



HEMODIALYSIS; PSYCHOSOCIAL STRESSORS IN PATIENTS UNDERGOING

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INTRODUCTION

Hemodialysis is a treatment option available for patients experiencing renal insufficiency in which a machine is used to act out the function of the kidney such as filtering the blood and excretion of by products.¹

Hemodialysis is a lifelong treatment. It significantly and sometime adversely affects on patients life, both mentally and physically. The positive or negative experiences of treatment, also mood and psychological stability were influenced in the first six weeks of treatment because that time period appeared to be a crucial period. A negative experience during this period appears to influence mood and develop of further stressors.²

During dialysis, stressors can be physical and psychosocial. Physical stressors include arterial & venous stick, hypotension, vomiting stiffening of joints, itching, fatigue, confusion, clouding of consciousness and fits.³

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ABSTRACT... Objective: To determine the nature and frequency of psychosocial stressors faced by the patients on hemodialysis admitted in Renal Dialysis Unit of Nishtar Hospital, Multan. **Study design:** A descriptive study. **Place & duration of study:** The study was conducted in the Renal Dialysis Unit of Nishtar Hospital, Multan, from 1st May, 2014 to 31st May, 2014. **Subjects & methods:** The sample consisted of 170 (112 Male, 58 Females) consecutive inpatients on Hemodialysis Treatment. They were interviewed and Hemodialysis Stressors Scale (HSS) was administrated to know the frequency of Hemodialysis Stressors. **Results:** Results showed that all the patients reported Physiological and Psychosocial stressors. Most frequent physical stressors included feeling tired (92%) and stiffening of joints (91%). In psychosocial stressors restriction of fluid (100%), dependence on dialysis machine and/ or equipment (95%), limitation of physical activity (93%), changes in family responsibilities (93%), dependency on nurses and technicians (93%), length of treatment (92%), dependency on physicians (91%), sleep disturbance (90%) and limitation of food (93%) were the most frequently reported. **Conclusions:** We concluded that both physiological and psychosocial stressors were present in significant majority of patients.

Key words: Hemodialysis, Stressors,

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In psychological stressors, long term hemodialysis, financial problems, unemployment, sexual problems and impotence, changes in body appearance, limitation of fluid, limitation in physical activities, frequent hospitalizations, uncertainty about the future, changes in life style, increased dependence and sleep disturbances and fear of dying are most important.⁴ Fluid restriction is one of the most frequently reported and major stressors among patients receiving hemodialysis especially in hot weather. Young patients receiving hemodialysis, also worry about marriage, having children and the burden that they bring to their family.⁵ Studies reported that they experienced physiological stressors more than psychological once. These physical and psychological stressors can lead to anxiety, hopelessness, depression, suicide, irritability, uncooperative behaviour and sexual dysfunction.⁶ Dialysis treatment can also have impact on body image as patient might perceive himself as unattractive. For example, A-V fistula (Arterial & venous stick), neck line or catheter can change

the appearance of the body.⁷

In Pakistan there were only few studies of psychosocial stressors in hemodialysis patients.^{3,13} The aim of the present study is an attempt to find out the main stressors in hemodialysis patients reporting at Dialysis Unit, Nishtar Hospital, Multan.

MATERIAL AND METHODS:

This study was conducted in Renal Dialysis Unit of Nishtar Hospital, Multan, a teaching hospital affiliated with Nishtar Medical College, Multan. The Department offers in-patient and out-patient treatment services of Hemodialysis for End stage Renal Disease patients with a team of trained Physicians, nurses and other paramedical staff.

The population of the study was 330 registered patients for hemodialysis in the Department of hemodialysis. Calculated sample size was 170 patients on Hemodialysis treatment. Data was collected from 1st May, 2014 to 31st May, 2014. Patients on hemodialysis who were willing to participate, regardless of age, gender and causes of the renal failure were included in the study. Patients of chronic liver disease, at coma stage and pregnant females were not included in the study. Written Informed consent was taken from the patients and then all the demographic information was collected on pre-designed Performa, which was comprised of socio-demographic details like age, gender, locality, marital status & occupation. Confidentiality was also ensured. Hemodialysis Stressors Scale (HSS)⁸ was administrated to know Psychosocial Stressors.

The data was analyzed using Statistical Package for Social Sciences (SPSS) version 20.0. The results were depicted in the form of tables.

RESULTS

Table-I shows Demographic Characteristics of subjects. Out of 170 subjects, the majority of patients 112(65.9%) were Male, 51(30%) were about 31-40 years age group, 93(54.7%) belonged to urban area, 125(73.5%) were married and 103(60.6%) were unemployed.

Demographic Details	Frequency	Percentage
Gender		
Male	112	65.9%
Female	58	34.1%
Age		
15-20	9	5.3%
21-30	37	21.8%
31-40	51	30.0%
41-50	46	27.1%
51-60	19	11.2%
61-70	8	4.7%
Locality		
Rural	77	45.3%
Urban	93	54.7%
Marital status		
Single	22	12.9%
Married	125	73.5%
Divorced	8	4.7%
Widow / Widower	15	8.8%
Occupation		
Unemployed	103	60.6%
House wife	54	31.8%
Students	13	7.6%

Table-I. Demographic characteristic of the participants (n=170)

Table-II shows the frequency of Hemodialysis Stressors. All the patients reported Physiological and Psychosocial stressors. Most frequent physical stressors included feeling tired (92%) and stiffening of joints (91%). In psychosocial stressors restriction of fluid (100%), dependence on dialysis machine and/ or equipment (95%), limitation of physical activity (93%), changes in family responsibilities (93%), dependency on nurses and technicians (93%), length of treatment (92%), dependency on physicians (91%), sleep disturbance (90%) and limitation of food (93%) were the most frequently reported.

STRESSORS	%
PHYSIOLOGICAL STRESSORS	
Arterial & venous stick	66%
Nausea and vomiting	68%
Muscle cramps/soreness	82%
Itching	69%
Feeling Tired	92%

Stiffening of joints	91%
Loss of body function	86%
PSYCHO-SOCIAL STRESSORS	
Length of treatment	92%
Decrease in social life	87%
Limitation of food	90%
Limitation of fluid	100%
Interference with job	75%
Decrease in sexual drive	85%
Limitation of physical activity	93%
Sleep disturbances	90%
Changes in family responsibilities	93%
Reversal in family role with spouse	86%
Reversal in family roles with the children	87%
Uncertainty about the future	89%
Changes in body appearance	72%
Limited in styles of clothing	56%
Cost of treatment/transportation to treatment/or other cost factors	79%
Transportation to and from the unit	76%
Limits on time and place for vacations	71%
Frequent hospital admissions	80%
Dialysis machine and/ or equipment	95%
Dependency on nurses and technicians	93%
Dependency on physicians	91%
Fear of being alone	42%
Feelings related to treatment (example: feeling cold)	42%
Boredom	89%
Decreased ability to have Children	88%

Table-II. Hemodialysis stressors

DISCUSSIONS

In this study majority of patients were male 112(65.9%). In other researches also male population accounted for 57.5%⁵, 56.7%⁹, and 62.71%⁷ of all the patients.

In our study, majority of patients 51(30%) belonged to 31-40 years of age group. One study by Tu, et al., patients on hemodialysis belonged to 20-45 year age group.¹⁰

In this study, 93(54.7%) patients were belonged to urban area, 125(73.5%) were married and 103(60.6%) were unemployed. Other researches also showed similar profile as 93.3%⁹, 62.5%¹⁰ and 75.6%¹¹ patients as being married. Moreover 71.1%¹ and 72.5%¹² patients were unemployed

as reported by those studies which are in keeping with our findings.

Present study revealed that psychosocial stressors have strong relationship with hemodialysis. In physiological stressors 92% patients were reported feeling tired and 91% reported stiffening of joints. In one study by Cinar et al., 80% patients on hemodialysis complained of fatigue which is in accordance with our findings.¹³

Considering Psychosocial stressors in our study, 100% patients reported limitation of fluid as major stressor and in more than 90% patients, stressors revealed were limitation of physical activity, dependence on dialysis machine and/ or equipment, changes in family responsibilities, length of treatment, dependency on physicians, sleep disturbance, limitation of food and dependency on nurses and technicians. Shinde, & Mane, also reported similar results. He reported 93% patients had severe stress of daily activity, 86.7% patients had the stress of dependency on staff and food & fluid restriction and 76.7% patients had stress related to the problems of blood vessel among the patients undergoing hemodialysis.⁹

Our results had resemblance with another study by Cinar et al., who reported that 80.4% had psychosocial stressors related to the vocation limitations, 80% had uncertainty about future, 76% had activity limitation and 75% had dependence on Hemodialysis machines.¹³

Tsay et al., used the Hemodialysis Stressor Scale (HSS) in his study to assess the stressors in 57 patients on hemodialysis in Taiwan. His results showed the major stressors to be length of dialysis treatment, employment issue, limitations of fluid intake, transportation difficulties, loss of bodily function and limitation of physical activities which is in accordance with our findings.¹⁴

In our research 100% patients reported limitation of fluid as one of the strongest psychosocial stressor. However in other research done by Gorji et al., water drinking related worry only

47.5% patients on hemodialysis.¹² This difference may be due to comparatively hot weather in our setting. In the same study by Gorji et al., limited time and places for enjoyment was reported by 46.25%¹² which is significantly lower than our findings which mentioned 71% patients reported the same stressors. The difference may be explained due to scarce resources for enjoyment as well as peculiar cultural norms in our setting which does not encourage leisure activities in sick population.

In our study 79% & 76% patients reported the psychosocial stressors related to cost of treatment and transportation issues to and from the unit. In comparison this seems to be higher than that reported by Gorji et al., which mentioned only 45% reported travelling related worry and 41.5% had cost related worries.¹² This difference may be due to poor health infrastructure as well as difficult accessibility to health facilities in our setting.

CONCLUSION

We concluded that both physiological and psychosocial stressors were present in significant majority of patients.

LIMITATION & SUGGESTION

This research did not mention the duration of both illness and hemodialysis procedure which may change the nature and frequency of psychosocial stressors. Another research which takes into account the duration of hemodialysis procedure and its relationship to the psychosocial stressors may be needed.

Authors suggest that a comprehensive psychosocial approach may be adopted to address the psychosocial stressors in the management of patients on hemodialysis.

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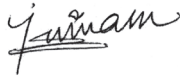

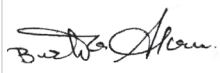


“Imagination rules the world.”

Napoleon Bonaparte



AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Dr. Naeem-Ullah Legheri	Contribution to conception and design, acquisition of data, analysis and interpretation of data.	
2	Dr. Rizwana Amin	Drafting the article and shares its expert research opinion and experience in finalizing the manuscript.	
3	Bushra Akram	Contributed in conception and interpretation of data and give his expert view for manuscript designing.	 DR. MUHAMMAD ALI ASADULLAH
4	Dr. Muhammad Ali Asadullah	Statistical analysis	