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Comparing how co-morbid depression affects individual domains of functioning and life satisfaction in schizophrenia

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Abstract

Objective: Depression in schizophrenia is often associated with reduced life satisfaction. Yet, it is not clear how depression influences different functioning domains. The relative impact across objective and subjective quality of life (QOL) has also not been clearly compared. This study sought to examine the differences in individual QOL indicators between schizophrenia patients with and without co-morbid depression. This was completed separately for objective and subjective QOL.
Method: 57 patients with schizophrenia/schizoaffective disorder were classified into groups with (DP: $N = 31$, $M = 45.81$, $SD = 10.29$) and without depression (NDP: $N = 26$, $M = 40.54$, $SD = 11.00$) using MADRS scores. Objective and subjective QOL was assessed using Lehman's (1988) QOL Interview using five domains: daily activities and functioning, family relations, social relations, safety and health. z-scores were created for these domains (objective and subjective) based on responses from 44 healthy controls ($M = 39.80$, $SD = 13.94$).
Results: Objectively, DP patients had significantly reduced social interaction frequency compared to HCs. Subjectively, DP patients had significantly poorer scores than HCs on all five domains, and additionally reported poorer satisfaction with daily activities and health compared with the NDP group.
Conclusions: Presence of depression in schizophrenia results in reduced self-reported life satisfaction across a broad spectrum of QOL domains. Objectively, depression resulted in decreased interactions with friends and peers, i.e. greater social isolation. The findings support the need to continue developing and implementing peer support groups in schizophrenia, a challenging task especially in the face of depression. More broadly, the assessment of depression in other illnesses is recommended.

1. Introduction

The influence of depression on quality of life (QOL) is well-established with evidence for reduced functioning and life satisfaction in patients with major depressive disorder (MDD) [1–3]. Depressive symptoms also occur outside MDD, co-morbid with other physical and mental disorders such as diabetes [4] and schizophrenia [5] where they demonstrate effects on QOL as well. Understanding how depression affects aspects of QOL in individuals with other diagnoses is critical in not only comprehending the influence of mood symptoms overall, but also if/how they compound the consequences of the primary diagnosis. This is highly significant for the development of both clinical management and therapeutic intervention plans.

1.1. Depression, schizophrenia and quality of life

This paper focuses particularly on depression in schizophrenia, where prevalence rates of clinical depression in patients range from 25% to 31% [5,6]. Schizophrenia itself has characteristics that affect QOL, such as negative symptoms and formal thought disorder [7,8]. Independent of these, depression has regularly been implicated in reduced QOL in schizophrenia, with much of its impact relating to reduced life satisfaction (subjective QOL) [8–10]. Conversely, the effects of depression on daily functioning, that is objective QOL, in schizophrenia are not as well-defined.

Depression appears to primarily affect only specific objective QOL domains, such as daily activities [11] and

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social functioning [3]. Similarly, co-morbid depression severity in schizophrenia has been associated with general reduced functioning [12], poorer employment and reduced functional activity [13] particularly in the social domain [14]. However, a recent study reported undifferentiated objective and subjective QOL between schizophrenia patients with and without current depressive symptoms [15]. This could be due to the use of composite QOL scores that may have masked any significant relationships on specific elements or individual domains of QOL [e.g. [12]].

The relative impairment of individual objective QOL domains is still unclear. The questions concerning if and how depression exacerbates the functional impairments present in schizophrenia are therefore still valid. No study has yet investigated depressive effects on a broad range of objective QOL domains individually in a single sample. Additionally, comparisons of how depression affects both objective and subjective QOL ratings in individual domains are still limited. Given the high co-morbidity of depression and the established influence of disorder-specific symptoms on QOL in schizophrenia, clarifying the impact of co-morbid depression on individual QOL domains is highly necessary.

1.2. The current study

The current study thus aims to compare schizophrenia patients with current clinically significant depressive symptoms (DP) to those without (NDP) and a group of healthy controls (HC) on individual domain measures of both objective and subjective QOL. Five domains of QOL (described below) will be assessed separately. Concurrent assessment of these two distinct but related aspects of QOL will inform the accurate conceptualization of how depression affects QOL. We hypothesized that DP patients would show a reduction in some objective QOL domains, particularly family and social functioning [i.e. [3]], compared to NDP patients and HCs. We also expected that subjective QOL across the five domains would be reduced in DP patients when compared to the other groups.

2. Method

2.1. Participants

Fifty-seven outpatients with DSM-IV schizophrenia/schizoaffective disorder[1] were recruited for this study from the Alfred Hospital and surrounding community clinics in Melbourne, Australia. All patients were on stable doses of antipsychotic medication. Forty-four healthy control participants (HCs) with no prior history of depression, other mental illness or antipsychotic medication use were also recruited. All participants were screened for current substance abuse (previous 6 months) and history of traumatic brain injury and neurological disease. All participants provided written voluntary informed consent prior to assessment. This research was conducted in accordance with the 1964 Declaration of Helsinki and received ethical approval from the Alfred Hospital Human Research Ethics Committee, Melbourne.

2.2. Measures

2.2.1. Depression and schizophrenia symptomatology assessment

The Montgomery–Asberg Depression Rating Scale [MADRS; [16]] was selected as a comprehensive measure of depression. Patients were classified into two groups using MADRS rating cut-offs: ≤ 6 = not depressed (NDP) and ≥ 7 = depressed (DP) [17]. HCs were also screened with the MADRS for current depressive symptoms. Schizophrenia symptomatology was assessed using the Positive and Negative Syndrome Scale [PANSS; [18]]. G12 (Lack of judgment and insight) was used as a basic measure of patient insight.

2.2.2. Quality of life assessment

The widely-used Quality of Life Interview [QoLI; [19]] provides both objective and subjective measures of life domains. For this study, five measures of objective QOL were selected to examine a broad area based on highest relevance to daily functioning and experience: daily activities and functioning (e.g., going to a movie, shopping, preparing a meal); family relations (e.g., frequency of interactions with family members); social relations (e.g., frequency of interactions with close friends); safety (encounters with violent and non-violent crime) and health (maintenance over the last 6 months). Patient-reported satisfaction ratings (subjective QOL) for these five objective domains were also used.

2.3. Statistical analysis

Raw response scores for objective and subjective QOL on the five domains of the QOLI were converted to z-scores using the respective HC scores as a baseline. These five domain scores were compared separately for objective and subjective QOL using one-way ANOVAs. Tukey's HSD test was used for post-hoc comparisons. All analyses were two-tailed and alpha was set at .01 to control for multiple comparisons (n = 5).

3. Results

3.1. Demographic and clinical analysis

Demographic and clinical characteristics are presented in Table 1. A significant difference on MADRS score was

[1] While it may be contentious combining schizophrenia and schizoaffective disorder patients (with the latter having mood issues as a defining characteristic), we did supplementary data analyses which revealed that depression severity within both the depressed and non-depressed groups did not significantly differ between schizophrenia or schizoaffective disorder patients; nor did it differ across the diagnoses. Therefore, we felt it was acceptable presenting this combined sample here.