

A Study of Quality of Life and Coping Style among Haemodialysis Patients

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ABSTRACT

Background: Health-related quality of life (HRQOL) is a significant indicator of how chronic kidney disease (CKD) affects patient's life. Coping indicates the method used by the patients to encounter a situation and reach the goal. The objective of the study was to assess the quality of life and coping technique among haemodialysis patients. **Methodology:** The quality of life and coping skills were assessed among the chronic kidney disease patients who were on haemodialysis (HD) from 2 months to 8 years by using the World Health Organization Quality of Life (WHOQOL) and Brief Cope Inventory. The total 90 participants were randomly selected depending on the years of HD they were undergoing. The sample was divided in the three groups who are on dialysis from 2months to 1year –group 1, 1year to 4 year-group 2 and 4years to 8 years-group 3. **Results:** The results show the scores on all the dimension of QOL deteriorated significantly across the group with the lowest score in group 3. Active coping ($P = 0.005$) and denial ($P = 0.001$) were the significant coping style. Significant correlation was seen between Quality of Life and coping on several dimensions. **Conclusion:** The newly diagnosed patients had better coping with the illness compared to the other two groups. There is a progressive decline in the coping across the three groups. Acceptance as well as denial are the coping skill in most of patients. Strategies to improve the patients function with psychological intervention need to be considered.

Keywords: Coping Style- Haemodialysis-Quality of Life

The avert treatment process such as Dialysis and renal transplantation are demanding and stressful on the everyday lives of end-stage renal disease (ESRD) patients, often negatively affecting their emotional and psychological well-being. Many patients deny the thought of initiation of dialysis, they curtail social interactions, are uncertain about the decisions due to emotional resonance which is influenced by their thoughts due to which they experience the

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transition to dialysis to be physically and mentally exacting.^[1] They are forced to contend with periods of distress throughout the process of dialysis due to the stress of treatment, loss of sexual function, marital issues, and distorted body image and decreased physical and cognitive functioning, out of pocket expenses as well as consequent effects on occupation, relationships and standard of comfort. This has a holistic effect on their overall well-being.^[1] Chronic kidney disease (CKD) is a major health problem worldwide with a prevalence that increases with age and with comorbid conditions having a significant negative effect on the health related quality of life (HRQOL). HRQOL is associated with risk of evolution to end-stage kidney disease and increased mortality in those end-stage patients. Because of its high prevalence and impact, research on HRQOL in CKD patients has increased over the years. Reported satisfaction of haemodialysis patients with their personal health is positively correlated with HRQOL. Negative mental health e.g., depression, high psychological distress and psychiatric disorder, psychosocial factors all of which are prevalent amongst CKD patients, is a negative predictor of HRQOL in CKD.

Coping is the process of executing a response to a stressor, where stress is viewed as the experience of encountering relevant difficulties in one's goal-related efforts.^[2] According to Lazarus several distinctions have to be made within the broad domain of coping as the concept of coping is very broad. The ways people react and cope with specific difficulties and stressful circumstances is known as situational coping and tendencies to use specific coping reactions to a greater or lesser degree under stress is known as dispositional coping style.^[3]

Psychosocial stressors and physiological stressors are found to have impact on patients. Fluid restriction and muscle cramps with fatigue were ranked as top psychosocial and physiological stressors respectively. Baldree found that patients used problem-oriented coping methods significantly more than emotion-oriented methods for solution.^[4] Also a study by Gurkils found that physiological stressors were more troublesome than psychosocial stressors.^[5] The most common coping methods used were Optimism and controlling the situation, and putting the problem out of one's mind and blaming someone else were the least important coping tools.

Study by Lindquist, showed that optimistic coping style was the most widely used by both genders in both the groups of continuous ambulatory peritoneal dialysis (CAPD) and consecutive series of haemodialysis patients. Patients also considered this type of coping to be the most effective in terms of dealing with stressful treatment aspects.^[6]

Daily activity of the patients were positively associated with using emotion-oriented, avoidance and isolated thoughts as coping styles and negatively related to support seeking from professionals. Shu-Chuan, observed that greater dependency was seen on medical staff and technicians for blood vessel problems during higher perceived stress related to physical symptoms. The most commonly used coping strategies by the patients were emotion-oriented, avoidance and isolated thoughts. The type of coping adopted depended on the type of stressors and the situations.^[7]

A comparative study of QOL of a general population and dialysis patients 3 months after the start of chronic dialysis treatment was made by Maruschka. QOL of haemodialysis and peritoneal dialysis patients was substantially impaired in comparison to the general population sample, particularly with respect to role-functioning of physical and general health perceptions. HD patients showed lower levels of QOL than peritoneal dialysis patients on physical functioning, role functioning, emotional, mental health and pain. A higher number of

A Study of Quality of Life and Coping Style among Haemodialysis Patients

comorbid conditions, a lower haemoglobin level, and a lower residual renal function were independently related to poorer QOL.^[8]

Fernando et al., (2001) study on HRQOL refers to the measures of a patients functioning, well-being and general health perception in each of 3 domains: Physical, psychological and social. QOL of patients with end stage renal disease is not only influenced by the disease itself but also by the type of replacement therapy. Transplantation among replacement therapies appears to give the best QOL for large groups of patients. No conclusive data exists to prove differences in QOL between haemodialysis patients and peritoneal dialysis patients.^[9]

MATERIALS AND METHODS

The study was performed in the dialysis unit of hospital. The patient participants were interviewed prior to the medical visits or after the HD session in a separate /counselling room by two trained interviewers. The patients who meet the inclusion criteria should be on HD treatment for >2months and < than 8 years and were submitted to a conventional in-centre HD regime consisting of 3 weekly HD sessions lasting for 4 hours each. Patients who were hard of hearing, or had speech problem or cognitive deficits were excluded from the study since these deficits in patients would impair the understanding of the questions. The information about patient age, gender, educational level, marital status, duration of dialysis and predisposing diseases, such as diabetes, hypertension and cardiac disease were collected. The participants (90) were randomly selected depending on the years of HD they were undergoing. The patients (30) who were on HD from 2 months-1 years were in the group 1 of the study, patients (30) undergoing HD from 2 months-3 years were in second group and patients (30) on HD from 2 months to 8 years were in the third group. Patients completed two validated questionnaire including WHOQOL^[10] and Brief Cope Inventory.^[11]

Statistical Analysis

Statistical analysis was performed based on the objectives of the study. The results are presented as mean. For the variables, we used ANOVA to compare more than two groups. Pearson's correlation test was employed to check the relationship between the QOL and Brie Cope results with other variables.

RESULTS

Table: 1 Socio Demographic details of the sample

Variables		Group 1 (>2months to 1 Year)	Group 2 (>2mnt-3 yrs)	Group 3 (>2mnths-8yrs)
Gender	Male	18	21	14
	Female	12	09	16
Age	Male	15-72	20-79	34-70
	Female	19-72	45-68	34-74
Marital Status	Married	24	24	27
	Single	6	6	02
	Widow	-		01
	Separated	-		
	Divorced	-		
Education	Illiterate	12	3	22
	High School	7	6	03
	Graduate	8	3	15
	PG/Professional	3	8	-
Occupation	Employed	11	12	11
	Unemployed	19	18	19
Financial Assistance	Self	18	16	08
	Insurance	12	14	22

A Study of Quality of Life and Coping Style among Haemodialysis Patients

Table 1 displays the study sample characteristics. The total number of participants was 90 patients with 30 in each group. The participants of the study were 53 male and 37 female patients, with in the age group of 15 to 79. Evaluating the social demographic data, patients who had a higher level of education were very few in numbers in all three groups as compared to the rest of the participants of the study. Unemployed participants were more in number and the patients covered under insurance or other government scheme were less in number except in group three.

Table 2: Various dimensions of Brief Cope and Quality of Life among HD patients (N=90)

Variable	Dimensions	Mean (±SD)	F	P value
Brief Cope	Self-Distraction	5.4(1.6)	.77	.46
	Active Coping	4.6(1.8)	5.7	.005**
	Denial	2.9(1.3)	7.2	.001**
	Substance Use	2.8(1.6)	1.6	.19
	Use Emotional Support	6.6(1.3)	.95	.39
	Use Instrumental support	5.4(1.7)	.10	.90
	Behavioural Disengagement	4.3(1.8)	2.1	.12
	Venting	3.5(1.4)	.16	.84
	Positive Reframing	4.4(1.8)	1.9	.15
	Planning	3.9(1.5)	.88	.41
	Humour	3.0(1.4)	1.4	.24
	Acceptance	5.4(2.0)	2.22	.11
	Religion	5.8(1.7)	1.2	.29
	Self-Blame	3.5(1.9)	1.14	.32
QOL	Physical	16.9(4.3)	.59	.55
	Psychology	16.9(4.3)	.95	.38
	Social	7.4(2.3)	.74	.47
	Environmental	25.6(6.2)	.15	.85

*p<0.05

**p<0.01 N=90 df=89

The table 2 shows the descriptive statistics on the Brief cope scale and Quality of Life of the dialysis patients. Brief Cope as evaluated by the means of 14 domains is low on the dimension of substance use where mean is 2.86, and high in the dimension of use of emotional support with the mean of 6.62. The patient participants have used emotional support as the coping skill. In QOL the minimum mean value is in the domain of social which is 7.42 and the maximum is in environmental with a mean value of 25.60. The environmental aspect has helped the participants to have a better quality of life. The table 2 displays the F value on the dimensions of Brief Cope and Quality of Life of patients undergoing Haemodialysis. In Brief Cope scale on the dimension of Active coping the obtained F value is 5.7 and in Denial it is 7.2. The F value of both the dimensions is significant at 0.01level. No significant difference is noticed on any other dimensions of QOL. On Quality of Life the F value is not significant on any of the dimensions indicating that neither physical, psychological, social nor environmental has supported the patients to have a better quality of life. The highest mean value of 25.6 compared to other dimensions indicates that an environmental aspect was better compared to other dimension of QOL. No significant difference is noticed in Quality of Life of patients undergoing HD.

Table 3: Mean differences among the three groups of HD patients on Brief COPE

Active Coping		
Group 1	Group 2	Group 3
5.53	4.23	4.16
Denial		
Group 1	Group 2	Group 3
3.6	2.73	2.43

The 3 table indicates the mean differences between the three groups on the dimensions of Active Coping and Denial. In Active coping the mean is 5.53 of group 1, 4.23 of group 2 and 4.16 in group 3. On the dimension of Denial the mean of group 1 is 3.6, group 2 is 2.73 and finally group 3 is 2.43.

Table 4: The Correlation between Brief Cope and Quality of Life in HD patients

Dimensions	Physical	Psychological	Social	Environmental
Self-Distraction	.117	.268**	.195	.267*
Active Coping	.282**	.433**	.271**	.368**
Denial	.097	.17	.24*	.21*
Substance Use	.097	.15	.10	.07
Use Emotional Support	.32**	.49**	.56**	.50**
Use Instrumental Support	.16	.34**	.33**	.41**
Behaviour Disengagement	.23*	.31**	.32	.29
Venting	.01	.02	.07	.03
Positive Reframing	.34**	.42**	.31**	.34**
Planning	.19	.25*	.25*	.23*
Humour	.13	.28**	.17	.27**
Acceptance	.06	.24*	.21*	.31**
Religion	.34**	.50**	.47**	.40**
Self-Blame	.005	.03	.09	.10

P>0.05* P>0.01**

Table 4 shows the correlation between the Brief cope and the Quality of Life of patients on Haemodialysis. Significant relationship ($p=.000$) between Brief Cope and QOL exists on several dimensions except on domains of substance Use, Venting and Self Blame where relationship do not exist.

DISCUSSION

People cope with stress differently; some patients may be inclined to express their feelings outwardly, others may reconstrue the stress-inducing event in a positive way so that it seems less stressful and so on. Coping process emerge as result of changing environmental circumstances that directly affect emotional states. ^[12] The main aim of the study was to assess the QOL and the coping adapted by the patients undergoing HD. The study's results illustrate how their QOL were affected and the type of coping adopted by the patients on several dimensions of coping.

The participants of the current study were between the age group of 15 to 79 years and many of them were illiterates. Moderate number of participants of the group had to quit their jobs as they had to undergo dialysis thrice a week. Only few participants of the study were covered under government health scheme while remaining participants were self-financed.

A Study of Quality of Life and Coping Style among Haemodialysis Patients

Majority of the participants were married and had the spousal support to undergo dialysis thrice a week. The patient's spouse would arrange for conveyance, finance for dialysis, and diet care for patients throughout the period of dialysis. Participants informed being contended about the spousal support with regard to financial arrangement, administering the medicines and taking care of their day to day activities, and most of all they derived emotional support from their spouses.

Though many of the subjects of the study were illiterate they had knowledge about CKD and its management within a period of 6 months of commencement of dialysis. The findings of the study indicate that none of the dimensions on quality of life are significant. The environmental factor has helped the patients to have better quality of life compared to physical, psychological or social dimension. The result of the study though not significant, indicates that environment does play a major role in determining their health status. The environmental domain includes the financial support or resources, other health facilities at the dialysis centre, feeling of security in case of emergencies with regard to health issues, health benefits, involving oneself in leisure activities and the work environment. The participants expressed satisfaction about the dialysis unit and the ICU facilities in the hospital. Patients were more comfortable with the dialysis technicians and trusted the treating consultants. The close range from patient's residence to hospital helped in having a more secured feeling during the times of emergencies.

The assessment of Brief COPE showed that the participants of the group did not abuse substance due to their illness or worries. They depended mainly on the emotional support extended by their spouses (mean value of 6.62) and other family members to cope with their problems. Active coping with the situation and family support helped them to avoid substance abuse. The F value (Table 2) is significant on the dimensions of Active coping and Denial in Brief COPE. Active coping is a strategy aimed at dealing actually with stress or its related emotions. The participants adapted active coping with regard to their illness. Comparing across the three groups on the dimension of active cope there is a difference in the mean value of all the three groups and impaired progressively across the duration of dialysis. Participants of group 1 show better active coping where the patients think that their condition with dialysis can improve and the anticipation of getting kidney transplant helped them to cope with the situation. The group 2 has lesser active coping compared to group 1. The participants had lost hope about transplantation due to non-availability of funds or zero matching of the donor kidney and accepted the fact that coping with the illness is better than being depressed. The third group showed further declined in coping, the reason being hopelessness, uncertainty about future, frequent admissions to ICU, deterioration in their health status, out of pocket expenses and other psychosocial factors. The assessment of a patient's health status depends on individual's cognitive perception of ones coping efficacy and is affected by change in family dynamics and environmental changes. On the dimension of denial a decline is noticed in the mean value from group 1 to group 3. Along with active coping, progressive decrease on dimension of denial exists. The mean scores on the dimension of denial are comparatively lower than the scores on active coping of all the three groups of participants. Along with acceptance the denial about their health status is noticed. Denial is used to avoid stressful situation and must have been used by participants on several occasions as temporary disengagement and abandonment from their current situations. When the participants were unable to accept deterioration in their health status with frequent admissions to hospital the avoidance tendency in the form of denial was enhanced.^[12] It is a situation where both the emotion and appraisal are functioning consistently towards avoiding a stressful situation. The emotion /threat are driving an avoidance strategy, while at the same

time feelings of situational competence and mastery would implore an active coping strategy.
[3] In spite of insight about their current health status, the patients have attempted to deny their current stressful situation.

Significant relationships are found between several dimensions of coping and QOL. Highly significant relationship exists on the dimensions of Active coping, Use of Emotional Support, positive reframing and Religion, indicative of patients coping with the stressful situation, deriving emotional and social support from other significant people, seeking advice from someone and their belief in religion. [13]

CONCLUSION

The newly diagnosed ESRD patients had better coping with the illness compared to the other two groups. There is a progressive decline in the coping across the three groups. Acceptance as well as denial is the coping method used. Denial as a coping is used to a lesser extent compared to acceptance depending on the situation. All the three groups have poor quality of life. Comorbid conditions, such as haemoglobin level, a lower residual renal function needs to be evaluated which could explain poor Quality of Life only to a limited extent. Symptom burden related to other variables can play a role in perceived quality of life. Symptom management is important to eliminate the distress of the patient.

Implications of the study

Assessment of QOL and coping method could be a useful tool in renal care patients in order to explore and improve general health and perceived psychological well-being of the patients. The social area and equally important physical and psychological areas needs to be addressed to manage and maintain the psychological well-being. The psychosocial support to patients about to commence dialysis treatment is important to accept their illness and to avoid future impairments in mental health. The studies take home point is patients' need to accept the health status and denial of illness in certain situations needs to be addressed. The psychological counselling regarding the illness and understanding of current health situation is the need. Acceptance of CKD helps to cope and improve one's wellbeing than denial as a coping technique.

Suggestions for future Research

The findings of the study suggest coping and Quality of Life is not only related to renal functioning but also to the other co morbid conditions related to chronic kidney disorder like inflammation, CVD and diabetes. Psycho social aspects maybe contributing factor which needs to be explored in-depth. Interventional strategies need to be evaluated to enhance their QOL and avoid the risk factors. Education about CKD helps the patients to adapt to the situation and strengthen their coping.

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A Study of Quality of Life and Coping Style among Haemodialysis Patients

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Conflict of Interest

The authors carefully declare this paper to bear not conflict of interests

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