Stressors and Coping Style of School Age Children On Hemodialysis Therapy

Thesis

Submitted for Partial Fulfillment for Requirements
of Master Degree in Pediatric Nursing

By

Sahar Samir Abdo

B.Sc Faulty of Nursing (1997)
Clinical Instructor in Technical
Institute of Nursing
Ain Shams University

Faculty of Nursing
Ain Shams University
2017

Stressors and Coping Style of School Age Children On Hemodialysis Therapy

Thesis

Submitted for Partial Fulfillment for Requirements
of Master Degree in Pediatric Nursing

Supervisors

Dr. Madiha Amin Morsy

Assistant Professor of Pediatric Nursing
Faculty of Nursing – Ain Shams University

Dr. Salma Elsayeed Hassan

Assistant Professor of Pediatric Nursing
Faculty of Nursing – Ain Shams University

Faculty of Nursing
Ain Shams University
2017

Acknowledgment

*First and for most, thank "**ALLAH**" to whom I relate any success in achieving any work in my life.*

I would like to express my deep appreciation to **Dr. Madiha Amin Morsy** *Assistant Professor of Pediatric Nursing, Faculty of Nursing – Ain Shams University, for her precious help, moral support, fruitful advice, kind attitude and her valuable remarks that gave me the confidence and encouragement to fulfill this work.*

I am immensely indebted and deeply grateful to **Dr. Salma Elsayeed Hassan** *Assistant Professor of Pediatric Nursing Faculty of Nursing – Ain Shams University for her great encouragement, excellent guidance, powerful support, valuable constrictive advices and generous help throughout this work.*

I would like to express my heart thanks, respect and profound gratitude to **Professor Dr. Iman I. Abd Al-Moniem** *Professor of Pediatric Nursing, Faculty of Nursing – Ain Shams University, for her moral support, valuable guidance and constructive criticism and deep concern with this work.*

I wish to convey my thanks to all the nurse teachers who shared in this study.

List of Contents

List of Tables

List of Figures

Figure No.	Title	Page No.

Figures related to Review :

Figures related to Results:

List of Abbreviations

Abb.		Full Term
A.R.F	**:**	Acute Renal Failure
BP	**:**	Blood pressure
C.N.S	**:**	Sympathetic nervous system
C.R.F	**:**	Chronic Renal failure
E.C.G	**:**	Electro cardio gram.
GFR	**:**	Glomerular Filtration Rate
H.R.Q.O.L	**:**	Health Related Quality of Life.
HD	**:**	Hemodialysis
R.F	**:**	Renal failure
RBCs	**:**	Red Blood Cells
RRT	**:**	Renal Replacement Therapy
U.S.A	**:**	United stats of America
U.T	**:**	Urinary tract
WBCs	**:**	White Blood cells

Personal Computer (PC).

The statistical Package for Social Sciences (SPSS)

Chi-square test (X^2)

Glossary

- **Chronic renal failure** (CRF): slow and progressive deterioration of kidney function -¬now replaced by the phrase chronic kidney disease
- **CKD** Abbreviation for chronic kidney disease. This is an abnormality in the kidneys that is present for more than 3 months, and is graded stages 1, 2, 3a, 3b, 4 and 5 for minor to severe kidney disease.
- **Creatinine**: a waste product of muscle activity that is removed from the body by the kidneys, and excreted in the urine; high levels of creatinine represent reduced kidney function
- **Dialyser**: the part of a kidney machine which acts like a filter to remove wastes from the body
- **Dialysis machine** The machine used to perform haemodialysis. It includes a dialyser, which filters the patient's blood. The machine helps to pump the patient's blood through the dialyser, and monitors the dialysis process as it takes place.
- **Dialysis**: a treatment for kidney failure which removes wastes and water from the blood; a process by which small molecules pass from one fluid where they are in high concentration to another fluid where the concentration is lower, through a porous membrane
- **ECG** Abbreviation for electrocardiogram. A test that shows the electrical activity within the heart.
- **ECHO** Abbreviation for echocardiogram. A type of ultrasound scan (sound-wave picture)that shows how well the heart is working.
- **End-stage kidney disease (ESKD)**: stage in kidney disease when treatment, such as dialysis or transplantation, becomes necessary. " End-stage" refers to the end of kidney function
- **Glomerular** filtration membrane: the wall of the glomerular capillary serves as a filtering membrane
- **Glomerulonephritis** (GN): condition in which the glomeruli, the tiny filters in the kidneys are damaged; often referred to as nephritis
- **Haemodialysis**: treatment for kidney failure in which the blood passes through an artificial dialyser to remove wastes and water
- **Oliguria**: diminished excretion of urine (< 400 mL/d or 30 mL/h)
- **Renal failure**: loss of kidney function
- **Urea**: waste product from the breakdown of protein and the major constituent of urine along with water
- **Ureter**: tubular structure that transports urine form the kidney to the bladder

Abstract

Loss of renal function requiring hemodialysis leads to dramatic life changes that would expected to be stressful and to require major coping efforts. **Aim of the study :** was to assess the stressors and coping style of school age children on hemodialysis therapy. **Research design.** A descriptive design was used in carrying out this study **settings:**. The study was conducted at Pediatric Hemodialysis Units in Children Hospital affiliated to Ain Shams University Hospitals and, Elzahraa Hospital, affiliated to Azharaa University. **Subjet :** A purposive sample consisted of sixty children on Hemodialysis who attained hospital in the previously mentioned **Tools for data collection:** three tools were involved; A structured interviewing questionnaire sheet to assess children's knowledge about disease, Hospital stressors scale to assess stressors facing children on Hemodialysis, and Jalowiec and Powers Coping Behavioral scale to assess coping Behavioral of children on Hemodialysis. **Results:** The study revealed that, the majority of the studied children had poor total knowledge regarding renal failure and hemodialysis and the highest percent of the studied children have moderate social stressors and psychological stressors. The majority of the studied children had negative coping style. **Conclusion:** Based on the study finding it was concluded that, there is a negative correlation between coping style of the study children and their stressors among children undergoing hemodialysis with statistical significant difference. **Recommendations:** It was recommended that, Health care organizations should develop inters- professional collaborative care models for the delivery of comprehensive care for children undergoing hemodialysis.

Key words: End Stage Renal Diseases, Hemodialysis Therapy, Stressors, Coping Style, School Age Children.

Introduction

Kidney Failure (KF) is mainly determined by a decrease in glomerular filtration rate. It refers to temporary or permanent damage to the kidneys those results in loss of normal kidney function. KF, or Renal Failure (RF) or renal insufficiency, is a medical condition of impaired kidney function in which the kidneys fail to adequately filter metabolic wastes from the blood. The two main forms are acute kidney injury, which is often reversible with adequate treatment, and Chronic Kidney Disease (CKD), which is often not reversible ***(Amin, 2012)***.

Acute renal failure has an abrupt onset and is potentially reversible. The condition is detected by a decrease in or absence of urine production or determination of waste products (creatinine or urea). In the Chronic Renal Failure (CRF) progresses slowly over at least three months and can lead to permanent RF. The causes, symptoms, treatments, and outcomes of acute and chronic are different ***(Bukhary et al., 2013)***.

There are two different types of RF: Acute and chronic. There are about 600.000 children worldwide who have been undergoing maintenance hemodylsis (HD), in Europe and The United States of America (USA), the reported incidence of RF and End Stage Failure (ESF) in year 2010 among children aged 0-15 years is 28rnillion pediatric population. In The United Kingdom (UK) the

prevalence of national renal registry was 12.2 per million of total population ***(Mousavi et al., 2014)***.

In Egypt, the exact statistical reports about the prevalence of RF in children are rare analysis of health statistics showing that the incidence of children on maintenance dyalsis is continuously expanding during the last three decades. According to the Statistics of Health Sector (SHS) in ***El Gharbia Governorate, (2005)***. There are 586 cases of a total pediatric population of different ages that are scheduled for maintenance HD ***(Fadel et al., 2009)***.

Statistical records of Pediatric Nephrology Unit in (PNU) Tanta University Hospital indicate that 13 HD machines, and 8 HD machines of children are scheduled for maintenance HD besides, 34 cases in El-Mansoura Pediatric University Hospital and 8 HD machines in El-Menofia University Hospital ***(Mahfouz et al., 2012)***.

Children with CRF are at higher risks for behavioral and emotional problems compared to physically healthy children ***(Herlin and Wann-Hansson, 2010)***. Moreover, these children treated by HD feel that life has no meaning and that the pain will never end. They live under a constant shadow; there is no cure or treatment and there is uncertainty about the future that considered as a constant challenge to attainment of normal life ***(Bossola et al., 2010)***. In addition, these children face multiple and

frequent dietary manipulation throughout their course of treatment. This occurs at a time when growth and development are at then most dynamic stages and behavior adaptation to eating and making food choices are greatly influenced ***(Letchmi et al., 2011)***.

Stress is a part of human life and it can cause either beneficial or detrimental effects on human beings, which can affect physical, emotional, economical, spiritual and social aspects. Stress in human life often equated with tension, anxiety, worry and pressure ***(Aghighi et al., 2009)***.

Hemodylsis treatment results in many stressors and restrictions. Children receiving HD use various strategies to cope with stress related to their disease and the treatment procedures. The kind of coping strategies they use depends on their personal experience, social support system, child beliefs, and availability of resources ***(Silva et al., 2013)***.

Coping strategies represent emotional, behavioral and cognitive efforts to deal with stressful encounters such strategies classified as either problem focused or emotion focused, thereby delineating the functions of coping as dealing directly with the problem or with its emotional and physiological outcomes, respectively. Other has shown problem focused coping as more effective than emotion focused coping in terms of emotional reactions and performance levels in a stressful situation ***(Gaafer et al., 2013)***.

The general responsibilities of dialysis nurse summarized in the accompanying display. Nurse has an important responsibility to the child and family as the primary child advocates. The nurse can play a master role in early detection of potential renal problems and referral of the child to pediatric nephrologists can often prevent Irreversible Renal Damage (IRD) ***(Chang et al., 2010)***.

Family members were important providers of social support for children. Adaptation and support can result in advantageous outcomes and successful relationship within the family and has a great impact on HD children. on the other hand, marital and family connection can be the victim of maladaptation such as depression, anxiety, sexual dysfunction ***(Brown et al., 2008)***.

A comprehensive management is necessary for helping to minimize any disruption in children's life which can maintained. Whether the child hospitalized or is receiving out-child dylsis, the nurse is in an ideal position to support the medical plan and provide informed and concerned care ***(Tong et al., 2010)***.

Significance of the Study

There are two different types of RF: Acute and chronic. There are about 600.000 children worldwide who have been undergoing maintenance HD, in Europe and The USA, the reported incidence of RF and End Stage Failure (ESF) in year 2010 among children aged 0-15 years is

28rnillion pediatric population. In UK the prevalence of national renal registry was 12.2 per million of total population ***(Mousavi et al., 2014)***.

There is an association between multiple stressors and coping abilities was experienced by child receiving HD. So that it seems important to investigate how children with CRF who treated by permanent HD cope with their illness and related stressors. Data generated from this study may be helpful to implement and evaluate program to increase child's resiliency in the face of stressors and enhance effective way of coping to promote sense of wellbeing among this group of children.

Aim of the Study

The aim of this study was to assess the stressors and coping style of school age children on HD therapy

Research Questions:-

- What are the types of stressors that children suffering from CRF experienced?
- What are the levels of copping in children suffering from CRF?
- What is the effect of children characteristics on their coping?