

Rate of depression among patients with schizophrenia

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Abstract

Background and objective: Depression is a common comorbid mental condition in schizophrenia. This study aimed at estimating both the rate and demographic correlates of depression among patients with schizophrenia in Erbil, Kurdistan Region.

Methods: Three hundred patients with schizophrenia were assessed for the possible existence of comorbid depression. Diagnosis of schizophrenia was confirmed by Mini International Neuropsychiatric Interview. Each participant, however, was assessed by Calgary Depression Scale for Schizophrenia for possible concurrent depressive disorder.

Results: Of 300 patients with schizophrenia, 101 (33.7%) had concurrent depression as well. When all demographic variables considered, altogether, through logistic regression analysis, none of them discriminated, significantly, depressed from non-depressed patients with schizophrenia.

Conclusion: Depressive disorders are frequently experienced by patients with schizophrenia. Psychiatrists are in charge to pay greater attention to this, life-threatening, mental disorder whenever they come across patients diagnosed as schizophrenia.

Keywords: Comorbidity, Depressive disorders, Schizophrenia.

Introduction

Although schizophrenia and depression have been regarded as distinct disorders throughout the history of psychiatry, it is well-recognized now that depressive symptoms and disorders are common as well as challenging clinical problems in schizophrenia.¹ The prevalence rates differ noticeably depending on the phase of the illness as well as the assessment tools implemented. A wide range of prevalence rates have been reported between 7% and up to 75%. Nevertheless, an average depression prevalence estimate of 25% was recorded, which is higher than the rate of general population.^{2,3} Depressive symptoms in schizophrenia have been measured using several sorts of assessment tools like the Positive and Negative Syndrome Scale (PANSS),⁴ the Brief Psychiatric Rating Scale (BPRS),⁵ and the Montgomery-Asperg Depression Rating Scale.⁶ However, Calgary

Depression Scale for Schizophrenia (CDSS) was designed specifically to detect depression among patients with schizophrenia.⁷ Face-to-face comparisons with other assessment tools indicated superiority of CDSS in detecting depression as well as discriminating depressive symptoms from negative symptoms of schizophrenia and extra-pyramidal side effects (EPS) of antipsychotic drugs as well.⁷⁻¹⁵ The foremost aim of the current investigation was to assess the rate of depression among patients with schizophrenia visiting the psychiatric unit of Hawler Teaching Hospital (current Hawler Mental Hospital). Additionally, demographic variables were addressed in order to disclose any possible difference(s) between patients with and without depressive disorders.

Methods

Participants:

The study was performed on patients with

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schizophrenia who visited out-patient psychiatric units of Hawler Teaching Hospital in Erbil from July 2012 to April 2013. Prior power sample size estimation done adopting STATA 2.0 software. Considering 95% confidence interval and 5% maximum acceptable point of error with a maximum prevalence estimate of depressive disorders among patients with schizophrenia of 75%,³ the software determined the necessity of recruiting 311 patients. To achieve a representative sample of patients with schizophrenia, sampling ratio of 1:4 from consecutive clients of the above setting was implemented as the fourth patient with schizophrenia has been seen at the start of the study was the first recruited participant. Inclusion criteria were patients with DSM-IV schizophrenia according to Mini International Neuropsychiatric Interview (M.I.N.I.6.0.0) chapter K- Psychotic Disorders and Mood Disorder with Psychotic Features.¹⁶⁻¹⁹ Patients with comorbid chronic medical conditions as well as comorbid other psychiatric disorders (not including depressive disorders) were excluded from the study so as to avoid possible confounding influences on the incidence of depressive symptoms among the studied sample. The study was performed in accordance to Helsinki declaration. Informed consent was obtained from each participant, or his/her accompanied relative(s) when patients were unable to award consents due to their illnesses, stressing on anonymity and confidentiality issues.

Procedures:

Demographic and clinical data were collected using semi-structured interview. Diagnosis of schizophrenia was confirmed thru MINI.¹⁶⁻¹⁹ Each participant was assessed for possible concurrent depressive disorder by CDSS.⁷⁻¹² As stated earlier, CDSS was explicitly developed to assess depression in schizophrenia.⁷ It has been shown to be a reliable, valid, and specific measure of depression in patients with schizophrenia. CDSS consists

of nine-item structured interview scales in which each item has a four-point anchored measure (0 = Absent; 1 = Mild; 2 = Moderate; 3 = Severe). A cutoff point of eight is considered to be a definite indicator of comorbid depression.⁷⁻¹⁵

Previous contrast studies have demonstrated that CDSS is able to distinguish depression from negative psychotic symptoms as well as extra-pyramidal symptoms.^{10,13-15}

Psychometric properties of Kurdish versions of both assessment tools have been guaranteed in previous studies led by the author.^{20,21}

Statistical analyses:

Several difference analyses were applied to assess the trend of demographic variations between both depressed and non-depressed groups of schizophrenia participants as follows: independent t test for age variable, and Chi-squared (X^2) for gender, employment, and marital status variables. Moreover, in order to weigh the effect of entire demographic variables altogether, Binary Logistic Regression (LR) analysis was applied to examine the hypothesized relationships between demographics as independent variables and the chance of comorbid depression as a dependent variable. All tests were two tailed and P value of ≤ 0.05 was considered as a level of significance. All statistical analyses were conducted by statistical package for social sciences (version 21).

Results

Among the approached 311 patients, four participants were excluded because there were comorbid other psychiatric disorders (excluding depression), five patients were suffering from comorbid chronic medical diseases, and two patients regretted to participate. Therefore, a total of 11 (3.54%) patients were ruled-out and the remaining 300 participants were recruited for the purpose of the study. Demographic characteristics of the participants are shown in Table 1. More than one-third (33.7%) of the patients with

schizophrenia were diagnosed as concurrent depression as well. Depressed group patients were, almost 3 years younger than non-depressed group which flagged statistically significant ($P = 0.028$). When employment variable was considered individually, there were significant differences between depressed and non-depressed groups ($P < 0.05$). Contrariwise, there were no statistical differences in both gender and marital status variables between depressed

and non-depressed groups (Table 1). Binary logistic regression was conducted to derive the odds ratios and 95% confidence intervals of all demographic variables, altogether, in estimating the incidence of depression among the studied sample of patients with schizophrenia. When all demographic variables were considered together in a single block of prediction, nevertheless, none of them were significant predictors of comorbid depression in schizophrenia (Table 2).

Table 1: Prevalence of depression by gender, employment, and marital status.

Socio-demographic characteristics		Not Depressed No. (%)	Depressed No. (%)	Total	P value
Gender	Male	148 (65.8)	77 (34.2)	225	0.724
	Female	51 (68)	24 (32)	75	
Employment	Employed	55 (63.2)	32 (36.8)	87	0.038
	Student	15 (48.4)	16 (51.6)	31	
	Unemployed	129 (70.9)	53 (29.1)	182	
Marital Status	Married	45 (65.2)	24 (34.8)	69	0.823
	Unmarried	154 (66.7)	77 (33.3)	231	
Total		199 (66.3)	101 (33.7)	300	

Table 2: Logistic regression expecting which demographic variable(s) predict depression among patients with schizophrenia ^a.

Predictors	B	P value	OR	95% CI for OR	
				Lower	Upper
Age	-0.025	0.088	0.975	0.947	1.004
Gender	-0.096	0.744	0.909	0.511	1.615
Employment		0.223			
Employment(1)	0.304	0.285	1.356	0.776	2.368
Employment(2)	0.674	0.123	1.963	0.833	4.623
Marital Status	0.341	0.293	1.407	0.745	2.656

^a No significant associations

Discussion

Despite existence of several studies presenting comorbidity of schizophrenia and depression worldwide, this study is the first investigation of this kind, up to author's best knowledge, in Kurdistan Region. More than a third (33.7%) of current patients-sample of schizophrenia was additionally depressed. This finding confirms previous similar studies elsewhere.¹⁻³ The Epidemiologic Catchment Area (ECA) study indicated that patients with schizophrenia were 29 times more likely than the general population to have a lifetime diagnosis of major depression.²² Similarly, the National Comorbidity Study (NCS) suggested that 59% of patients with schizophrenia met DSM-III criteria for major or minor depression.²³ Koreen et al (1993), furthermore, put forward that depression may represent a core part in patients experiencing their first episode of schizophrenia or may occur as a subjective reaction to the decompensating psychotic experience. They also argued for limited uses of antidepressant therapy since most of the depressive symptoms resolved as the psychosis remitted.²⁴ Moreover, the comorbid depression in schizophrenia is an important clinical factor influencing patient treatment and outcome. Schizophrenic patients with depressive symptoms have a less favorable clinical course and prognosis with higher relapse rates than patients without such symptoms,^{25,26} extended hospitalization,²⁷ greater cognitive impairment,²⁸ poor social functioning,^{29,30} increased risks of suicide,^{27,31,32} and poorer quality of life.³³ Nevertheless, Emsley et al and Koreen et al pointed out to the optimistic outcomes of schizophrenia once it is accompanied by depressive features.^{4,24} Oosthuizen et al, as well, confirmed the positive outcome of comorbid schizophrenia with depression and found that depression during psychosis differs from ICD-10 post-psychotic depressive disorder since the later carries poorer prognosis.³⁴ In an attempt to understand whether both depressed and

non-depressed patients with schizophrenia differ in their demographic variables, multivariate analyses revealed no significant differences in age, gender, employment, and marital status, unlike primary depression where it is well-known that depressive disorders, overall, are more prevalent among elderly, female gender, unemployed, as well as non-married individuals.³⁵ This dissimilarity, in demographic variables, between depression with schizophrenia and primary depression may pave the road for future studies stressing on nature as well as etiological factors of depression in schizophrenia which was beyond the scope of the current study. Limitations of this study include its cross-sectional, non-comparative design which turned it down unable to examine the origin of depressive symptoms in schizophrenia. Although demographic variables were not significant predictors of depression in this cross-sectional attempt; future, yet prospective, investigations are in call to study demographic and other factors, including psychosocial stressors and even the nature of schizophrenia itself, as possible contributors to this devastating comorbid condition. Meantime, psychiatrists are in charge to pay more attention to depressive experiences whenever they attempt to manage patients with schizophrenia.

Conclusion

Depressive disorders are frequently experienced by patients with schizophrenia. Psychiatrists are in charge to pay greater attention to this, life-threatening, mental disorder whenever they come across patients diagnosed as schizophrenia.

Conflicts of interest

The author reports no conflicts of interest.

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