

RESEARCH ARTICLE

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# Major depressive disorder in Parkinson's disease: a cross-sectional study from Sri Lanka

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## Abstract

**Background:** Depression is common in Parkinson's disease (PD), and has a significant impact on the functional level of those affected. It is well studied in Western populations but data from Asia is limited. This study aims to estimate the prevalence of depression among PD patients attending a tertiary care outpatient clinic in Sri Lanka and identify potential risk factors.

**Methods:** One hundred and four consecutive idiopathic PD patients as defined by the United Kingdom Parkinson's Disease Society Brain Bank Diagnostic Criteria were recruited to the study. An interviewer administered questionnaire, the Hoehn-Yahr staging scale and the Schwab-England Activities of Daily Living Scale (SEADL) were used for assessment. Depression was diagnosed through a semi-structured clinical interview based on DSM-IV-TR criteria and all subjects were rated with the Montgomery-Asberg Depression Rating Scale (MADRS).

**Results:** The prevalence of depression in the study population was 37.5%. Among the depressed 12 (30.8%) had mild depression, 21 (53.8%) moderate depression and 6 (15.4%) had severe depression. Depression was significantly associated with the stage of PD, functional impairment, civil status, educational level, caregiver dependence and concomitant diabetes mellitus.

**Conclusion:** A significant proportion of PD patients suffers from depression. The prevalence rate of depression in the sample was similar to that reported in previous studies. Depression in PD is significantly associated with functional impairment.

**Keywords:** Parkinson's disease, Depression, Prevalence, Sri Lanka

## Background

Parkinson's disease (PD) is the second commonest neurodegenerative disorder, its prevalence only being less than that of Alzheimer's disease [1]. It affects approximately 1% of individuals older than 55 years [2]. Many patients with PD have clinically significant non-motor symptoms such as anxiety, depression, fatigue, sleep disturbance and sensory symptoms [3].

Up to 90% of patients with idiopathic PD experience psychiatric complications, including major depression [4]. Depression is the most common neuropsychiatric disturbance in PD [5] with its prevalence estimated to be around 35% [6]. It is also the most important predictor of poor quality of life in PD [1] and the most significant factor associated with experienced quality of life [7]. These findings

emphasize the need to study the factors associated with depression in this population.

In comparison to the Western world there is a paucity of research on PD related psychiatric manifestations in Asia, especially in the South Asian region. Findings from Western populations cannot be directly extrapolated to the population of this region due to significant socio-cultural differences. This may also be supported by the observation that rates of depression have been shown to vary widely between different countries [1]. This underscores the importance of studying depression in PD in different countries and in a variety of socio-cultural contexts. To our knowledge, to date, only one study has been conducted in the South Asian region on this subject, which found a higher prevalence of depression, greater overall disability and inferior quality of life among PD patients compared to a control group of patients with other chronic medical illnesses [8]. The present study, the first

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