# A study to assess the stressors and coping strategies among patients undergoing hemodialysis admitted at tertiary care hospital in view to develop information booklet.

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## Abstract

**Background :** Hemodialysis is the most common choice of treatment in chronic renal failure. Hemodialysis results in change in quality of life because of a number of modifications and restrictions which affects on the patients health functioning. Patients undergoing hemodialysis have severe stress, hence patients receiving hemodialysis use various strategies to cope with the stressors related to their disease and the treatment procedures. **Aims and Objectives:** A study to assess the stressors and coping strategies among patients undergoing hemodialysis at tertiary care hospital in view to develop information booklet .The objective of study was to assess the level of stressors among patients undergoing hemodialysis. To assess the coping strategies used by patients undergoing hemodialysis. To find out association between selected socio-demographic variables and stressors , coping strategies .To assess the relationship between these stressors and the coping strategies used by patients undergoing hemodialysis. To prepared a booklet on stressors and various coping strategies used by the patients. **Methods:** A cross sectional descriptive research design was used. The data was collected from 30 hemodialysis patients by purposive sampling technique with use of modified hemodialysis stressors scale and copying stratergies. **Result :** Findings revealed that highest percentage 36.66% were in the age group of 51-66 years and,36-50years of age. Majority 83.33 %were male and 16.66 % female patients .86.66% were married,and13.33% patients were single. 40% of patients had primary education, 23.33% had graduation. Maximum 53.33% daily wages workers. About 63.33% were in lower socio economic The majority of patients 70% belongs to joint family. cause of hemodialysis is renal diseases reported by 73.33% patients .73.33% patients reported that since 1-11 months is the duration of hemodialysis, about 96.66% undergoing hemodialysis twice in a week. Maximum 83.33% were travelled from above 20 KM distance from home to dialysis centre . In physical stress fatigue , diet and fluid restriction is very often experience by the patients where as psychological stressors changes in family responsibility decrease social life and patients felt dependent on hemodialysis machine and health team members. Very often socio-economic stressors was financial issue and job interference.(83.33%) of patients had severe level of stress. Highest percentage (66.66%) of patients had completely adoptive coping, (33.33%) had partially adoptive coping. Karl Pearsons's co-efficient of correlation analysis showed positively moderate relationship between stressors and coping strategies of patient undergoing hemodialysis. (r=0.320) **Conclusion :** Data shows that the patients undergoing hemodialysis had severe stress. Modification in copying stratergy should be implemented by the hemodialysis patient.

**Key words :** Hemodialysis, strategies, information booklet.

**Introduction :** Stress is inevitable in human life is often equated with tension and pressure. Chronic renal failure is one of the chronic and life threatning disease. Almost 2-3% people from all over the world is afftected with this disease .[1]

Irreversible reduction in kidneys function results in end stage renal disease. Different mode of treatment are available to combat with this disorder such as hemodialysis, Peritoneal dialysis, kidney transplant etc. to prevent uremia and its complications.[2,3] World wide hemodialysis is the most common choice of treatment for end stage renal disease.[4]

End stage renal disorder and hemodialysis complications makes the patients life more critical and it leads to reduction in their quality of life[5,6,7,]

Hemodialysis patients needs to deal with various aspects of their disease. Hemodialysis patients are exposed to different stressful factors and have to use various coping strategies as a supportive processes. Hemodialysis treatment imposes many challenges and problems for patients and their family members ,who often require innovative ways of coping. The

information booklet will help the hemodialysis patients to adopt different coping strategy for the physical, psychological and socio-economic stressors .

Hence researcher has undertaken "a study to assess the stressors and coping strategies among patients undergoing hemodialysis admitted at tertiary care hospital in view to develop information booklet."

**Aim & Objective:**

1. To assess the level of stressors among patients undergoing hemodialysis.
2. To assess the coping strategies used by patients undergoing hemodialysis
3. To assess the relationship between these stressors and the coping strategies used by patients undergoing hemodialysis.
4. To prepared a booklet on stressors and various coping strategies used by the patients.

**Methods and Material :** A cross sectional descriptive research design was used. The study was conducted in a dialysis unit of tertiary care hospital at Ahmednager . The population of study was 30 registered patients for hemodialysis at tertiary care hospital .Patients who were willing to participate in the study ,written informed consent was obtained from participants and all demographic information was collected on predesigned perform, which was comprised of socio-demographic details like age gender, education, marital status, occupation, type of family, per capita income, causes of hemodialysis, duration of dialysis in month, frequency of hemodialysis & distance travelled from the home to hemodialysis dialysis unit. Hemodialysis stressors scale tool was developed by the investigator through literature review and modified to suit the population and socio cultural background. Tool was validated by the expert from medical and nursing field. Data was collected to know the physiological psychosocial and socio-economic stressors.

Stressors perceived by participants on hemodialysis were measured by the modified hemodialysis stressors scale. Participants rated on this modified hemodialysis stressors scale the extent of being stressed on a 5–point Likert scale .Respondent were: 1=never,2= rearly ,3=sometimes,4=often,5=very often. Score range for the total scale is (20-100) out of which (12-60) for physical stressors,( 4-20) for psychological stressors, and (4-20) for socio-economic stressors. Higher score on the scale indicates high severity of stressors perceived by the patients.

Coping strategy used by the participants items consist of 63 statements .The response to statement was based on 5 –point Likert scale and responses were scored as follows: 1=never, 2= rearly,3=sometimes,4=often,5=very often. The total score was 315 .The three ways of coping (1-105)= no adaptive coping,(106-210) partial adaptive coping,(211-315) complete adaptive coping.

**Result :**

**Description of Demographic Variable**

Maximum patients 36.66% were in the age group of 51-66 years, 36.66% participents were 36 -50 years of age where as 26.66% population were 20-35 years of age. Majority 83.33 %were male and 16.66 % female patients. 86.66% were married, and 13.33% patients were single. 40% of patients had primary education, 36.66% had high secondary education, 23.33% had graduation. The result showed that patients had minimum education. The result shows that the 10% are house wife, 16.66% are service , 20% are businessman and 53.33% daily wages. Maximum patients 63.33% were in lower socio economic class ,23.33% had middle socioeconomic class ,13.33% had upper class. Patients had lower socioeconomic status. The majority of patients 70% belongs to joint family, and 30% patients had nuclear family. Maximum patients 73.33% reported that they had renal disease and which is the cause for hemodialysis, were as 16.66% reported that hypertension and 9.99% said diabetes is the causes for hemodialysis. Renal disease is the cause of hemodialysis.73.33% patients reported that since 1-11 months duration of hemodialysis, were as 26.66% said that 12-25 months and above is the duration of dialysis. Patients had 2month to 25 months duration of hemodialysis. About 96.66% undergoing hemodialysis twice in a week, and 3.33% patients had hemodialysis three times per week. Twice in a week is the frequency of hemodialysis. Distance Travelled from home to dialysis unit data shows that the majority of 83.33% were travelled from above 20 KM distance , whereas 9.99% travelled from 11-20 KM distance, and 6.66% travelled from 1-5KM of distance. Patients have been travelled for the hemodialysis at tertiary care hospital from 20 KM of distance and above.(Table 1.)

**Table -1. Demographic Characteristics of The Participants (n=30)**

| Demographic Details | Frequency | Percentage |
|---|---|---|
| **Age** | | |
| 20-35year | 8 | 26.66 |
| 36-50year | 11 | 36.66 |
| 51-66 & above | 11 | 36.66 |
| **Gender** | | |
| Male | 25 | 83.66 |
| Female | 5 | 16.66 |
| **Marital Status** | | |
| Married | 26 | 86.66 |
| Single | 4 | 13.33 |
| **Educational Status** | | |
| Primary | 12 | 40 |
| Higher Secondary | 11 | 36.66 |
| Graduate | 7 | 23.33 |
| **Occupation Status** | | |
| House Wife | 3 | 10 |
| Service | 5 | 16.66 |
| Business | 6 | 20 |
| Daily Wages | 16 | 53.33 |
| **Socio-economic Status** | | |
| Upper class | 4 | 13.33 |
| Middle class | 7 | 23.33 |
| Lower class | 19 | 63.33 |
| **Type of Family** | | |
| Nuclear | 9 | 30 |
| Joint | 21 | 70 |
| **Causes of hemodialysis** | | |
| Renal Diseases | 22 | 73.33 |
| Hypertension | 5 | 16.66 |
| Diabetes | 3 | 9.99 |
| **Duration of hemodialysis** | | |
| 1-11months | 22 | 73.33 |
| 12-25months | 8 | 26.66 |
| **Frequency of hemodialysis** | | |
| Two times in a week | 29 | 96.66 |
| Three times in a week | 1 | 3.33 |
| **Distance travelled from home to dialysis center** | | |
| 1-10 KM | 2 | 6.66 |
| 11-20KM | 3 | 9.99 |
| Above 20 KM | 25 | 83.33 |

**Table 2. Stressors of patients undergoing hemodialysis (n=30)**

| Sr. No. | Stressors | Very Often | Often | Some times | Rarely | Never |
|---|---|---|---|---|---|---|
| A | **Physical stress** | | | | | |
| 1 | Experience fatigue | 11 | 8 | 10 | 1 | 0 |
| 2 | Activity limitation | 7 | 11 | 6 | 6 | 0 |
| 3 | Muscle cramps , joint stiffness and pain | 9 | 6 | 8 | 7 | 0 |
| 4 | Sleep disturbance | 2 | 4 | 9 | 11 | 4 |
| 5 | Itching and dry skin | 5 | 7 | 6 | 11 | 1 |
| 6 | Nausea and vomiting | 1 | 4 | 13 | 11 | 1 |
| 7 | Lack of urination | 21 | 7 | 1 | 1 | 0 |
| 8 | High blood pressure | 13 | 4 | 4 | 6 | 3 |
| 9 | Low blood pressure | 0 | 0 | 6 | 17 | 7 |
| 10 | Shortness of breath | 0 | 3 | 6 | 21 | 0 |
| 11 | Insufficiency of A-V fistula | 1 | 2 | 4 | 21 | 2 |
| 12 | Diet and fluid restriction | 20 | 6 | 2 | 2 | 0 |
| B | **Psychological stress** | | | | | |
| 13 | Changes in family responsibility and decrease social life | 13 | 12 | 4 | 1 | 0 |
| 14 | Dependent on hemodialysis machine and health team member | 13 | 10 | 6 | 1 | 0 |
| 15 | Changes in body appearance | 12 | 13 | 5 | 0 | 0 |
| 16 | Thought of uncertain about future | 7 | 7 | 6 | 10 | 0 |
| C | **Socio-Economic stress** | | | | | |
| 17 | Financial issues | 14 | 12 | 2 | 2 | 0 |
| 18 | Issues of transportation to and from unit | 9 | 11 | 4 | 6 | 0 |
| 19 | Job interference | 10 | 9 | 6 | 5 | 0 |
| 20 | Leave and vacation limitation | 6 | 3 | 3 | 8 | 10 |

**Table 2** shows that in physical stress fatigue is very often experience by the patients where as activity limitation is often experience by 11pateints. Muscle cramps , joint stiffness and pain is common stressor said by all people.Itching and dry skin ,nausea and vomiting is rarely seen . Lack of urination and High blood pressure is the common stressor among patients. Low blood pressure and shortness of breath rarely seen in patients. Insufficiency of A-V fistula is a rare stressor for patients but maximum patients had reported that diet and fluid restriction is very often stressor. About psychological stressors maximum patients had reported that very often they had changes in family responsibility and decrease social life and patients felt dependent on hemodialysis machine and health team members. Often feels that changes in body appearance.

About socio-economic stressors financial issue is very often .Maximum Patient had issues for transportation from home to dialysis center. Job interference is a very often stressor for patients .Leave and vacation limitation is a common stressors for all patients (Table 2.)

**Table No 3. Frequency and percentage distribution of the stress among patients subjected to hemodialysis (n=30)**

| So. No | Level of Stressors | No. | % |
|---|---|---|---|
| 1 | Not stress full (0) | 0 | 0 |
| 2 | Very mild stress (1-25%) | 0 | 0 |
| 3 | Mild stress (26-50%) | 0 | 0 |
| 4 | Moderate stress (51-75%) | 5 | 16.66 |
| 5 | Severe stress (76-100%) | 25 | 83.33 |
| | **TOTAL** | **30** | **100** |

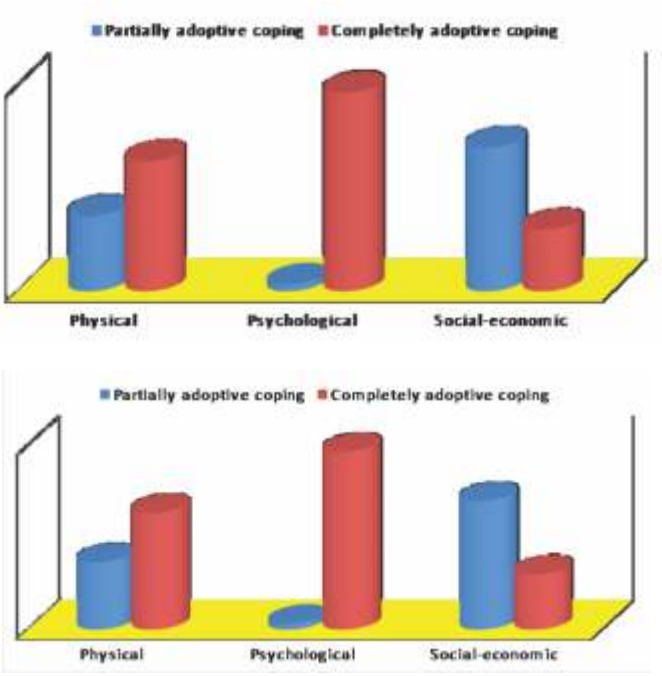
The percentage wise distribution of level of stressors among hemodialysis patients shows that highest percentage (83.33%) of patients had severe level of stress , (16.66%) had moderate level of stress, there was (0%) of them were having mild , very mild and not stress full respectively. Data depicts that the hemodialysis patients suffers from moderate to severe level of stress (Table no 2).

**Table No 4. Assessment of the level of copings strategy among patients subjected to hemodialysis (n=30)**

| So. No | Level of Coping Strategy | No. | % |
|---|---|---|---|
| 1 | Non adoptive coping | 0 | 0 |
| 2 | Partially adoptive coping | 10 | 33.33 |
| 3 | Completely adoptive coping | 20 | 66.66 |
| | **Total** | **30** | **100** |

The percentage wise distribution of level of coping strategies among hemodialysis patients shows that highest percentage (66.66%) of patients had completely adoptive coping, (33.33%) had partially adoptive coping, there was (0%) of no adoptive coping strategies. The data shows that the hemodialysis patients had partially and completely adoptive coping for hemodialysis stressors(Table No 3).

**Fig. No 1. Aspects of stressors and copying strategy adopted by hemodialysis patients**




All aspects of stressors shows completely adaptive coping strategies. Only Physical (36.66%) Socio economical stressors (70%) shows partially adaptive coping strategies. Hence Information , Education and Communication campaign should be made regarding the dialysis centers and various Governmental schemes available at the center which will help HD patients to avail economic support (Fig No 1).

**Table 5 Analysis of relationship between stressors and coping strategies adopted by the patients undergoing hmodialysis**

| n=30 | | Coping | Stress |
|---|---|---|---|
| Coping | Pearson Correlation | 1.0 | 0.320 |
| | Sig.(2 -tailed | | 0.213 |

The above table shows that Pearsons correlation was used to find out the relationship between the coping stratergies and stressors of the patients undergoing hemodialysis, r=-0320 which is moderatly positive relationship between stressors and coping strategies.

From the above result researcher had developed the brief information booklet, which comprise of information about 20 common stressors , and a63 various alternative copying strategies, information about various Government schemes at Tertiary care

hospital (Example :Rajiv Gandhi Jeevandayee Arogya Yojana), facilities provided by the hospital for hemodialysis patients, Health team of hemodialysis dialysis center, and how to reach hospital with map. Booklet was distributed to hemodialysis patients for their reference.

**Discussion :** Study shows that majority of patients 36.66 % belongs to 36-50 years of age group.Study by Tu , et al . patients on hemodialysis belonged to 20-45 years age group. [8] In our study majority of patients were male 83.33% . In other research also male population accounted for 57.5%,62.71 . Our study had 86.66% married patients Dr. Naeem-ullah Leghari study show similar profile 73.5% patients were married[9].

Presenta study shows maximum 83.33% were travelled from above 20 KM distance from home to dialysis center . Our findings comparatively is higher than the Dr. Naeem-ullah Leghari study their study showed that 76% patients reported travelling problems.[9] Present study reveled that physiological stressors have strong relationship with hemodialysis .Physical stressors like fatigue , diet and fluid restriction is very often experience by the patients. Dr.Naeem-ullah Leghari study showed simillar findings 92 % patients had often experience physical stressors.

This study highlighted psychological stressors very often reported by the patients are changes in family responsibility decrease social life and patients felt dependent on hemodialysis machine and health team members.Our study had resumblance with another study by Cinar et al.,who reported that 80.4 % had phschosocial stresors 75% had dependency on hemodialysis machine. [10]

**Conclusion :** At initial stage a patient may required only rest and dietary restrictions but as diseases progresses , the patient physically may not be able to cope up with his work, family responsibility social isolation etc. and patients may experiences severe stress. Nurse should focus on the comprehensive nursing care and help the hemodialysis patient to attain optimum quality of life.

The present study found that patient subjected to hemodialysis experiences more stress such as physical and socio economic aspects and inadequate coping ability to over come the stressors.

Present study found that hemodialysis patients subjected to hemodialysis experiences more stress , physical , psychological and socio economic aspects and they had inadequate information about copying strategy .

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