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Relative contributions of negative symptoms, insight, and coping strategies to quality of life in stable schizophrenia

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ABSTRACT

The purpose of this cross-sectional study was to examine the relative contributions of negative symptomatology, insight, and coping to quality of life (QOL) in a sample of 92 consecutive outpatients with stable schizophrenia referring to the Department of Neuroscience, Psychiatric Section, University of Turin, Struttura Semplice di Coordinamento a Valenza Dipartimentale (SSCVD), Department of Mental Health ASL TO1, Molinette, Italy, in the period between July 2009 and July 2011. In order to assess the specific effect of negative symptoms on QOL and the possible mediating role of insight and coping, two mediation hypotheses were tested, using multiple regression analyses specified by Baron and Kenny (1986). Our findings suggest that (a) higher negative symptoms predict a worse Quality of Life Scale (QLS) intrapsychic foundations (IF) subscale score; (b) attribution of symptoms and coping-social diversion have a direct and positive association with QLS-IF; (c) patients high in negative symptoms are less likely to use attribution of symptoms and coping-social diversion; and (d) attribution of symptoms and coping-social diversion act as partial mediators in the negative symptoms–QOL relationship. The prediction model accounts for 45.3% of the variance of the QLS-IF subscale score in our sample.

In conclusion, our results suggest that insight and coping-social diversion substantially contribute to QOL in patients with higher negative symptoms. These factors are potentially modifiable from specific therapeutic interventions, which can produce considerable improvements in the QOL of this population.

1. Introduction

Despite the general agreement that schizophrenia patients have impaired quality of life (QOL) compared with members of the general population (Lehman, 1988; Sullivan et al., 1991; Ritsner et al., 2000; Saleem et al., 2002; Alptekin et al., 2005), the determinants of QOL are poorly understood in this population (Tolman and Kurtz, 2012).

Moreover, even if some authors have shown that there are a few significant correlations between subjective and observer-rated QOL (Dickerson et al., 1998; Heider et al., 2007), also in first-time-admission schizophrenic patients (Górna et al., 2008), other ones have found that they are not closely related, and concluded that subjective and observer-rated QOL have different determinants in patients with schizophrenia (Fitzgerald et al., 2001). A recent review (Tomotake, 2011) highlighted that depressive symptoms are most related to subjective QOL, whereas negative symptoms are most associated with the observer-rated one, and basic life skills are related to both. Cognitive dysfunctions in some neurocognitive domains such as verbal memory, vocabulary, fluency performance, attention, social knowledge, and executive function are associated with lower observer-rated QOL, but the effects of them are much smaller than negative and depressive symptoms. Nonetheless, it was suggested that the magnitude of the relationship between clinical symptoms and QOL is not large and it is influenced by several factors, such as patient characteristics, stage of illness (acute versus chronic samples), and treatment setting (community versus inpatients units) (Eack and Newhill, 2007).

Lastly, since QOL in schizophrenia appears to be a complex outcome encompassing several major dimensions (including psychological status, functional abilities, subjective wellbeing, social interactions, economic status, vocational status, and physical status) and multiply determined with no single predictor variable explaining a sufficient amount of variance, recent research has focused on the identification of mediators or moderators between clinical variables and QOL.

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Among them, insight into illness could be particularly relevant because preserved insight had been suggested to be a predictive value for the treatment outcome in schizophrenia, especially when improving adherence to treatment and reducing the risk of relapse and re-hospitalization (Amador et al., 1994; Quee et al., 2011). Contradictory findings have been reported concerning the relationship between insight and QOL in patients with schizophrenia (Karow et al., 2007). Whereas previous studies have shown an association of increased insight with better expert-rated QOL (Dickerson et al., 1997; Schwartz, 1998; Hasson-Ohayon et al., 2006; Aghababian et al., 2011; Kurtz and Tolman, 2011), other studies have demonstrated an inverse relationship between insight and subjective QOL (Ritsner, 2003; Sim et al., 2004; Hasson-Ohayon et al., 2006; Boyer et al., 2012) and other ones have failed to find an association (Browne et al., 1998; Williams and Collins, 2002; Hofer et al., 2006). The direction of the relationship between insight and QOL, which can appear paradoxical, should be explored by taking into account the multidimensional aspect of insight and potential confounding factors.

As for the relationship between negative symptoms and insight, studies included in the review of Mäkinen et al. (2008) reported that overall, patients with negative symptoms may have poor awareness of the adverse effects of their symptoms. A meta-analysis of 40 published English-language studies (Mintz et al., 2003) indicates that there is a small negative relationship between both positive and negative symptom severity and insight, with age of onset and acute versus chronic disease status serving as moderating variables, and that 3–7% of the variance in insight is explained by severity of symptomatology in schizophrenia patients.

Coping resources are considered a crucial factor potentially mediating the effects of stressors on QOL outcomes. Researchers have frequently classified coping strategies into three categories: problem focused (i.e. strategies to actively solve an underlying problem, cognitively reconceptualize it and potentially minimize its adverse effects), emotion-focused (i.e. strategies to restructure cognitions to modify the emotional response), and avoidance-focused (avoidant-distracted coping, i.e. strategies to avoid a stressful situation via self-distraction from stressful situation, e.g. “giving up” denial, or engaging in a substitute task; avoidant-social coping, i.e. strategies to avoid a stressful situation by using social diversion, i.e. choosing to be with other people and seeking emotional support) (Folkman and Lazarus, 1980). Although there is no consensus regarding which coping strategies are more or less adaptive and most effective in reducing psychopathological and distress symptoms (Aldwin and Revenson, 1987; Carr, 1988; Thoits, 1995; Lazarus, 2000; Austenfeld and Stanton, 2004), schizophrenia patients have been found to use less effective coping strategies to deal with stress than non psychiatric controls (Wield et al., 1990; Van Den Bosch et al., 1992; Horan et al., 2005). They generally use more passive emotion-focused coping strategies, such as avoiding, ignoring, and not thinking about the problem (Mueser et al., 1997; Jansen et al., 2000; Wilder-Willis et al., 2002; Aghevli et al., 2003; Phillips et al., 2009). The use of such coping strategies can explain why schizophrenia patients report greater dissatisfaction with all aspects of their lives (i.e. lower QOL) (Rudnick and Kravetz, 2001; Ritsner et al., 2003), but more research is required to elucidate this relationship.

Moreover, according to the integrated model of the determinants of functioning and well-being in schizophrenia (Yanos and Moos, 2007) psychiatric factors are hypothesized to exert a moderate influence on coping responses. Patients' symptom severities were related to maladaptive coping patterns (Wiedl, 1992; Lee et al., 1993; Strous et al., 2005; Lysaker et al., 2006; Lee et al., 2011). The relationship between a higher level of negative symptoms and the more reliance on emotion-focused coping was repeatedly reported in studies of schizophrenia patients (Wiedl, 1992; Hultman et al., 1997; Wilder-Willis et al., 2002; Lysaker et al., 2006; Martins and Rudnick, 2007; Rudnick and Martins, 2009). Subjects with severe negative symptoms might have difficulties in using a problem-focused coping because it demands volition, attention, and more cognitive functions (Wilder-Willis et al., 2002; Lysaker et al., 2004). Tsai et al. (2010) have found that clients with particularly high negative symptoms are more isolated, and engage in more maladaptive coping than others. Meanwhile, subjects who relied on maladaptive coping strategies would not be tolerable to various stressful circumstances, and as a consequence, they could be more depressed, anxious, and symptomatic (e.g. avoid social interactions). However, evidence is mixed.

Previous research has linked negative symptoms to coping strategies and insight, and coping strategies and insight to QOL, but in separate studies.

1.1. The current study

The present study was conducted to determine whether the relationship between negative symptoms and QOL might be mediated by the extent of insight and coping strategies in patients with stable schizophrenia. To the best of our knowledge, we are the first to report on this issue in a sample of outpatients with stable schizophrenia. Indeed, although the relation between some of the disease variables and QOL has been described in the literature, the pattern of interaction between the different factors and the specific contribution of each alteration to QOL remains to be clarified.

Despite the field of QOL in schizophrenia has witnessed significant growth in the number of publications over the past two decades, a recent review by Awad and Voruganti (2012) has concluded that a uniform definition may not be possible, and instead, it may be preferable to have several definitions, which may enrich the concept and broaden its usefulness. The absence of agreement on QOL has led to the proposal of often unclear and overlapping definitions, with corollaries to a multitude of QOL instruments (Boyer et al., 2013). Despite several reviews of literature on QOL instruments (Simeoni et al., 2000; Bobes et al., 2005; Awad and Voruganti, 2012), the authors generally consider that there is little guidance to choose the most appropriate questionnaires. A ‘best scale’ for the measurement of QOL does not exist (Awad and Voruganti, 2012). There are, however, instruments that are best suited to a particular purpose (Hyland, 2002). The Heinrichs–Carpenter QLS is considered one of the most frequently used observer-rated QOL measures, specifically constructed to measure QOL of community dwelling outpatients with schizophrenia. The QLS combines the subjective patient report and objective data via assessment of the patients' internal state and the clinician's professional judgment about the patient's functioning and life circumstances. It could be considered a gold standard research instrument for assessment of QOL in severely ill schizophrenia patients when administered by trained clinical raters (Cramer et al., 2000). This QLS has been reported to be acceptable in terms of these measures of validity (Lehman et al., 1993; Lehman, 1996) and to show substantial sensitivity to subtle change and treatment effects (Rosenheck et al., 1998; Mohamed et al., 2008). For the purposes of the present study, we were interested in one of the four subscales of the QLS, intrapsychic foundations (IF). The IF subscale is the key domain of QLS, which is based entirely on the schizophrenia patient's intrapsychic subjective elements that are seen as a core aspect of schizophrenia. The IF subscale gives a clinical judgment regarding intrapsychic elements in the dimensions of cognition, affectivity, drive. Patient's sense of purpose, motivation, curiosity, empathy, ability to experience pleasure, and emotional interaction are assessed (Heinrichs et al., 1984). They