 ±	0.49	1.00 ± 0.00	10.607	<0.001
Causes of nephrotic syndrome	1.55 ±	0.61	2.87 ± 0.33	- 15.721	<0.001
Symptoms of nephrotic syndrome	1.66 ±	0.66	2.88 ± 0.31	- 13.010	<0.001
Nephrotic syndrome triggering factors	1.70 ±	0.71	2.87 ± 0.33	10.078	<0.001
Complications of nephrotic syndrome on long run	1.68 ±	0.70	1.00 ± 0.00	8.731	<0.001
Nephrotic syndrome problems	1.48 ±	0.83	2.88 ± 0.31	- 12.166	<0.001
Effect of nephrotic syndrome on child's life	1.47 ±	0.85	3.00 ± 0.00	8.454	<0.001

Table (7) points out that there is an improvement in mothers' knowledge post-program mean scores and there were highly statistically significant differences ($P < 0.001$) between pre and immediately after program implementation.

Table (8): Mean scores of the studied mothers' knowledge regarding to nephrotic syndrome during Pre/After three months of discharge guide program implementation

Knowledge about <i>Satisfactory (60% +)</i> <i>Unsatisfactory (<60%)</i>	n = 80				100%	
	Pre Total Knowledge		After three months		T test	P value
	Satisfactory		Satisfactory			
	\bar{x}	SD	\bar{x}	SD		
Definition of nephrotic syndrome	1.58 ±	0.49	1.00 ±	0.00	10.607	<0.001
Causes of nephrotic syndrome	1.55 ±	0.61	2.93 ±	0.24	-17.540	<0.001
Symptoms of nephrotic syndrome	1.66 ±	0.66	2.97 ±	0.15	-10.765	<0.001
Nephrotic syndrome triggering factors	1.70 ±	0.71	2.87±	0.33	10.078	<0.001
Complications of nephrotic syndrome on long run	1.68 ±	0.70	1.00 ±	0.00	8.731	<0.001
Nephrotic syndrome problems	1.48 ±	0.83	2.97 ±	0.15	-9.166	<0.001
Effect of nephrotic syndrome on child's life	1.47 ±	0.85	1.00 ±	0.00	8.454	<0.001

Table (8) points out that there is an improvement in mothers' knowledge after three months`test mean scores and there were highly statistically significant differences ($P < 0.001$) between pre and after three months of program implementation.

Table (9): Percentage distribution of mothers' knowledge regarding their children's nephrotic syndrome medication (steroids)

Knowledge about Medication											
	Pre-program n = 80			After immediate n = 80			After three months n = 80			χ^2	P
	Com	Incom	Inc	Com	Incom	Inc	Com	Incom	Inc		
Name and type of child's medication: • Know	6 3.8	27 79.4	47 100	75 47.2	5 14.7	-	78 49.1	2 5.9	-	189.49	<0.0001
Regularity for giving medication: -Regularly	8 5.6	27 52.9	45 100	67 46.5	13 25.5	-	69 47.9	11 21.6	-		

Com =complete

Incom = incomplete

Inc = incorrect

A highly statistical significant difference ($P < 0.001$)

Table (9) shows that, there is a highly statistically significant difference between pre, immediately after and after three months of program implementation in relation to mothers' knowledge regarding to medication of nephrotic syndrome ($P < 0.001$).

Table (10): Percentage distribution and mean scores of the studied mothers' knowledge regarding nephrotic syndrome deteriorating factors Pre/Post discharge guide program implementation

Nephrotic syndrome deteriorating factors	n = 80		100%		T test	P value
	Pre-program		Immediately after			
	Satisfactory \bar{X}	SD	Satisfactory \bar{X}	SD		
Excessive fluid intake	1.47	± 0.50	1.00	±0.00	8.454	<0.001
Infection	1.43	± 0.44	1.00	±0.00	7.839	<0.001
Environmental factors	1.58	±0.49	1.00	±0.00	10.078	<0.001
Outdoor /Indoor air pollution	1.07	± 0.26	2.90	± 0.30	-22.880	<0.001
Exercises	1.56	± 0.49	1.00	±0.00	10.078	<0.001
Emotional condition	1.58	± 0.56	2.88	± 0.31	8.827	<0.001
Nutrition	1.73	± 0.44	2.97	± 0.15	8.454	<0.001

highly statistically significant difference ($P < 0.001$)

Table (10) reveals that, there is highly statistically significant differences between pre and immediately after program implementation in relation to the studied mothers' knowledge regarding to nephrotic syndrome triggering factors.

Table (11): Percentage distribution and mean scores of the studied mothers' knowledge regarding nephrotic syndrome deteriorating factors Pre/After three months of discharge guide program implementation

Nephrotic syndrome deteriorating factors	n = 80		100%	
	Pre-program		T test	P value
	Satisfactory \bar{X}	Satisfactory \bar{X}		
Excessive fluid intake	SD 1.47 \pm 0.50	1.00 \pm 0.00	8.454	<0.001
Infection	1.43 \pm 0.44	1.00 \pm 0.00	7.839	<0.001
Environmental factors	1.58 \pm 0.49	1.00 \pm 0.00	10.078	<0.001
Outdoor /Indoor air pollution	1.07 \pm 0.26	2.93 \pm 0.24	-18.525	<0.001
Exercises	1.56 \pm 0.49	1.00 \pm 0.00	101.57	<0.001
Emotional condition	1.58 \pm 0.56	2.90 \pm 0.30	8.827	<0.001
Nutrition	1.73 \pm 0.44	2.90 \pm 0.30	-10.587	<0.001

highly statistically significant difference ($P < 0.001$)

Table (11) reveals that, there is highly statistically significant differences between pre and after three months program implementation in relation to the studied mothers' knowledge regarding to nephrotic syndrome triggering factors.

Table (12): Comparison of mothers' total knowledge related to their child with nephrotic syndrome in pre/post discharge guide program implementation

Item	Study							
	Pre (n = 80)		Immediately after (n = 80)		After three months (n = 80)		F test	P value
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD		
-Total knowledge	1.54	0.50	2.00	0.00	1.91	0.30	63.2	<0.001

highly statistically significant difference ($P < 0.001$)

Table (12) points out that there is an improvement in mean scores of mothers' knowledge post-program and there was a highly statistically significant difference ($P < 0.001$).

Table (13): Percentage distribution of children regarding to their nephrotic syndrome relapse before and after discharge guide program implementation

Child's Relapse								X ²	P value
	Pre-program (n = 80)		Immediately After (n = 80)		After three months (n = 80)				
	No	%	No	%	No.	%			
Average relapse of nephrotic syndrome during a year: ○ One time ○ Two times ○ Three times ○ Four times and more	4 10 17 49	3.6 20.0 68.0 92.5	54 20 4 2	48.2 40.0 16.0 3.8	54 20 4 2	48.2 40.0 16.0 3.8	145.5 2	<0.001	
$\bar{X} \pm SD$	3.38 ± 0.89		1.42± 0.70		1.42± 0.70				
Most common period of nephrotic syndrome relapse: ○ 2 - < 5. ○ 5- < 8 ○ 8 - 12	20 43 17	16.7 53.8 43.6	52 19 9	43.3 23.8 23.1	48 18 13	40.0 22.5 33.1	32.59 8	<0.001	
$\bar{X} \pm SD$	1.96 ± 0.68		1.46 ± 0.69		1.55 ±0.67				

Table (13) shows that there is improvement regarding child's relapse of nephrotic syndrome after discharge program implementation, where 48.2% of children have one relapse of nephrotic syndrome per year and 43.3% of children their relapses were from 2- < 5 years.

PART [III] Mothers' practice related to nephrotic syndrome before and after discharge program implementation

Table (14): Mean scores of the studied mothers' practice regarding to protection of their child from disease relapse pre/post discharge program implementation

Practice of <i>Satisfactory (80% +)</i> <i>Unsatisfactory (<80%)</i>	n = 80				100%			
	Pre Total Practice			After immediate		T	P	
	Satisfactory			Satisfactory				
	\bar{x}	SD		\bar{x}	SD			
•Giving prescribed drugs as doctor's order continuously	1.00	±	0.00	6.19	±	0.50	-47.25	<0.001
Urine analysis	3.64	±	1.90	10.46	±	0.81	-29.273	<0.001
•Personnel hygiene(mouth care – skin care)	2.08	±	1.18	10.71	±	0.84	-51.98	<0.001
- Child`s comfortable position	1.20	±	1.04	3.78	±	0.64	-18.881	<0.001
Encouraging physical exercises regularly	1.10	±	0.99	3.84	±	0.89	-16.428	<0.001
- Care of skin and regularity follow up of child's health	1.05	±	0.22	4.30	±	0.80	-35.490	<0.001
- Observe intake and output fluid (color and amount	1.00	±	0.00	7.81	±	1.15	-53.059	<0.001
•Observation of child and measure level of edema or measure abdomen daily or umbilicus level	1.02	±	0.15	3.28	±	0.75	-25.067	<0.001

Table (14): This table shows generally an improvement in mothers' practices related to care of their children with nephrotic syndrome after immediate program implementation as compared to per-program mean scores and there is a highly statistical significance ($P < 0.001$) difference between them.

Table (15): Mean scores of the studied mothers' practice regarding to protection of their child from disease relapse pre/post discharge program implementation

Practice of <i>Satisfactory (80% +)</i> <i>Unsatisfactory (<80%)</i>	n = 80		100%		F	P
	Pre Total Practice		After three months			
	Satisfactory		Satisfactory			
	\bar{x}	SD	\bar{x}	SD		
•Giving prescribed drugs as doctor's order continuously	1.00	± 0.00	6.75	± 0.91	- 56.698	<0.001
Urine analysis	3.64	± 1.90	10.79	± 1.19	- 29.542	<0.001
•Personnel hygiene(mouth care – skin care)	2.08	± 1.18	11.06	± 0.88	- 52.819	<0.001
- Child`s comfortable position	1.00	± 0.00	1.81	± 0.39	120.5	<0.001
Encouraging physical exercises regularly	1.20	± 1.05	4.20	± 0.99	- 18.511	<0.001
- Care of skin and regularity follow up of child's health	1.05	± 0.22	4.29	± 0.75	- 36.962	<0.001
- Observe intake and output fluid (color and amount	1.00	± 0.00	8.53	± 1.27	- 52.887	<0.001
•Observation of child and measure level of edema or measure abdomen daily or umbilicus level	1.02	± 0.15	3.613	± 0.88	- 25.837	<0.001

Table (15): This table shows generally an improvement in mothers' practices related to care of their children with nephrotic syndrome after three months program implementation as compared to per-program mean scores and there is a highly statistical significance ($P < 0.001$) difference between them.

Table (16): Percentage distribution of mothers' practice regarding to their children during relapse pre/post discharge program implementation

Practice of Satisfactory (80% +) Unsatisfactory(<80 %)														
	Pre-program n = 80				After immediate n = 80				After three months n = 80				X ²	P
	Unsatisfactory		Satisfactory		Unsatisfactory		Satisfactory		Unsatisfactory		Satisfactory			
-Giving prescribed drugs as doctor's order continuously	80	53.3	0	0.0	36	24.0	44	48.9	34	22.7	46	51.1	72.107	<0.001
-Urine analysis	80	78.4	0	0.0	9	8.8	71	51.4	13	12.7	67	48.6	162.762	<0.001
•Personnel hygiene(mouth care – skin care)	74	73.3	6	4.3	14	13.9	66	47.5	13	12.9	67	48.2	125.171	<0.001
Encouraging physical and breathing exercises	77	65.3	3	2.5	24	20.3	56	45.9	17	14.4	63	51.6	107.663	<0.001
- Care of skin and regularity follow up of child's health)	66	88.0	14	8.5	5	6.7	75	45.5	4	5.3	76	46.1	146.735	<0.001
- Observe intake and output fluid (color and amount	80	58.8	0	0.0	36	26.5	44	42.3	20	14.7	60	57.7	98.281	<0.001
•Observation of child and measure level of edema	78	47.9	2	2.6	47	28.8	33	42.9	38	23.3	42	54.5	50.520	<0.001

Table (16) indicaties a highly statistically significant differences (P < 0.001) between mothers' practices pre, immediately after and after three months of discharge guide program implementation.

Table (17): Comparison of mothers' total practice related to care of their children with nephrotic syndrome in pre/Post discharge guide program implementation

Item	Study							
	Pre(n = 80)		After immediate(n = 80)		After three months (n = 80)		F	P
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD		
-Total practice	1.00	0.00	1.97	0.15	1.37	0.48	221.5	<0.001

Table (17): This table illustrates that there is a highly statistical significant difference ($P < 0.001$) in mothers' practice score before the program compared after immediate and after three months program implementation.

PART [IV] Correlation between Mothers' Knowledge and Practice in Relation to their Characteristics Pre/Post Discharge Guide Program Implementation

Table (18): Correlation coefficient between total mothers' knowledge and practice scores regarding their children with nephrotic syndrome and their characteristics pre/post discharge program implementation

Variables	Knowledge						Practice					
	Pre-		Immediately After		After 3 Months		Pre -		immediately After		After 3 Months	
	r	p	r	p	r	p	r	p	r	p	r	p
* Age	0.106	> 0.01	-	-	0.03	>0.67	-	-	0.66	>0.05	0.14	>0.20
* Level of education	0.17	> 0.12	-	-	1.74	> 0.01	-	-	- 0.08	> 0.46	- 0.02	>0.84
* Working status	0.27	<0.01	-	-	- 0.11	>0.32	-	-	0.09	>0.38	0.81	>0.09

Statistical significant difference ($P < 0.05$)

Highly statistically significant difference ($P < 0.005$)

Table (18) shows statistically significant positive correlation between knowledge scores and mother's working status at the pre-program phase ($P < 0.001$). Meanwhile, no statistically significant correlations regarding their age and level of education during pre program implementation.

However, this table shows that there are statistically insignificant positive correlations between practice scores and mother's age level of education and working status at immediately after and after three months of program phases implementation.

Table (19): Correlation coefficient between total mothers' knowledge and practice scores during pre/post discharge program implementation

Variables	Practice					
	Pre program		After immediate		After three months	
	r	p	r	p	r	p
*Total knowledge pre-program	-	-	0.141	0.18	0.09	0.39
* Total knowledge after immediate program	-	-	-	-	-	-
* Total knowledge after three months program	-	-	0.48	< 0.01	0.00	<0.01

Statistical significant difference ($P < 0.05$)

Highly statistical significant difference ($P < 0.001$)

Table (19) shows a statistically significant positive correlation between mothers' total knowledge scores after three months of program implementation and their practice immediately after and after three months of program implementation ($p < 0.01$).

Table (12): Comparison of mothers' total knowledge related to their child with nephrotic syndrome in pre/ after immediate discharge guide program implementation

<i>Item</i>	Pre/post program knowledge (n = 80)							
	Pre	After immediate	T	P	Pre	After three months	T	P
	Mean ± SD	Mean ± SD			Mean ± SD	Mean ± SD %		
-Total knowledge:	1.54 ±0.50	2.00 ±0.00	-8.245	P < 0.001	1.54 ±0.50	1.90 ±0.30	-4.907	P < 0.001

A highly statistical significant difference ($P < 0.001$)

Table (12): This table points out that there is an improvement in mean scores of mothers' knowledge after immediately program and there were a highly statistical significance difference $P < 0.001$.

Table (17): Comparison of mothers' total practice related to their child with nephrotic syndrome in pre/after three months of discharge guide program implementation

<i>Item</i>	Pre/post program practice (n = 80)							
	Pre	After immediate	T	P	Pre	After three months	T	P
	Mean ± SD	Mean ± SD			Mean ± SD	Mean ± SD %		
-Total practice:	1.00 ±0.00	1.98 ±0.16	-55.507	P < 0.001	1.00 ±0.00	1.38 ±0.49	-6.885	P < 0.001

A highly statistical significant difference ($P < 0.001$)

Table (17): This table points out that there is an improvement in mean scores of mothers' practice after three months of program and there were a highly statistical significance difference $P < 0.001$.