FAMILY ENVIRONMENT AND RENAL AFFECTION AMONG CHILDREN

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ABSTRACT

Family environment has a considerable impact on childhood kidney disorders. The objective of this work: was to study the family environmental parameters in children with kidney diseases. Subjects & Methods: 50 patients with various kidney diseases and 50 healthy children as controls were included in this study. A comprehensive family environmental questionnaire, clinical examination and laboratory investigations were done to all subjects. Our results showed: significant lowering in the mothers' education, parents' occupation among families of patients as compared to their control; Indoor environmental hygiene of patients group showed a significant decreasing in number of rooms, floor of houses, state of building when compared to controls; As regard home behavior there was a significant decreasing concerning cooking devices, refuse collection and usage of outdoor pesticides in families of patients when compared to families of controls; As regards child care: hygienic care, medical care as vaccination and feeding pattern as external food source our results were significantly less among patients group compared to controls; Concerning the social behavior, a significant increase in conflicts was detected among patients group when compared to controls. However, other data were insignificantly different. Socioeconomic score was insignificantly different in patients group as compared to controls; yet significantly decrease among patients subgroup when compared to controls. A significant negative correlation was found

between social score and serum creatinine level among control group and insignificant among patients group. Conclusion: family environment may be involved as mediator, risk or protective factor in the outcome. Hence, this emphasis it essential additive to the planned health program caring for children with renal diseases.

INTRODUCTION

Family environment is the social climate and quality of life. It has been related to the health status of children ***(Overstreet et al, 1995).***It includes supportive family atmosphere, accommodation, positive and negative moods and marital adjustment ***(Devins, 1998).*** which have a positive role in promoting and supporting children's physical and mental development ***(WHO, 1995).***

The environment in which children live is also, made up of built environment and natural environment. It focuses on physical, chemical and biotic conditions ***(David et al, 1996)***. Size and quality of home exert a profound influence on the level of risk in infancy, childhood and adolescence ***(Ekblad & solvig etal, 1991).*** This quality is expanded to include the household environment ***(Worldbank, 1993),*** social and economic statuses ***(Chambers & Robert 1995)*** , quality and accessibility of health care ***(Wratten & Ellen 1995***) and degree of community support ***(David et al, 1996).***

The natural and social environments have a considerable impact on childhood kidney disorders. Improved living conditions would ameliorate many of the adverse effects, but they would not affect a core of renal diseases such as many types of nephrotic syndrome, urinary tract

infection and congenital anomalies that are not directly influenced by the environment, more important is the effect of social circumstances on the ability of the family to cope with minor symptoms as enuresis or to participate in the major up heaval of a renal – replacement program for end stage renal disease ***(Rushton, 1992)***;where. 20 new cases per million children in the United States, peaking at about 11-15 years of age were documented each year ***(USRDS, 1991)*** Therefore, **the aim of this work** is to study the family environmental parameters in children with various kidney diseases.

SUBJECTS & METHODS

This work was carried out from the period of August 1999 till January 2000.

Subjects:

A case-control study was carried out on 100 children randomly selected from National Institute of Urology and Nephrology. They were divided into:

*Patient Group: it included 50 diseased children attending the Pediatric Nephrology Unit. 25 males and 25 females (M:F /1:1) with their age ranged between 2-15 years old (mean 8.04±4.06 years). 17/50 (34%) had nephrotic syndrome, 8/50(16%) had nephritic syndrome, 10/50(20%) had urinary tract infection and 15/50(30%) had renal failure

* Control Group: it included 50 healthy children of similar age, 28 males and 22 females (M:F / 1:1.27). Their age ranged between 2-15 years old (mean 8.23 ±4.88 years). They were free from renal troubles. This was documented by urine analysis and kidney function tests.

Methods:

All subjects were subjected to:

1) Family environmental questionnaire and not a medical sheet, including:

a- Personal data: age, sex and order of birth.

b- Socioeconomic status as regards: Parents' occupation, education and income.

c- Feeding Pattern: breast, artificial or mixed., artificial food additives , dietary habits and food source.

d- Hygienic care of the child: bathing, washing hands, and using his own tools.

e- Medical care of the child: vaccination, treatment.

f- Parent bad habits and health customs.

g- Questions about Indoor environmental hygienic state:

1- Home share.

2- Number of rooms

3- Ventilation

4- Wastage closet and drainage

5- Water supply source

6- Wall painting and floor material.

h- Home behavior: refuse collection, cooking devices, house keeping, presence of pets at home, usage of disinfectants and pesticides.

i- Social behavior: conflicts, unwanted child, parent absence guided by Family Environment Scale (Moos and Moos 1986) arranged according to our environment.

j- Social score is used to evaluate social standards of families of children (El Sherbini 1984)

- The total score summed =57
- High social score standard =50-57
- Middle social score standard =40-50
- Low social score standard =30-40
- Very low social score standard = <30
- Parameters included:
  - ☐ Education of father =10 points
  - ☐ Education and work of mother =10 points
  - ☐ Percapita (income / months) =4 points
  - ☐ Family size =8 points
  - ☐ Sanitation
    - a) Water supply (6 points)
    - b) Refuse disposal (4 points)
    - c) Latrines (6 points)
    - d) Sewage disposal (5 points)

e) Illumination (4 points)

K- Socioeconomic score is used to evaluate the socioeconomic level of families of children ***(Rosse, 1987).***

- Total score summed = 30
- High Socioeconomic level = 25-30
- Middle Socioeconomic level = 21-24
- Low Socioeconomic level = <21
- Parameters included:
  - ☐ Education of father = 5 point
  - ☐ Education of mother = 5 point
  - ☐ Occupation of father = 4 point
  - ☐ Occupation of mother = 4 point
  - ☐ Income = 5 point
  - ☐ Social status = 7 point

2) Comprehensive medical history

3) Clinical examination

4) Laboratory investigations: CBC, Renal function tests (blood urea nitrogen (BUN) and serum creatinine) and urine analysis.

5) Imaging studies: abdominal ultrasound, intravenous Pyelography (IVP), Voiding Cystourethrography (VCU), renal biopsy & renal scinitigraphy in selected cases.

RESULTS

Results are shown in tables (1-8) & figure (1)

The socio-demographic characters of individuals in this study were shown in table (1). There was no significant difference in the mean age at evaluation between both groups as it was 8.04±4.06 years among the patients versus 8.23±4.88 years among the controls. Fathers' occupation, mothers' occupation and mothers' education were significantly less among patients group as compared to controls ($P<0.05$); however, there was no significant difference in the sex, order of birth, fathers' education and income among both groups ($P>0.05$).

The results of indoor environmental hygiene of patients group in table (2) showed a significant lowering in number of rooms, floor of houses, state of buildings when compared to controls ($P<0.05$), yet insignificant for water source, shared-home ,and waste drainage($P>0.05$). behavior.

Table (3) showed a comparison between case and control as regard home behavior, refuse collection, cooking devices and usage of outdoor pesticides were significantly lower among families of patients when compared to families of controls group ($P<0.05$). However it was insignificant regarding indoor pesticides, house keeping and raising pets ($P>0.05$).

As regards child care shown in table (4) hygienic care was significantly less among patients group as compared to controls ($P<0.05$);

and insignificantly different in food cleaning and using his own tools (P>0.05).

With respect to medical care shown in table (5), vaccination was found to be significantly less among patients group compared to controls (P<0.05) and of insignificance in the way of treatment by (doctor, relatives or herbals) and isolation of their ill child (P>0.05).

Concerning the social behavior shown in table (6), a significant increase in conflicts was detected among patients group when compared to controls (P<0.05), and an insignificant difference in exacerbations of child illness, unwanted child, parent absence (P>0.05).

As regards, the feeding pattern shown in table (7), external food source was significantly high among patients group as compared to controls (P<0.05), while there weren't significant difference for the infant feeding and artificial food additives (P>0.05).

Socioeconomic score shown in table (8) was insignificantly different among patients group (P>0.05); yet significantly less in cases with nephrotic syndrome, P <0.05,and highly significant in urinary tract infection P < 0.005 and highly significantly in renal failure P<0.005 compared to controls

Laboratory investigations for the patients group showed that 24% had severe anemia, 24% had leucocytosis, 26% had hematuria ,34% had pyuria, 61% had albuminuria, 54% had crystalluria and 30% had renal function impairment; while 28% of controls had moderate anemia , 58% had mild anemia 4% had leucoytosis.

Correlation between the social score and kidney status reflected by the serum creatinine level and BUN was assessed. Correlation data indicated a negative correlation between social score and serum creatinine level. This was highly significant in controls group ($r=-0.842, P<0.001$) and insignificant in patients group($r=-0.083, P>0.05$) whereas (fig1) insignificant difference with respect to urea level in both groups ($P>0.05$) As creatinine is a sensitive marker for renal function tests, the negative significant correlation in the healthy children means that a high social score reflects a good family environment for a better health.

DISCUSSION

Family environmental factors had a differential impact on participation in families with pediatric health problems ***(Janus and Goldberg 1997).***

The present work revealed that patients were insignificantly different in their age, as compared to their controls. Yet significantly less in mothers' education and parents' occupation when compared to parents of controls. ***Mongeou et al 1997***, found a relation between socio-demographic characters and survival rate of children with renal transplantation However, This highlights the important role played by the mother and notifies the necessity of mother's education and occupation which could diminish unhygienic practices, minimize use of nephrotoxic agents and contribute to planned parenthood and smaller family size with

consequent improvement in the quality of life. However, economic growth, employment, equity and appropriate health services could lead to a reduced burden of infection and their nephrologic consequences ***(Hoosen et al, 1999).*** In agreement to our work, other studies ***(Bailey et al, 1992 and Eliser et al, 1992)*** found that mothers more likely expressed than did fathers needs for information and for child care to identify a need for enhanced family and social support and for help with interpersonal interactions regarding their child. Also, the study revealed that indoor environmental hygiene (home share, waste drainage and water source) was insignificantly different for both groups; however number of rooms and type of floor was significantly less in families of patients when compared to families of controls. This could show that children living in a crowded place were more liable to infections. So, proper housing may decrease skin and throat infection and the resultant acute glomerulonephritis.

In literature data concerning our study are limited. In our work results of child hygienic care; regularity of food cleaning and special tools were insignificantly different in both groups but bathing was significant less among patients group compared to controls. Our study revealed that medical care; treatment and isolation were insignificantly different where vaccination was significantly less in patients groups when compared to controls. This could explain the possibility that BCG vaccination which is one of the obligatory vaccine may retard the development of Focal Segmental Glomerulosclerosis and Takayasa

arteritis ***(Thomson, 1997).*** Hepatitis B vaccine which recently been introduced into routine childhood immunization has the potential to drastically contain the group developing hepatitis B virus (HBV) nephropathy ***(Gilbert and Wiggelinkhuizen 1994).*** Our work showed that feeding pattern; child feeding and artificial food additives, were insignificantly different in both groups; yet external food source was significantly high among patients compared to controls. However ***Curhan et al,1997 and Sowers et al, 1998*** found no relation between dietary calcium and risk of stone formation.

There are numerous cases of unexplained renal pathology presenting with varying symptomatology possibly caused by toxins found in herbal remedies. Therefore, programs to curtail the use of harmful traditional medicines and practices would prevent some renal problems.

In our work, social behavior was found to be insignificantly different in families of patients as compared to families of controls but conflicts were significantly increased in families of patients as compared to controls. However, other studies in children with different renal diseases done by ***Cormier et al, 1997, Shilder et al, 1998 and Herrle 1998*** found that social support played an important role for those beginning to experience a decline in renal functioning. Low family support was risky for early mortality among end stage renal disease patients ***(Holder et al, 1997 , Vourlekis & Rivera 1997, Kimmel et al, 1998 and Turner et al, 1999)*** and was a predictive factor of graft survival in renal transplantation in children ***(Mongeau et al, 1997, Nyberg et al 1997 and***

Wicks et al, 1998). This emphasis the importance of family cohesion and Can be consider in agreement to our work where initial coping behavior with illness in chronic renal failure allowed for a significant prediction of outcome

Also our work revealed an insignificant difference in the socioeconomic score in families of patients when compared to families of controls, but significant decrease in patients subgroups compared to control group. This could be explained as patients with (nephrotic syndrome, urinary tract infection and renal failure) need a regular follow up for a longer duration. As quality of life is assessed by the social score, this denoted that a high quality of life provided by the family environment decreases the risk of kidney diseases in infancy, childhood and adolescence. Our work showed a significant negative correlation between social score and serum creatinine level among control. However, other studies done by ***Holder 1997, Cormier et al, 1997, Herrle 1998, Turner et al, 1999*** suggested that social support was conceptualized as a source of assistance in copying with the renal illness or heamodialysis. ***Fedewa and Oberst, 1996***, suggested the need for careful assessment of the family environment to identify parents at risk of care giving burden.

From the course of this study family factors had shown differential impacts on participation in families of the pediatric patients and the healthy children. Hence, we can conclude that home environment, family relationship and parenting styles always involved as predictive factors.

They may act as an early risk factor, mediator or protective factors for children.

Finally, this is a preliminary study, more researches are needed to verify our results, future intervention need to include measures of quality of life, which could be better understood and be sensitive to the psychosocial and developmental issues of paramount concern to children, adolescents and families to promote better management and disease control among children and adolescents with chronic disease ***(Deaton 1985)***. ***Watson1997*** suggested Burden Care Assessment (BCA) may be a useful means of predicting families who require greater support from the multidisciplinary team. It was devised using a scoring system based on the domains of patients, sibling, parents, environment demands of therapy and dialysis, transplant factors .It aids clinicians both in systematic identification of priority concerns and in documenting circumstances and changes for outcome.

RECOMMENDATIONS

- Promoting environmental awareness.
- Family environmental careful assessment to measure quality of life including the supportive family atmosphere and cohesion, family relationship, parenting styles, household environment and home environment to promote better management and disease control among children and adolescents with renal disease.
- Early diagnoses and treatment of renal diseases.

- Children with chronic renal failure are best cared by using a team approach including physicians, nurse practitioners dietitians and social worker to help families to deal with social and financial problems.

Table (1): Comparison between patients and controls as regards socio-demographic characters.

Variables	Patient (50)		Control (50)		X^2	P
	Count	%	Count	%		
1) Sex						
Male	25	50.0%	28	56.9%	0.55	>0.05
Female	25	%50.0	22	3.1%4		
2) Child order						
1st	15	30.0%	24	48.0%		
2 nd	13	26.0%	14	28.0%		
3 rd	6	12.0%	7	14.0%	0.09	>0.05
4 th	7	14.0%	1	2.0%		
5 th	4	8.0%	2	4.0%		
6 th	1	2.0%	1	2.0%		
twins	4	8.0%	1	2.0%		
(3 Father Education						
High	6	12.0%	16	32.0%		
Average+	2	4.0%	4	8.0%	0.10	>0.05
Average	9	18.0%	8	16.0%	3	
Read & Write	17	34.0%	14	28.0%		
Illiterate	16	32.0%	8	16.0%		
(4Father Occupation						
High professions	3	6.0%	15	30.0%	9.48	<0.05
Admin. Work	11	22.0%	8	16.0%		
Worker	36	72.0%	27	54.0%		
(5Mother Education						
High	1	2.0%	10	20.0%		
Average+	3	6.0%	4	8.0%	14.0	<0.05
Average	10	20.0%	14	28.0%	3	
Read & Write	10	20.0%	1	2.0%		
Illiterate	26	52.0%	21	42.0%		
(6Mother occupation						
High professions	1	2.0%	8	16.0%		
Admin. Work	2	4.0%	7	14.0%	16.5	<0.05
Worker	0	0.0%	4	8.0%		
Not Worker	47	94.0%	31	62.0%		
(7Income						
< 1000	0	0.0%	2	4.0%		
1000 – 500	0	0.0%	24	48.0%	38.2	>0.05
500 – 200	24	48.0%	16	32.0%	1	
< 200LE	21	42.0%	6	12.0%		
others	5	10.0%	2	4.0%		

Table (2) : Comparison between patients and controls as regards indoor environmental hygiene.

Variables	Patient (50)		Control (50)		X^2	P
	Count	%	Count	%		
1 – House						
Independent	37	74.0%	43	86.0%	0.22	>0.05
Shared	13	26.0%	7	14.0%		
2 – W.C						
Private	37	74.0%	42	84.0%	0.63	>0.05
Public	13	26.0%	8	16.0%		
3 – stage level						
0	15	30.0 %	12	24.0 %		
1	2	4.0 %	4	8.0 %		
2	12	24.0 %	11	22.0 %	0.21	>0.05
3	13	26.0 %	6	12.0 %		
4	3	6.0 %	5	10.0 %		
5	3	6.0 %	6	12.0 %		
6	1	2.0 %	6	12.0 %		
4 – Room No.						
1	22	44.0 %	9	18.0 %		
2	14	28.0 %	14	28.0 %	12.69	<0.05
3	13	26.0 %	18	36.0 %		
4	1	2.0 %	9	18.0 %		
5 -Ventilation						
Good	6	12.0 %	4	8.0 %		
Average	30	60.0 %	39	78.0 %	0.23	>0.05
Bad	14	28.0 %	7	14.0 %		
6 – Waste Drainage						
Present	41	82.0 %	47	94.0 %	0.14	>0.05
Absent	9	18.0 %	3	6.0 %		
7 – Water Source						
Tape water	38	36.0 %	42	84.0 %		
Underground water	11	22.0 %	4	8.0 %	0.07	>0.05
Water stores	1	2.0 %	4	8.0 %		
8 – Floor						
Tiles	33	66.0 %	42	84.0 %		
Woody	0	0.0%	2	4.0 %		
Unpaved	17	34.0 %	6	12.0 %	7.24	<0.05

Table (3) : Comparison between patients and controls as regards home behavior.

Variables	Patient (50)		Control (50)		X^2	P
	Count	%	Count	%		
(1Refuse						
-1Refuse service	24	48.0%	36	72.0%		
-2Dispose at proper place	18	0. 36 %	13	26.0%	8.46	<0.05
-3Dispose by home	6	12.0%	1	2.0%		
-4Others	2	4.0%	0	0.0%		
(2Cooking						
(1Natural gas.	3	6.0%	26	52.0%		
(2gas stove	22	44.0%	16	32.0%	7.09	<0.05
(3Kerosene set	25	50.0%	8	16.0%		
(3Indoor pesticide						
Yes	31	62.0%	29	58.0%	0.68	>0.05
No	19	33.0%	21	42.0%		
(4Outdoor pesticide						
No	46	92.0%	50	100.0%	4.29	<0.05
Yes	4	8.0%	0	0.0%		
(5House Keeping						
Regular	32	64.0%	24	48.0%	0.07	>0.05
Irregular	18	36.0%	26	52.0%		
(6Pets						
None	28	56.0%	38	76.0%		
Birds	12	24.0%	10	20.0%	0.53	>0.05
Cats	5	10.0%	2	4.0%		
Dogs	5	10.0%	0	0.0%		

Table (4): Comparison between patients and controls as regards personal hygiene.

Variables	Patient (50)		Control (50)		X^2	P
	Count	%	Count	%		
1 – Bathing						
Daily	13	26.0%	25	50.0%		
Every other day	21	42.0%	10	20.0%	8.3	<0.05
Irregular	16	32.0%	15	30.0%		
2 – Food cleaning						
Regular	30	60.0 %	39	78.0%		
Irregular	20	40.0%	11	22.0%	0.09	>0.05
None	0	0.0%	0	0.0%		
3 – Special tools						
Clothes	17	34.0%	12	24.0%		
Tooth brush	6	12.0%	12	24.0%	0.13	>0.05
Fomite	5	10.0%	16	32.0%		
None	22	44.0%	10	20.0%		

Table (5): Comparison between patients and controls as regards Medical care.

Variables	Patient (50)		Control (50)		X^2	P
	Count	%	Count	%		
(1Vaccination						
-Complete	42	84.0%	48	96.0%		
-Partial	8	% 16.0	2	% 4.0	4.13	<0.05
(2Treatment						
-by doctor	34	68.0%	42	84.0%		
-By pharmacist	5	10.0%	4	8.0%		
-Relatives & neighbors	3	6.0%	0	0.0%	0.31	>0.05
-herbals & traditional	4	8.0%	4	8.0%		
-careless	4	% 8.0	0	0.0%		
(3Isolation of I II						
-yes	23	46.0%	32	64.0%	0.07	>0.05
-no	27	% 54.0	18	% 36.0		

Table (6): Comparison between patients and controls as regards family environmental social behavior.

Variables	Patient (50)		Control (50)		X^2	P
	Count	%	Count	%		
1 – Q.1 Conflicts						
Yes	11	22.0%	15	30.0%	0.260	>0.05
No	39	78.0%	35	70.0%		
2 – Q.2 Excitation						
I don't know	34	68.0%	30	60.0%	0.381	>0.05
Yes	11	22.0%	10	20.0%		
No	5	10.0%	10	20.0%		
3– Q.3 Diseases Occurrence						
Not Applicable	38	76.0%	50	100.0%	11.2	<0.05
Before Excitation	6	12.0%				
After Excitation	6	12.0%				
4- Q.4 Unwanted						
Others	4	8.0%	2	4.0%	0.36	>0.05
Yes	11	22.0%	7	14.0%		
No	35	70.0%	41	82.0%		
5.Q.5 parent Absence						
I don't know	32	64.0%	38	76.0%	0.31	>0.05
Yes	11	22.0%	9	18.0%		
No	7	14.0%	3	6.0%		
6-Q.6 House Effect						
Yes	11	22.0%	8	16.0%	0.44	>0.05
No	39	78.0%	42	84.0%		

Table (7): Comparison between patients and controls as regards feeding pattern.

Variables	Patient (50)		Control (50)		X^2	P
	Count	%	Count	%		
1 – Infant Feeding						
Breast	32	64.0 %	38	76.0%	0.33	>0.05
Bottle	10	20.0 %	5	10.0%		
Mixed	8	16.0 %	7	14.0%		
2 – Artificial food additive						
Yes	45	90.0 %	49	98.0 %	0.24	>0.05
No	5	10.0 %	1	2.0 %		
3 – Food source						
Home made	39	78.0 %	48	96.0 %	11.3	<0.05
Food dealers	11	22.0 %	2	4.0 %		

Table (8) : Comparison between patients subgroups and controls as regards socio-economic score

	Control (50)	Nephrotic (17)	Nephritic (8)	UTI (10)	Renal failure (15)
Mean	17.2	14.76	14.25	12.70	13.4
SD	4.79	4.37	4.30	1.63	3.29
t		2.355	2.870	4.420	3.72
Significance		<0.05 (Sig)	>0.05 (NS)	<0.005 (sig.)	<0.005 (Sig)

N.B:

Comparing socioeconomic score between patient group as whole (50) with control revealed insignificant difference" t" 13.86 and $\pm$SD = 3.62.

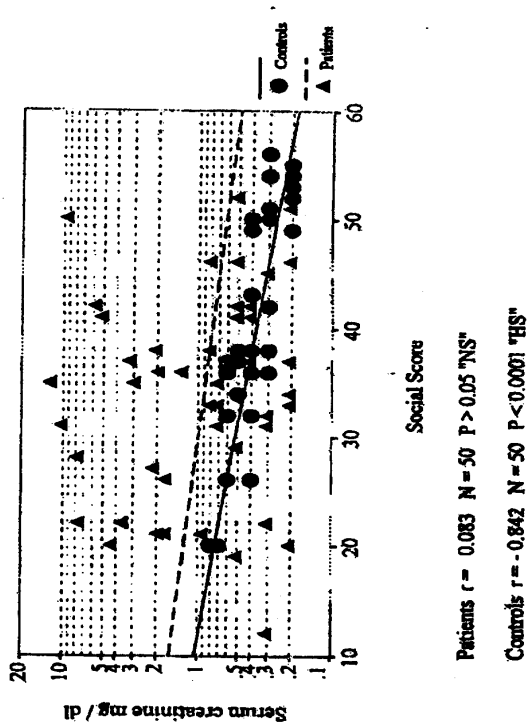

Figure (4) Scatterplot showing the relation between Social score & Serum Creatinine level among patients and their controls

REFERENCES

1) ***Bailey DB, Blasco PM, Simeonsson RJ (1992)***: Needs Expressed By Mothers And Fathers of Young Children With Disabilities. Am J Ment Retard; 97:1-10. Pediatrics Vol. 105 No. 1 Supplement January 2000 PP 277 – 285.

2) ***Chambers, Robert (1995)***: Editorial Introduction Vulnerability, Coping And Policy In Vulnerability. How The Poor Cope. IDS Bulletin Vol. 20, No 2 April, pp 1-7.

3) ***Cormier Daigle M; Stewart M (1997)***: Support and Coping of Male Haemodialysis Dependent Patients. Int – J-Nurs – Stud. ; Dec 34(6) : 420-30.

4) ***Curhan. CCWillett WC; Rimm EB; Stampfer JMJ (1997)*** : Family History And Risk Of Kidney Stones. J-Am-Soc – Nephol ; Oct 8(10) : 1568-73.

5) ***David S, Roger H, Caren L, Diama M, David R, , Jac S, Carolyn S (1996) :***The Environment For Children, New York, NY 10017, USA.

6) ***Deaton, A.v. (1985)***: Adaptive Noncompliance In Pediatric Asthma: The Parent As Expert. Journal Of Pediatric Psychology , 10, 1-14.

7) ***Devins GM (1998)***: Illness Intrusiveness and The Psychosocial Impact of Lifestyle Disruptions in Chronic Life-threatening Disease. Advances In Renal Replacement Therapy. 1:251-263.

8) ***Ekblad , Solvig Etal 1991*** : Stressors, Chinese City Dwellings and quality of life, D 12 , Swedish council for Building Research, Stockholm; Schaeffer, B (1990), " Home and Health on solid foundations ?. " World Health Forum Vol. 11, pp 38 – 45.

9) ***Eliser C, Havermans T, Pancer M, Eiser (1992)***: Adjustment to chronic disease in relation to age and gender: mothers and fathers' reports of their children's behavior. J pediatr. psychol. 17: 261-275.

10) ***El Sherbini AF, Sawsan F (1984)*** : Determining Simple Parameters For Social Classifications For Health Research . The Bulletin Of The High Institute Of Public Health Alexandria University, Vol. XII – No. 5.

11) ***Fedewa MM, Oberst MT (1996)*** : Family Care giving In A Pediatric Renal Transplant Population. Pediatric Nurs, Sep – Oct 22(50) : 402-7; 417.

12) ***Gilbert DR, Wiggelinkhuizen J (1994)***: The Clinical Course of Hepatitis B Virus Nephropathy. Pediatr Nephrol 1994, 8 , 11- 14.

13) ***Herrle J (1998)***: Coping With Illness in Chronic Renal Failure. Psychosocial Correlates and Predictive Significance In Participants Of A Brief Intervention. Psychother – Psychosom – Med – Psychol; Jan 48 (1) : 13-9.

14) ***Holder B; Turner J; Kimmel PL; Alleyne S; Kobrin S; Simmens S; Cruz – I; (1998)*** : Engagement Of African American Families In Research On Chronic Illness: A Multisystem Recruitment Approach. Fam-Process; summer 37(2): 127-51.

15) ***Hoosen M Coovadia, Felicia E, Martin L Etal (1999)***: Pediatric Nephrology Fourth Edition Section 12, Pediatric Nephrology Around The World Chapter 81 PP 1362.

16) ***Janus M, Goldberg S (1997)***: Factors Influencing Family Participation In longitudinal Study Comparison Of Pediatric And Health Samples. J Pediatr. Psychol. Apr. 22(2): 245-62.

17) ***Kimmel PL; Peterson RA; Weihs KL; simmens SJ; Alleyne S; Cruz I; Veis JH (1998)***: Psychosocial Factors, Behavioral Compliance and Survival in Urban Haemodialysis Patients. Kidney – Int; Jul 54 (1): 245-54.

18) ***Mongeau J-G;Clermont MJ; Robitaille P; Plante – A ; Jequier Jc; Godbout c; Guertin MC : Beaulieu MA : Sarrazin F (1997)*** : Study

Of Psychosocial Parameters Related To The Survival Rate Of Renal Transplantation In Children. Pediatr. – Nephrol – Oct 11(5) : 542-6.

19) ***Moos RH, Moos BS (1986):*** Family Environment Scale Manual Palo Alto: CA Consulting Psychologists Press.

20) ***Nyberg SL; Manivel JC; Cook ME; Cillingham KJ; Matas AJ; Najarian JS (1997)***: Grandparent Donors In A Living Related Renal Transplant Program Clin. – transplant; Oct 11 (5) : 349 – 53.

21) ***Overstreet S, Goins J, Chen RS, Holmes CS, Green T, Dunlap WP & Frentz J (1995)***: Family Environment And The Interrelation Of Family Structure, Child Behavior, And Metabolic Control For Children With Diabetes. Journal Ff Pediatric Psychology, 20:435-447.

22) ***Rushton HG (1992)***: Enuresis. In: Kelafis PK, King LR, Belman AB (eds.). Clinical Pediatric Urology l. Philadelphia, WB Sounders, P. 365.

23) ***Rosse J, Barbara G. (1987);*** Sociology : An Introduction, library of congress cataloging in publication data, U.S.A, third Edition.

24) ***Shilder NR, Peterson RA, Kimmel PL (1998) :*** Quality Of Life And Psychosocial Relationships In Patients With Chronic Renal Insufficiency. Am-J Kidney – Dis; Oct 32(4): 557-66.

25) ***Sowers MR; Jannausch M; Wood C: Pope Sk; Lachance – LL; Peterson B (1998)***: Prevalence Of Renal Stones In A Population – Based Study With Dietary Calcium, Oxalate, And Medication Exposures. Am – J – Epidemiol.: May 147(10) : 914-20.

26) ***Thomson PD (1997)*** : Renal Problems In Black South – African-Children. Pediatr.

27) ***Turner J, Leidner D, simmens, S Resiss D, Kimmel PL, Holder B (1999)***: Family Structure And Patient Survival In An African –

American End Stage Renal Disease population: A Preliminary Investigation. So-Sci-Med; May 48(10): 1333-40.

28) ***USRDS (1991)***: Annual Data Report. The National Institutes of Health, National Institute of Diabetes, Digestive and Kidney Diseases, Bethesda MD.

29) ***Vourlekis BS; Rivera Mizzoni RA (1997):*** Psychosocial Problem Assessment And End – Stage Renal Disease Patient Outcomes. Adv – Ren – Replace – ther; Apr 4(2): 136-44.

30) W***atson AR (1997):*** Stress And Burden Of Care In Families With Children Commencing Renal Replacement Therapy. Adv – Perit – Dial; 13: 300-4.

31) ***WHO (1995)***: Our planet, Our Health, Report of the Commission on Health and Environment Geneva. The Environment for Children Chapter 1.

32) ***Wicks MN; Milstead , EJ; Halthaway DK; Cetingok M. (1998):*** Family Caregivers Burden quality of Life, and Health Following Patients' Renal Transplantation. J – Transpl – Coord Sep 8 (3): 170-6.

33) ***World Bank (1993) : OP Cit; see also Kanji, Nazneen (1995) :*** "Gender , Poverty And Structural Adjustment In Harare, Zimbabwe, Environment and Urbanization. The Environment for Children, Vol. 7 No. 1, April, pp 37-55.

34) ***Wratten , Ellen (1995***) : Conceptualizing Urban Poverty Both In Environment And Urbanization. The Environment for Children, Vol. 7, No 1 Apr, PP 59-62.

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بيئة الأسرة والتأثرات الكلوية بين الأطفال

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المستخلص

إن البيئة الأسرية هى المناخ الاجتماعى للأسرة وجودتها المعيشية.

يتعرض الأطفال إلى عوامل طبيعية كيميائية وحيوية تؤثر على البيئة. يعتمد الأطفال على الآخرين للحماية والرعاية طوال فترات نموهم ومراحلها.

كما أن إصابة الأطفال بالأمراض الكلوية يمكن أن تصل إلى نتائج غير مرضيه.

فى السنوات الأخيرة وجد زيادة فى نسبة الإصابة بالفشل الكلوى فى معظم مراحل العمر. لذا فالهدف من هذه الدراسة هو بحث العلاقة بين البيئة الأسرية والأطفال المصابين بأمراض كلوية.

شملت الدراسة خمسين طفلاً مصابين بأمراض كلوية مختلفة ومقارنتهم بخمسين طفلاً أصحاء وقد تم طرح استبيان لجميع الأطفال مع إجراء الفحوصات للأطفال المصابين بأمراض كلوية مختلفة. وقد وجد أن هناك فروق إحصائية ذات دلالة بالنسبة للحالة الإجتماعية للأسرة والسلوك الإجتماعى والسلوكيات الخاصة بالمنزل بأسر المرضى مقارنة بأسر الأصحاء. ولا يوجد فروق بالنسبة للعادات السلوكية بالنسبة للنتائج البيئية.

أما بالنسبة للظروف البيئية وجد أنها ذات دلالات إحصائية، عدا التهوية الصحية والسكن المشترك. أما بالنسبة للرعاية الصحية للطفل من حيث النظافة الشخصية والسلوك الوقائى ونوعية الغذاء وجدت فروق ذات دلالة إحصائية.

وقد أثبت البحث وجود فروق ذات دلالة إحصائية فى المستوى الاجتماعى الاقتصادى للأسرة وذلك فى المجموعات الفرعية للمرضى كما وجدت علاقة إحصائية سلبية وذلك فى المجموعتين بين مستوى درجة البيئة الاجتماعية ومستوى الكرياتينين بالدم لذا تلعب البيئة الأسرية دوراً "هاماً" وفعالاً للإقلال من أو منع أو استقرار حالة مرضى الكلى عند الأطفال كما ننصح بإدخالها منظومة الإهتمام بصحة الطفل.