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Dr. Radhakrishnan MP
Associate Professor,
Department of Psychiatry,
Azeezia Institute of Medical
Sciences and Research,
Kollam, Kerala, India

Dr. Anil Vijayakumar
Associate Professor,
Department of Medicine,
Azeezia Institute of Medical
Sciences and Research,
Kollam, Kerala, India

A study of stress and quality of life in medically ill patients admitted to a hospital

Dr. Radhakrishnan MP and Dr. Anil Vijayakumar

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Abstract

Quality of life has been shown to be negatively affected in patients suffering from illnesses like diabetes mellitus, hypertension and tuberculosis and often found to be associated with higher levels of stress and psychological co-morbidities. Quality of life has also been linked to treatment adherence with poor treatment adherence often associated with poor quality of life. In this study, we aimed to examine the relationship between perceived stress levels, quality of life and treatment adherence in patients hospitalized with medical illnesses.

Keywords: Stress, quality of life, cross sectional

Introduction

Quality of life has been defined as “an individuals’ perceptions of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, concerns”. It is a broad ranging concept affected in a complex way by the persons’ physical health, psychological state, level of independence, social relationships and their relationship to salient features of their environment^{1,2}. Numerous studies have been conducted, in India and abroad, to assess the levels of stress, the quality of life and treatment adherence in patients suffering from various medical illnesses. Some of the studies have also tried to understand the association between the aforementioned factors³⁻⁵. While some of the research focuses on the stress and quality of life in hospitalized patients, the rest of the studies targeted patients staying in the community and attending the hospitals as out-patients.

Aims and Objectives

To study the levels of perceived stress and the quality of life and their association in medically ill hospitalized patients.

Materials and Methods

- **Design:** Cross-sectional design.
- **Study population and setting:** 100 patients admitted in the general medicine wards. Azeezia Institute of Medical Research and Sciences.

The study was done from Oct 2016 to Sept 2018.

Inclusion criteria

1. Age: 18-80 years.
2. Those who gave written informed consent

Exclusion criteria

1. Patients unwilling and uncooperative for the study
2. Patients suffering from dementia, delirium or any psychiatric conditions impairing their competence to understand the procedure and give consent.

- **Sampling method:** Convenience sampling.
- **Study duration:** 2 years.

Corresponding Author:
Dr. Anil Vijayakumar
Associate Professor,
Department of Medicine,
Azeezia Institute of Medical
Sciences and Research,
Kollam, Kerala, India

Perceived Stress scale (PSS-10) [1]: It is the most widely used psychological instrument for the measurement of the perception of stress. It is a 10-item scale with good reliability and validity and has been used in various population samples including people with chronic medical illnesses to assess the levels of perceived stress.

World health organization quality of life-bref version (WHOQOL-BREF) [2]: It places emphasis on subjective evaluation of respondent’s health and living conditions. Four domains of QOL are measured- physical health, psychological health, social relationship and environment. The scale has 26 items scored from 1 to 5 with total score range of 26-130. Its psychometric properties have been found to be comparable to those of the full version (WHOQOL-100). The scale has shown good discriminant validity, concurrent validity, internal consistency and test-retest reliability.

Morisky Medication Adherence scale (MMAS-4) [3]: It is a 4 item scale measuring treatment adherence.

Statistical analysis

Descriptive analysis was carried out using mean and standard deviation with range for continuous variables of the socio-demographic profile sheet, clinical profile sheet and other scales (mean total scores on the PSS-10, total scores on the domains of WHOQOL-BREF and MMAS-4 mean total score).

Results

Table 1: Clinical Conditions.

Clinical Variables	
Presenting complaint system	
Cardiovascular	12
Respiratory	12
Neurological	07
Gastrointestinal	16
Renal	15
Musculoskeletal	10
Acute infectious	11
Endocrine	07
Haematological	10

Table 2: Perceived Stress Scale, WHOQOL-BREF and MMAS-4 scores [N=100]

	Mean (SD) [range]
Perceived Stress Scale	
Total score	16.18(5.67)
WHOQOL-BREF	
Overall quality of life and general health	7.41 (1.72)
Physical health	24.85 (4.36)
Psychological health	21.89 (4.15)
Social relationships	12.02 (1.59)
Environment	30.16 (4.75)
MMAS-4	
Total score	2.07 (1.49)

Discussion

Numerous studies have studied the association between stress, quality of life and treatment adherence in patients suffering from medical illnesses. Significant number of these studies has found a correlation between these factors.

In the earlier quoted study of 80 patients with chronic kidney disease undergoing dialysis, a significant negative correlation was found between the stress score (measured by the PSS-14) and the social and environment domains of WHOQOL-BREF, indicating a worse quality of life in those domains amongst those with higher perceived stress levels [4]. Similarly, in a study of 200 patients living with HIV / AIDS in Taiwan, higher stress levels were found to be associated with poorer quality of life in all four domains of WHOQOL-BREF, i.e. physical, psychological, social and environment [6].

In a prospective cohort study of 349 patients recovering from an acute myocardial infarction, the association between the perceived stress level and adherence to medical discharge instructions was examined. It was found that patients with a higher perceived stress level had a statistically significant lower adherence to discharge instructions compared to those with lower stress levels [6].

In a prospective cohort study of 127 patients with history of myocardial infarction, greater 3-year treatment adherence was associated with a better quality of life [7]. Similarly, a 6-month observational study of 1,470 hypertensive patients revealed better quality of life scores in those with better treatment adherence [8].

Conversely, in a cross-sectional comparative study on 238 Type 2 diabetic patients, no association between quality of life and treatment adherence was found [9].

Conclusion

Medical illness and hospitalization is associated with increased perceived stress levels. Perceived stress is significantly associated with a lower quality of life in all domains and lower levels of treatment adherence.

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