Research Article

Evaluation of mental health using hospital anxiety and depression scale in primary caregivers of patients undergoing dialysis

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Received November 26, 2015. Accepted January 11, 2016

Abstract

Background: There is inadequate research on anxiety and depression in the primary caregivers of the patients undergoing dialysis.

Objective: To analyze the anxiety and depression of primary caregivers of patients undergoing dialysis using Hospital Anxiety and Depression Scale (HADS).

Materials and Methods: This study enrolled 52 patients from Amrita Institute of Medical Sciences Hospital, Kochi, Kerala, India. Their mental health was assessed by using HADS. The patient's caregivers were categorized into three groups based on their age namely <40 years, 41–59 years, and >60 years. The caregiver's characteristics such as relationship, educational status, type of family, income status, frequency of dialysis, number of hospitalization per year, and monthly expenditure for dialysis were taken into consideration.

Result: The total number of caregivers enrolled in this study was 52 (men: 18, women: 34). The overall HADS indicated that both anxiety and depression were mildly higher than the normal. However, the gender-based analyses showed that women caregivers were moderately depressed and mildly anxious that too middle-aged female caregivers were affected with both, whereas in men the young male caregivers were in mild depression. In the remaining male groups, no significant depression and anxiety were noted.

Conclusion: The middle-aged women caregivers (41–59 years) were mildly depressed and anxious when compared with other groups.

KEY WORDS: HADS, caregivers, depression, anxiety, dialysis

Introduction

Depression and anxiety are far more understudied aspects of the caregivers of patients who were dialysis dependent. The Hospital Anxiety and Depression Scale (HADS) was first introduced by Zigmond and Snaith[1] with the intention to provide health-care providers a reliable and easy way of identifying patients prone to have depression and anxiety in general. HADS differs from other scales because it contains items that address symptoms of anxiety and depression associated with physical illness (such as weight loss, insomnia, fatigue, headache, and dizziness) to prevent interference from somatic disorders in scale scoring. It contains 14 items related to emotional and cognitive aspects of depression and anxiety, with seven items for each subscale. Each item is graded 0 to 3, indicating symptom intensity or frequency. The total score ranges from 0 to 42, and 0 to 21 for each subscale. The higher the score, the more severe the symptoms; 0–7 indicates the absence of significant symptoms; mild symptoms have scores

Access this article online	
Website: http://www.ijmsph.com	Quick Response Code:
DOI: 10.5455/ijmsph.2016.26112015337	

between 8 and 10; 11–15 and 16–21 are the scores for moderate and severe symptoms, respectively.

Recently, Kroenke et al.[2]and Sareen et al.[3] highlighted the negative impact that anxiety disorders can have on quality of life (QOL) and disability across multiple illnesses. The study of psychosocial aspects of nephrology is still relatively new in patients who undergo dialysis.[4] Within the psychonephrology literature, depression has received almost all the clinical attention.[5–7] There is a trend toward early discharge of hospitalized patients who underwent dialysis to their private homes, thus leaving more of the care to the persons closest to the patient. At home, the primary caregiver is the main provider of physical and emotional support to the patient. Primary caregivers are mostly the patient's spouse, partner, or closest relatives, but significant others can also take on that role and function. The increased responsibility and challenge of care provision may lead to negative as well as positive effects on the primary caregiver's mental health and health-related QOL.[8] However, depression and anxiety assessment in primary caregivers of patients undergoing dialysis are poorly documented especially in Indian scenario. Hence, this study aimed to evaluate the depression and anxiety status in primary caregivers of patients undergoing dialysis in Indian population.

Materials and Methods

This study was performed in the Department of Nephrology, Amrita Institute of Medical Sciences, Kochi, Kerala, India. In this study, primary caregivers of 52 patients (men [M]: 18; women [F]: 34) were enrolled. The patient's primary caregivers were asked to fill the questionnaire of HADS after obtaining their informed consent.

Inclusion Criteria

All primary caregivers of patients undergoing hemodialysis at Amrita Institute of Medical Sciences.

Exclusion Criteria

Primary caregivers of patients who are chronic kidney disease but not on maintenance hemodialysis, patients noncompliant to regular renal replacement therapy, patients on hemodialysis for less than 3 months duration, and patients who refused and did not give consent for the study.

The primary caregivers were categorized into three groups based on their age as group 1: <40 years, group 2: 40–60 years, and group 3: >60 years.

Operational Definitions

Anxiety: A subjective sense of unease, dread, or foreboding, can indicate a primary psychiatric condition, or can be a component of, or reaction to, a primary medical disease.[9]

Depression: Major depressive disorder is defined by the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition, as having a loss of pleasure or interest for 2 weeks, accompanied by five or more psychological, somatic, and behavioral symptoms.[10]

Result

A total of 52 primary caregivers (M: 18; F: 34) were enrolled in this study. The average age of male caregivers was 51.2 ± 16.8 years and that of female caregivers was 52.35 ± 10.08 years. The primary caregivers were categorized into three groups based on age as group 1: <40 years (Total: 10; M: 5; F: 5), 40–60 years (Total: 27; M: 8; F: 19), and >60 years (Total: 15; M: 5; F: 10). The overall analyses showed that both male and female primary caregivers were mildly affected with both depression and anxiety [Table 1]. The characteristics of primary caregivers and patients, which were considered for assessment are shown in Table 2. Majority of the primary caregivers were women (65%) whereas men were only 35%. The relationships of the primary caregivers to the patients were that of wife (50%), husband (17%), son (10%), daughter (3%), and others (19%). The educational status of the primary caregivers was postgraduates (13%), graduates (38%), 10+2 (27%), and below 10th standard (21%). The frequency of dialysis in this study was twice weekly (67%), which was more predominant than thrice weekly (33%). The patients who were hospitalized for more than three times per year were 42%, one to three times were 33%, and less than one time were 25%. The study population with economic status belonging to the very poor, that is, <10,000 Indian Rupee (INR) per month was 38%. This study showed that majority of the patients' monthly expenditure for the dialysis and its related medicines was >20,000 INR (73%). This could be the prime factor that influences the primary caregiver's mental health. Another key factor that was considered in this study was the type of family and the most predominant type was nuclear family (81%). This factor could be considered very seriously because majority of the nuclear family usually fall in stress because of the improper or lack of proper guidelines from their parents, grandparents, and so on. Hence, the mental health disability or problem may not be inevitable.

In this study, further in-depth analyses were carried out. The depression and anxiety scale has been assessed based on the gender and on the age group [Table 3]. Five important

Table 1: Depression and anxiety characteristics of primary caregivers

	HADS-A	HADS-D
Overall (*N*: 52)		
(F: 34; M: 18)	**8.04 ± 4.54**	**8.34 ± 4.38**
Female (*N*: 34)		
<40 yrs (*N*: 05)	6.8 ± 2.3	8.11 ± 3.53
40–59 yrs (*N*: 19)	**9.64 ± 3.49**	**9.58 ± 2.95**
>60 yrs (*N*:10)	**8 ± 5.41**	5.1 ± 4.2
Male (*N*: 18)		
<40 yrs (*N*: 05)	7 ± 6.8	**8 ± 6.4**
40–59 yrs (*N*: 08)	7.37 ± 5.39	6.87 ± 5.11
>60 yrs (*N*: 05)	6.2 ± 3.76	5.4 ± 4.2

A, anxiety; D, depression; HADS, Hospital Anxiety and Depression Scale.

Table 2: Primary caregivers and patient's characteristics

Characteristics	*N* (%)
Patient's relative gender	
Male	18 (35)
Female	34 (65)
Relationship	
Wife	26 (50)
Husband	09 (17)
Son	05 (10)
Daughter	02 (3)
Others	10 (19)
Education	
Postgraduates	07 (13)
Graduates	20 (38)
10 + 2	14 (27)
<10	11 (21)
Frequency of dialysis	
3/week	17 (33)
2/week	35 (67)
Number of hospitalizations/year	
>3	22 (42)
1–3	17 (33)
<1	13 (25)
Monthly income	
<10,000	20 (38)
10,000–20,000	13 (25)
20,000–50,000	12 (24)
>50,000	7 (13)
Monthly expenditure for dialysis + medicine	
5,000–10,000	9 (17)
10,000–20,000	5 (10)
>20,000	38 (73)
Type of family	
Nuclear	42 (81)
Joint	10 (19)

criteria were taken into consideration for deep analyses. As per the relationship criteria, women especially wives were predominant. According to education criteria, men aged >60 years have shown the highest educational qualification than women and among women <40 years group have the highest education, that is, graduation. The education duration of middle-aged men and women was only 12–13 years. The foremost criterion was of economic status; comparatively middle-aged women were predominantly in a very poor status than others. The important and causative factor that affected both mental and physical health was the expenditure for dialysis and it was higher in middle-aged women primary caregivers. Patients with twice per week dialysis frequency were more and the corresponding primary caregivers were middle-aged women's group.

Table 3: Depression and anxiety scale assessed based on gender and the age group in five major categories

	Male	Female
Age years	51.2 ± 16.8	52.35 ± 10.08
Relationship		
Wife	—	26
Husband	09	—
Son	05	—
Daughter	—	02
Others	04	06
Education years (overall)	13.94 ± 2.68	12.06 ± 2.70
<40 years	13.4 ± 3.50	14.2 ± 3.11
41–60 years	13.37 ± 3.66	12.76 ± 3.07
>60 years	15.4 ± 0.89	12.2 ± 1.93
Economic status		
<40 years		
<10,000	02	02
10,000–20,000	02	02
20,000–50,000	01	01
>50,000	Nil	Nil
41–60 years		
<10,000	04	09
10,000–20,000	02	04
20,000–50,000	01	04
>50,000	01	02
>60 years		
<10,000	Nil	05
10,000–20,000	02	02
20,000–50,000	03	02
>50,000	Nil	01
Monthly expenditure for dialysis + medicine		
<40 years		
5,000–10,000	02	Nil
10,000–20,000	01	Nil
>20,000	02	05
41–60 years		
5,000–10,000	02	02
10,000–20,000	02	03
>20,000	04	14
>60 years		
5,000–10,000	Nil	02
10,000–20,000	01	Nil
>20,000	04	08
Frequency of dialysis		
<40 years		
2/week	05	04
3/week	Nil	01
41–60 years		
2/week	06	12
3/week	02	07
>60 years		
2/week	01	07
3/week	04	03

Discussion

Most patients who were chronically ill are cared for by an informal support system comprising family members. Moreover, caring for patients with chronic and disabling disease is associated with the caregivers experiencing physical and psychological distress, limitations to their personal and social activities, and financial burden.[11] The patients, who are physically and/or mentally unable to provide the necessary treatment for themselves, require a caregiver to assume major responsibility for their treatment[12] while this burden on family caregivers leads to negative consequences not only for themselves but also for patients, other family members, and health-care system. Moreover for caregivers, burden negatively affects caregiver's physical, emotional, and economic status.[13] Family caregiver is the most important person who cares for patient. However, when care is provided for a long time, they may experience the burden.[14] This in turn may result in a more negative impact on the emotional and social aspects of caregivers' lives.[15]

Arechabala et al.[16] identified the depressive symptoms and degree of fatigue in caregivers of patients with hemodialysis and found that the primary caregivers were female spouses, with an average age of 50 ± 16.1 years and also that they (43.82%) had depressive symptoms.[17–19] A similar kind of result was observed in this study too. Caregiver's burden contributes to lifestyle changes, which result in depression, anxiety, declining physical health, social isolation, and financial strain for them. Bayoumi[20] observed in his study that most of the caregivers were women, unemployed/housewife, with basic/intermediate level of education. Moreover most of them were married and had children, with 52.0% of them with an age more than 40 years on average. A similar observation was noticed in this study also.

Conclusion

In conclusion, this study confirmed that there was an impaired mental health among primary caregivers of patients undergoing dialysis. The middle-aged women were affected predominantly with mild anxiety and depression. This may be due to their poor economic status, education, and their family type. Further research should take into consideration larger samples, and try to improve the participation rate of patients to avoid biases. Health-care personnel should be observant of the emotional problems of the primary caregivers caring for patients undergoing dialysis.

References

1. Zigmond AS, Snaith RP. The hospital anxiety and depression scale. Acta Psychiatr Scand 1983;67(6):361–70.
2. Kroenke K, Spitzer RL, Williams JB, Monahan PO, Lowe B. Anxiety disorders in primary care: prevalence, impairment, comorbidity, and detection. Ann Intern Med 2007;146(5):317–25.
3. Sareen J, Jacobi F, Cox BJ, Belik SL, Clara I, Stein MB. Disability and poor quality of life associated with comorbid anxiety disorders and physical conditions. Arch Intern Med 2005;166(19):2109–16.
4. US Renal Data System. USRDS 2006 Annual Data Report. Bethesda, MD: The National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, 2006.
5. Cukor D, Peterson RA, Cohen SD, Kimmel PL. Depression in end-stage renal disease hemodialysis patients. Nat Clin Pract Nephrol 2006;2(12):678–87.
6. Kimmel PL, Peterson RA. Depression in end-stage renal disease patients treated with hemodialysis: tools, correlates, outcomes, and needs. Semin Dial 2005;18(2):1–97.
7. Kimmel PL. Depression in patients with chronic renal disease: what we know and what we need to know. J Psychosom Res 2002;53(4):951–6.
8. Grov EK, Dahl AA, Moum T, Fossa SD. Anxiety, depression, and quality of life in caregivers of patients with cancer in late palliative phase. Ann Oncol 2005;16(7):1185–91.
9. Sutherland SM. Anxiety Disorders. Available at: health.am/psy/anxiety-disorders (last accessed on July 23, 2010).
10. The Committee on Nomenclature and Statistics of the American Psychiatric Association. The Diagnostic and Statistical Manual of Mental Disorders, 4th edn (DSM-IV). Washington, DC: American Psychiatric Association.
11. Choi KS, Eun Y. A theory construction on the care experience for spouse of patients with chronic illness. The Committee on Nomenclature and Statistics of the American Psychiatric Association. Publisher: American Psychiatric Association Mental Hospital Service 1785 Massachusetts Ave., N. W. WASHINGTON 6, D. C. J Korean Acad Nurs 2000;30(1):122–36.
12. Gayomali C, Sutherland S, Finkelstein FO. The challenge for the caregiver of the patient with chronic kidney disease. Nephrol Dial Transplant 2008;23(12):3749–51.
13. Caqueo-Urizar A, Gutierrez-Maldonaldo J, Miranda-Castillo C. Quality of life in caregivers of patients with schizophrenia: a literature review. Health Qual Life Outcomes 2009;7:84.
14. Rafiyah SI, Sutharangsee W. Review: burden on family caregivers caring for patients with schizophrenia and its related factors. Nurs Media J Nurs 2011;1(1):29–41.
15. Belasco A, Barbosa D, Bettencourt AR, Diccini S, Sesso R. Quality of life of family caregivers of elderly patients on hemodialysis and peritoneal dialysis. Am J Kidney Dis 2006;48(6):955–63.
16. Arechabala MC, Catoni MI, Palma E, Barrios S. Depression and self-perceived burden of care by hemodialysis patients and their caregivers. Rev Panam Salud Pública 2011;30(1):74–9.
17. Cossette S, Levesque L. Caregiving tasks as predictors of mental health of wife caregivers of men with chronic obstructive pulmonary disease. Res Nurs Health 1993;16(4):251–63.
18. Kell-Card G, Foxall MJ, Barron C. Loneliness, depression, and social support of patients with COPD and their spouses. Public Health Nurs 1993;10(4):245–51.
19. Ferrans CE, Powers MJ. Psychometric assessment of the Quality of Life Index. Res Nurs Health 1992;15(1):29–38.
20. Bayoumi MM. Subjective burden on family carers of hemodialysis patients. Open J Nephrol 2014;4(2):79–85.

How to cite this article: Giri AP, Mohanasundaram S, Nayar PCK, Sharma RN, Kurian G. Evaluation of mental health using hospital anxiety and depression scale in primary caregivers of patients undergoing dialysis. Int J Med Sci Public Health 2016;5:1814-1817

Source of Support: Nil, **Conflict of Interest:** None declared.