Depressive disorder in patients attending the outpatient department of a tertiary care hospital in Colombo

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(Index words: depression, hospital out-patients, Sri Lanka)

Abstract

Introduction Lifetime prevalence of depression varies across countries and different populations. Depression is a common comorbidity of physical illness. Patients with depression are known to present with somatic symptoms. Depression is under-diagnosed in primary care settings.

Objectives To estimate the prevalence of depression in patients attending the outpatient department (OPD) of a tertiary care hospital in the Western Province of Sri Lanka.

Methods A cross-sectional descriptive study was conducted in the OPD of the National Hospital of Sri Lanka (NHSL). Sample size was 205. Every fifth patient aged between 18 and 60 years who attended the OPD was recruited until the required number was met. Centre for Epidemiologic Studies Depression Scale (CES-D) was used to identify depression.

Results There were 114 (55.6%) females. Mean age was 50 years (SD 13.68).Overall prevalence of depression in the sample was 22.4% (95% CI 16.68-28.20). Prevalence of depression was higher among females 25.4% (95% CI 17.32-33.56) than in males 18.7% (95% CI 10.52-26.84). Prevalence of severe depression was 15.1% (95% CI 10.18-20.07). Adjusted odds ratios showed that pain related presenting complaints were significantly associated with depression [adjusted OR 1.99 (95% CI 1.01-3.96)].

Conclusions Prevalence of depression in outpatients is similar to that reported in other parts of the world. None of the patients with depression presented seeking help for depressive symptoms.

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Introduction

Mental and substance use disorders were identified as the leading cause of years lived with disability (YLDs) by the Global Burden of Disease study in 2010 [1]. Depression contributes the most to YLDs due to mental disorders. The true burden of depression is underestimated because suicide and self-harm are considered in a separate category and there is insufficient consideration of the contribution of depression to mortality caused by metabolic illnesses [2].

Lifetime prevalence of depression varies across countries [3]. Studies from developed countries tend to report higher rates while lower rates are reported in lower and middle income countries. A population based study in Colombo reported a 6.6% lifetime prevalence of depression [4]. Rates of depression are higher in females, persons who are divorced and are of lower socioeconomic status [3].

Depression is a common comorbidity of physical illness. The WHO World Health Survey found one year prevalence of ICD-10 depressive episode to be 4.5% in angina, 4.1% in arthritis, 3.3% in asthma and 2% in diabetes [5]. The likelihood of having depression in the presence of a chronic illness is significantly higher than in the absence of a chronic medical illness. High prevalence of depression have been reported in patients with Parkinson disease (37.5%), chronic renal failure (27.9%), and in elderly patients in a medical ward in Sri Lanka [6-8].

Identification and treatment of depression is of importance considering the significant morbidity and mortality caused by this condition. The primary health care practitioner plays an important role here. However, it has been shown that general practitioners (GP) underdiagnose depression and treat only a proportion of patients even if identified. A meta-analysis of 41 studies

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assessing accuracy of unassisted diagnosis of depression by GPs reported that only 47.3% of the cases were correctly identified [9].

The expression of depressive symptoms by way of somatic symptoms is a common presentation [10]. This diverse expression of symptoms and the stigma attached to mental illness may contribute to poor recognition of the condition at the primary care level. A better understanding of the prevalence and characteristics of depressive symptoms will entail increased sensitivity to the detection and diagnosis of depression.

Data regarding the prevalence of depression in primary care settings and outpatient departments (OPD) in Sri Lanka is sparse. The only study published was from the Northern Province of Sri Lanka in 16 primary health care facilities [11]. The findings of this study may not be generalisable to other parts of the country, given that the study had been done out in a rural area in the aftermath of an armed conflict.

The objective of this study was to estimate the prevalence of depression in patients presenting to the OPD of a tertiary care hospital in the Western Province of Sri Lanka.

Methods

This cross-sectional descriptive study was conducted in the OPD of the National Hospital of Sri Lanka (NHSL). A sample size of 185 was calculated to obtain a 95% confidence interval of + or -5% around a prevalence estimate of 14%. To allow for a 90% response rate to the questionnaire a total sample size of 205 was required. Every fifth patient aged 18-60 years who attended the OPD was recruited until this number was met. Repeat visits were excluded.

A schedule incorporating demographic data and risk factors for depression including details of presenting complaint, past medical history, past psychiatric illnesses and medications was completed by a semi-structured interview. Diagnosis of current and past illnesses was extracted from diagnosis cards and clinical records available with the patient. All participants completed the self-rated Centre for Epidemiologic Studies Depression Scale (CES-D) and the Sinhala version of the Pittsburgh Sleep Quality Index (PSQI). Both these scales have been validated for Sri Lanka [12,13]. If the patients had difficulty understanding the questionnaires due to low literacy level or any other reason the questions were clarified by the first author.

Depressive symptoms were measured by the CES-D. The CES-D is a 20-item self-rated scale with a maximum possible score of 60. Higher scores indicate more symptomatic morbidity. It has been validated for use in general and clinical populations for identification of depression [14]. Depressive disorder was diagnosed when the total score was ≥16. Severe depression was diagnosed when the score was ≥22 (12) [12]. Quality of sleep was assessed by the PSQI. The findings have been reported previously [13].

Approval was obtained from the Ethics Review Committee of the National Hospital of Sri Lanka. Written informed consent was obtained from all participants. Participants diagnosed with depression were referred to an outpatient psychiatry clinic for treatment. Statistical analysis was done using SPSS version 18.0. Descriptive statistics were used to describe the sample. Unadjusted and adjusted odds ratios were calculated using binary logistic regression. We adjusted for age and sex which are known to be associated with risk of depression. Hosmer-Lemeshaw test showed that the model was adequate (Chi Sq. 10.65, p=0.22).

Table 1. Demographic and clinical characteristics of the sample

Characteristic	*(Total =205) Number (%)*
Sex - Female	114 (55.6)
Mean age in years	50.02 (SD 13.68)
Marital status	
Married	175 (85.4)
Single, separated or widowed	30 (14.6)
Employment status	
Employed	103 (50.2)
Unemployed	100 (48.8)
Student	2 (1)
Average monthly income of family (information not available in 45)	LKR 23,125 (SD 14,388)
Educational level	
0-5 years	33 (16.1)
5-10 years	65 (31.7)
GCE O/L	63 (30.7)
GCE A/L or higher	44 (21.5)
Presenting complaint	
Pain related symptom	78 (38.0)
Lumps and skin conditions	35 (17.1)
Respiratory or ENT problems	32 (15.6)
Infections	15 (7.4)
Numbness or dizziness	8 (3.9)
Other	37 (18.1)
Medical illnesses	
Diabetes	52 (25.4)
Hypertension	43 (21.0)
Hyperlipidaemia	54 (26.3)
Heart disease	14 (6.8)
Any other chronic illness	47 (22.9)
No comorbid medical illness	94 (45.9)
Medications	
On one medication	52 (25.4)
On two or more medications	42 (20.5)
Not on any medication	111 (54.1)

Results

The sample consisted of 205 patients. There were 114 (55.6%) females. Mean age was 50 years (SD 13.68). Majority were resident in the Colombo District (n=122, 59.5%). Table 1 describes the demographic and clinical characteristics of the sample. The commonest presenting complaint was pain related (38%). Majority of the patients (79.5%) were diagnosed with non-communicable disease (NCD). Only five (2.4%) reported a previous history of psychiatric illness. Only three patients were on treatment for a psychiatric illness at the time of assessment.

Overall prevalence of depression in the sample was 22.4% (95% CI 16.68-28.20). Prevalence of depression was higher among females 25.4% (95% CI 17.32-33.56) than in males 18.7% (95% CI 10.52-26.84). Prevalence of severe depression was 15.1% (95% CI 10.18-20.07). Prevalence of severe depression was 17.5% in females (95% CI 10.46-24.63) and in males 12% (95% CI 5.26-18.91).

Table 2 shows the unadjusted and adjusted odds ratios (OR) for risk of depression. Unadjusted and adjusted odds ratios showed that pain related presenting complaints were significantly associated with depression [adjusted OR 1.99 (95% CI 1.01-3.96)]. Patients with pain related complaints had even higher odds for developing severe depression OR 3.09 (95% CI 1.40-6.79).

Table 2. Risk factors for depression

Risk factor	*Prevalence of depression (95% CI)*	*Unadjusted odds ratio*	*Adjusted odds ratio**
Age			
<30 years	40.0 (16.48-63.52)	2.73 (0.88-8.47)	3.1 (0.98-9.81)
31-45 years	19.23 (8.15-30.31)	0.98 (0.37-2.59)	0.99 (0.37-2.64)
46-60 years	21.95 (12.8-31.10)	1.15 (0.49-2.74)	1.13 (0.47-2.70)
>61 years	19.61 (8.33-30.89)	1.0	1.0
Sex			
Male	18.68 (10.52-26.84)	1.0	1.0
Female	25.44 (17.32-33.56)	1.49 (0.76-2.91)	1.66 (0.83-3.34)
Income (LKR)			
<15000	30.3 (18.92-41.69)	3.04 (0.94-9.82)	2.71 (0.82-9.0)
15000-30000	17.74 (7.96-27.52)	1.51 (0.44-5.19)	1.42 (0.40-4.99)
>30000	12.5 (0.39-24.61)	1.0	1.0
No response	24.44 (11.39-37.5)	2.27 (0.65-7.90)	2.44 (0.65-9.12)
Education			
0-5 years	24.24 (8.81-39.67)	1.0	1.0
5-10 years	33.85 (22.03-45.66)	1.6 (0.62-4.12)	1.59 (0.60-4.2)
GCE O/L	14.29 (5.4-23.17)	0.52 (0.18-1.51)	0.46 (0.15-1.42)
GCE A/L or higher	15.9 (4.66-27.16)	0.59 (0.19-1.84)	0.44 (0.13-1.48)
Employment			
Employed	19.42 (11.65-27.19)	1.0	1.0
Unemployed	25.49 (16.89-34.09)	1.42 (0.73-2.75)	1.59 (0.72-3.49)
Presenting complaint			
Pain related	29.49 (19.14-39.83)	1.89 (0.97-3.67)	1.99 (1.01-3.96)
Not pain related	18.1 (11.32-24.9)	1.0	1.0
Medications			
On medication	24.47 (15.62-33.32)	1.24 (0.64-2.39)	1.31 (0.63-2.72)
Not on any medication	20.72 (13.06-28.38)	1.0	1.0

* Adjusted for age and sex

Discussion

Prevalence of depression in patients presenting to the out-patient department of the National Hospital of Sri Lanka was 22.4% and higher in females. Prevalence of severe depression was 15.12% and pain related presenting complaints were significantly associated with depression.

A study conducted in 12 Divisional Hospitals and 4 Primary Medical Care Units in the Northern Province reported overall prevalence of depression of 17.8% and major depression 4.5% [11]. Several other studies have looked at the prevalence of depression in different populations in Sri Lanka. The only community based study conducted in the Colombo District reported a life-time depression prevalence of 6.6% rising to 11.2% if the functional impairment criterion was excluded [4]. Studies among clinical samples have reported high rates of depression of 27.9% among patients with chronic renal failure, and 37.9% among patients with Parkinson disease in Sri Lanka [6,7].

These studies show that there is a wide variation in the rate of depression depending on the population. Clinical samples which include physically ill patients have high rates of depression. Community studies report low rates. The rate of depression in our sample was less than that reported among patients presenting to primary care centres in the Northern Province. This may be because of the high burden of physical illness among patients presenting to the NHSL where more than 50% had some comorbid physical illness. A meta-analysis has reported overall prevalence of depression of 19.5% in various mainly urban primary care practices across more than ten countries [9].

It has been suggested that in non-Western cultures patients are more likely to somatize their distress and thus present with somatic complaints rather than depressive features [15]. This is especially so in primary care settings. It is notable that none of the patients with depression in our sample sought help for depression. Instead they presented with physical complaints. However this may be true for Western cultures too where only 20% of patients with depressive disorder present with psychosocial problems [16]. The common presentations of depression are musculoskeletal pain and fatigue [15]. In our sample depression was significantly associated with pain related complaints.

Depression is under diagnosed in primary care [17]. In general, about half the patients with depression are diagnosed by general practitioners. Because of the limited time for clinicians in such settings they could use screening tools such as the CES-D or the Primary Health Questionnaire (PHQ-9) to identify probable depression which can be later confirmed by a more detailed assessment [18].

There are several limitations to our study. We did not perform a clinical interview to confirm the diagnosis of depression. This could have resulted in over-estimation of depression. Because the sample size was not calculated to identify risk factors the study may have been inadequately powered to detect risk factors for depression in this population. However, the findings are helpful to plan ways to improve detection and treatment of depression in out-patient settings.

Conflicts of interest

There are no conflicts of interest.

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