



STRESS AND STRESSORS EXPERIENCED BY PATIENTS ON INITIATION OF HAEMODIALYSIS

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ABSTRACT

An individual's perception or experience of a major change may initiate stress response. The stimuli preceding or precipitating the change are called Stressors(1). Excessive stress can threaten the way a person normally perceives reality, solves problems, and thinks in general and a person's relationships and sense of belongingness. Stress can also threaten a person's general outlook on life and health status(1). Several studies have attempted to assess the stress and stressors experienced by haemodialysis patients. Researchers have used quantitative as well as qualitative measures to assess stress in past. Since stress is a subjective experience qualitative research methodology is better suited to assess the concept of stress. The literature information presented in this review article attempts to present information regarding the stressors identified, factors associated with or influencing stress response and the impact of stress on haemodialysis' patients as identified by the past research studies.

KEYWORDS :

The stressors experienced by haemodialysis patients as examined by past research can largely be classified into physical stressors, psychosocial stressors and stressors related to dialysis treatment issues. Most researchers used quantitative methods to assess stress among haemodialysis patients. In more recent literature qualitative methods were used for assessment of stress⁽²⁻⁴⁾. The most common physical stressors reported by patients include, fatigue, inability to sleep, peripheral neuropathy, dry skin, itching, loss of appetite and bone and joint pain⁽²⁻⁹⁾. Almost 50% patients seem to be bothered by physical symptoms^(6,10). Gurklis and Menke assessed stressors among 68 haemodialysis patients using Haemodialysis Stressor Scale. Findings of this study concluded that physiological stressors were more troublesome than psychosocial stressors ($t = 10.85$, $p < 0.0001$) in patients receiving haemodialysis (HD)⁽¹¹⁾.

Psychological stressors reported by haemodialysis patients' were feeling depressed and anxious, helplessness, fear, uncertainty about prognosis and an overwhelming sense of disempowerment relating to dependency on dialysis treatment and a sense of abandonment^(2,4,12). Social stressors reported include, disruption of social and family life, feelings of being burden on family, and financial problems. The stressors related to dialysis treatment issues include, diet and fluid restriction, waiting time and clinic scheduling, transportation problems, length of dialysis treatment, perceived lack of information about the dialysis treatment, self-care issues and vacation limitation^(2,3,7,13). Among the reviewed studies that used qualitative methods seem to be more efficient in identifying psychological, social and treatment related stressors.

Haemodialysis patients' experience more stress as compared to patients on peritoneal dialysis ($p < 0.001$)^(14,15). This could be because of better patient preparation and more control over the treatment strategy that peritoneal dialysis (PD) patients have. Many hospitals in India too have well organized patient teaching and counselling programs for PD patients. But there is a lack of such organised programs meant for patients who choose to undergo haemodialysis. One study which attempted to assess overall reactions related to haemodialysis treatment reported that 73.4% patients were negative about the treatment 13.3% were indifferent and 13.3% were positive⁽¹⁶⁾. Although the sample size for this study was small it gives insight about patient attitudes towards the Haemodialysis treatment.

FACTORS INFLUENCING STRESS

Several factors have been found to be associated with or

influencing the stress experienced by haemodialysis patients. Younger patients were found to have more stress as compared to their older counterparts⁽¹⁷⁾. This may be because the younger patients perceive more consequences related to being an end stage renal disease (ESRD) patient as compared to older patients. Perception of more symptoms, more consequences and lower control are found to be associated with lower wellbeing⁽¹⁸⁾. Age was also found to be positively correlated with physical symptoms, dependency on medical staff and blood vessel problems⁽¹⁹⁾. Studies which associated gender with experience of stress reported that male patients reported worse effects of dialysis on family life, social life, energy and appetite⁽⁸⁾. Men were also found have higher scores in stress related to reproductive system functioning⁽¹⁹⁾. Women reported more helplessness and more intense experience of fear or horror than men⁽¹²⁾. Women also have higher stress scores in physical symptoms and blood vessel problem than men⁽¹⁹⁾.

Studies report contradictory findings regarding association of stress and education level of the patient. While Eissa et al. Reported that lower levels of education was associated with worse dialysis effects on stress, overall health, sexual life, hobbies and exercise ability, another study reported that more educated patients had significantly higher levels of stress^(8,13). It is however logical to assume that education may improve patients ability to understand about the disease and treatment in a better manner and hence may help to reduce patients experience of stress. Studies also report that the stress becomes worse as the disease progresses^(2,13).

IMPACT OF STRESS

A higher level of stress has been found to have numerous adverse effects. Higher level of perceived stress is associated with worse depressive symptoms (odds ratio = 1.20)⁽¹⁰⁾. There is extensive scientific data available about higher prevalence of depression among ESRD patients^(20,21). Stress has also been found to have significant association with high prevalence of other mental disorders among haemodialysis patients. Disorders like anxiety, hypochondriasis, hysteria, schizophrenia were observed more in haemodialysis patients than their normal population ($p < 0.05$)⁽²²⁾. Prevalence of post-traumatic stress disorder with regard to haemodialysis as a potential traumatic event was reported as 10.4%⁽¹²⁾. Patients who experience more stress tend to use ineffective coping strategies like emotion oriented coping and avoidance⁽¹⁹⁾. This may predispose the patient to more psychological and psychiatric problems.

Patient compliance to therapeutic regimen may be adversely affected when patients 'fail to cope adequately with stressors'. A study by Madeiro et al. reported transportation problems, pain caused by venepuncture, financial problems and knowledge deficit as major difficulties in adhering to the treatment regimen⁽¹⁶⁾.

The incidence of sexual dysfunction among haemodialysis patients has been reported to be 9% and before the initiation of haemodialysis it has been found to increase up to 60-70% due to increased stress, depression, anxiety and several other factors⁽²³⁾. One study reported that prevalence of erectile dysfunction of any degree was as high as 80.7% with 86.6% patients' aged more than 50 years⁽²⁴⁾. Sexual dysfunction in itself could be another stressor experienced by these patients which often remains unexpressed.

Physical stressors experienced by patients on haemodialysis were found to be directly correlated with impaired quality of life⁽⁶⁾. A qualitative study that sought to understand reasons for dialysis abatement found that patients' desire of not to burden others and personal experience of deteriorating quality of life were crucial elements to decision to stop haemodialysis⁽⁴⁾.

Studies also report higher incidence of suicidal attempts among haemodialysis patients than the general population^(25,26). Suicidal ideation was found in 21.5% in a recent study⁽²⁶⁾. Depression and anxiety were robust indicators of suicidal ideation⁽²⁶⁾. A study which assessed mortality rates among haemodialysis patients during first year of treatment found that mortality rate was as high as 8.5%⁽²⁷⁾. The researchers could not find any biochemical association for the higher mortality rates during first year of dialysis treatment and suggested that it could be due to higher levels of stress experienced by patients. They further added that information and counselling of patients could probably help reduce stress among these patients (27).

REFERENCES

- Potter PA PA. Fundamentals of nursing, 7 ed. Noida: Elsevier India Pvt Ltd; 2009.
- Harwood L, Locking-Cusolito H, Spittal J, Wilson B, White S. Preparing for hemodialysis: patient stressors and responses. *Nephrol Nurs J* 2005 May;32(3):295-302.
- Burnette L, Kickett M. 'You are just a puppet': Australian Aboriginal people's experience of disempowerment when undergoing treatment for end-stage renal disease. *Renal Society of Australasia Journal* 2009 Nov;5(3):113-8.
- Ashby M, op't Hoog C, Kellehear A, Kerr PG, Brooks D, Nicholls K, et al. Renal dialysis abatement: lessons from a social study. *Palliative Medicine* 2005 Jul;19(5):389-96.
- Kline SA, Burton HJ, De-Nour AK, Bolley H. PATIENT'S SELF ASSESSMENT OF STRESSORS AND ADJUSTMENT TO HOME HEMODIALYSIS AND CAPD. *Peritoneal Dialysis International* 1985 Jan 1;5(1):36-9.
- Weisbord SD, Fried LF, Arnold RM, Fine MJ, Levenson DJ, Peterson RA, et al. Prevalence, severity, and importance of physical and emotional symptoms in chronic hemodialysis patients. *J Am Soc Nephrol* 2005 Aug;16(8):2487-94.
- Ekelund ML, Andersson SI. Elucidating issues stressful for patients in predialysis and dialysis: from symptom to context. *J Health Psychol* 2007 Jan;12(1):115-26.
- Al EM, Al SM, Jondeby M, Karkar A, Barahmeim M, Shaheen FA, et al. Factors affecting hemodialysis patients' satisfaction with their dialysis therapy. *Int J Nephrol* 2010;2010:342901.
- Gurklis JA, Menke EM. Chronic hemodialysis patients' perceptions of stress, coping, and social support. *ANNA J* 1995 Aug;22(4):381-8.
- Ramer S, Germain A, Dohar S, Unruh M. Event-related distress in kidney disease patients. *Nephrol Dial Transplant* 2012 Jan;27(1):299-303.
- Gurklis JA, Menke EM. Identification of stressors and use of coping methods in chronic hemodialysis patients. *Nurs Res* 1988 Jul;37(4):236-9, 248.
- Tagay S, Kribben A, Hohenstein A, Mewes R, Senf W. Posttraumatic stress disorder in hemodialysis patients. *Am J Kidney Dis* 2007 Oct;50(4):594-601.
- Welch JL, Austin JK. Factors associated with treatment-related stressors in hemodialysis patients. *ANNA J* 1999 Jun;26(3):318-25.
- Udaykumar TR AASPAG. Level of stress and coping abilities in patients on chronic hemodialysis and peritoneal dialysis. *Indian Journal Of Nephrology* 2003;(13):89-91.
- Lok P. Stressors, coping mechanisms and quality of life among dialysis patients in Australia. *J Adv Nurs* 1996 May;23(5):873-81.
- Madeiro AC MPBIBALE. Adherence of chronic renal insufficiency patients to hemodialysis. *Acta Paul Enferm* 2010;23(4):546-51.
- Auer J, Gokal R, Stout JP, Hillier VF, Kincey J, Simon LG, et al. The Oxford-Manchester study of dialysis patients. Age, risk factors and treatment method in relation to quality of life. *Scand J Urol Nephrol Suppl* 1990;131:31-7.

- Timmers L, Thong M, Dekker FW, Boeschoten EW, Heijmans M, Rijken M, et al. Illness perceptions in dialysis patients and their association with quality of life. *Psychology & Health* 2008 Jul 11;23(6):679-90.
- Yeh SC, Chou HC. Coping strategies and stressors in patients with hemodialysis. *Psychosom Med* 2007 Feb;69(2):182-90.
- Kimmel PL. Psychosocial factors in adult end-stage renal disease patients treated with hemodialysis: correlates and outcomes. *Am J Kidney Dis* 2000 Apr;35(4 Suppl 1):S132-S140.
- Cohen SD, Norris L, Acquaviva K, Peterson RA, Kimmel PL. Screening, diagnosis, and treatment of depression in patients with end-stage renal disease. *Clin J Am Soc Nephrol* 2007 Nov;2(6):1332-42.
- SH AKO, EBRAHIMI A, SAMOOEI R. STRESS AND MENTAL DISORDERS IN HEMODIALYSIS PATIENTS. *Journal of Research in Medical Sciences*; Vol 7, No 4 (2002): Abstract Only 2002.
- Yilmaz A GCKOABSVNGSAKH. Sexual functioning in hemodialysis patients and their spouses: results of a prospective study from Turkey. *Turk J Med Sci* 2009;39(3):405-14.
- Arslan D, Aslan G, Sifil A, Cavdar C, Celebi I, Gamsari T, et al. Sexual dysfunction in male patients on hemodialysis: assessment with the International Index of Erectile Function (IIEF). *Int J Impot Res* 2002 Dec;14(6):539-42.
- Cohen LM, Dobscha SK, Hails KC, Pekow PS, Chochinov HM. Depression and suicidal ideation in patients who discontinue the life-support treatment of dialysis. *Psychosom Med* 2002 Nov;64(6):889-96.
- Chen CK, Tsai YC, Hsu HJ, Wu IW, Sun CY, Chou CC, et al. Depression and suicide risk in hemodialysis patients with chronic renal failure. *Psychosomatics* 2010 Nov;51(6):528.
- Topf JM PRWSCABA. First Year Dialysis Mortality in Patients Previously Enrolled in a Structured Chronic Kidney Disease (CKD) Program. *American journal of kidney diseases : the official journal of the National Kidney Foundation* 53(4), B75. 4-1-2009.