



Letter to the Editor



Can we really define the effect of psychological interventions on Quality of Life for patients with schizophrenia based on the most recent meta-analysis in the field?

I read with interest the meta-analysis on the effectiveness of psychological interventions for improving quality of life (QoL) in patients with schizophrenia (Valiente et al., 2019). The authors attempt to systematically synthesize the available information and to shed light on the longstanding question regarding whether the QoL concept as a patient reported outcome can adequately inform research, policy making, and clinical practice (Awad and Voruganti, 2012). However, a careful consideration of the conceptual framework, the methodological decisions, and the conclusions of this meta-analysis, raises several concerns regarding the extent to which the question reflected in this article's title is adequately addressed. The theoretical conceptualisation of QoL/Wellbeing is apparently based on the Schrank et al. (2013a) review, which offers a framework with a particular focus on wellbeing. The Valiente et al. (2019) meta-analysis includes mostly studies assessing QoL, with only five studies assessing wellbeing. A QoL-focused framework (see Awad and Voruganti, 2012) would be more suitable to guide methodological decisions for this meta-analysis, given that wellbeing and QoL are distinct, though interrelated constructs. Importantly, these constructs are only moderately correlated and their measures load onto separate factors (Schrank et al. (2013b)), thus their effect sizes should be calculated separately. I agree with Valiente et al. that a multidimensional approach should be taken when studying QoL/Wellbeing benefits of routinely used interventions with patients with schizophrenia. However, as Schrank et al. (2013a) highlight, there is a clear discrepancy between “insider” (i.e. subjective) and “outsider” (i.e. objective) perspectives, which reflect different values in the person's “good life”. In fact, in their focused review of the wellbeing concept for patients with psychosis, they make a specific distinction between wellbeing, QoL, observable and non-observable indicators, and provide a framework for distinguishing between instruments and their focus (Schrank et al., 2013b). In this meta-analysis, six studies measured Objective QoL using the QLS. The QLS assesses social, occupational skills and intrapsychic foundations, with higher scores indicating higher functioning. Seven studies used instruments that include both objective and subjective indicators (LQoLP, MANSA, MSQoL) but considered the Subjective component only, and the rest used pure Subjective QoL measures. Subjective QoL items measure subjective appraisals of several life dimensions (i.e. health, social adjustment, etc.), evaluated by directly asking the person. Mixing functioning with subjective rates is not meaningful in terms of research or practice. The distinctive nature of objective and subjective QoL indicators (Harvey and Bellack, 2009), is also proven by the differential associations they display with other constructs. For instance, neuropsychological functions show a moderate relationship with Objective QoL, and no associations with Subjective QoL (Tolman and Kurtz, 2012). Functioning (Nevarez-Flores et al., 2019) and negative symptoms (Eack and Newhil, 2007) show higher

associations with Objective QoL and only small with Subjective QoL, whereas service satisfaction (Petkari and Pietschnig, 2015), shows no associations with Objective and moderate associations with Subjective QoL. In this meta-analysis, the decision of mixing the effects of interventions that target subjective and objective QoL indicators resulted in erroneous findings, as the calculated effect size is an example of the “mixing apples and oranges” phenomenon, resulting in the large heterogeneity reported. A straightforward solution would be to split the interventions' outcomes on those based on the QLS and those based on the remaining measurements and calculate an overall objective and an overall subjective QoL effect size. Following this approach, Nevarez-Flores et al. (2019) found that the strength of the correlations between functioning and QoL was primarily dependent on the QoL measure, being consistently larger for objective QoL than subjective QoL.

With regards to methodology, the literature systematic research is limited to only two databases, leaving aside comprehensive search engines such as Scopus, Web of Science, and Cochrane Trials. The systematic search of these databases results in further 21 studies that fulfill the inclusion criteria and are missed in this meta-analysis. The keywords are broadly defined, the search does not include words related to RCTs, which produces an unnecessary massive results' turnout with numerous irrelevant studies. Another concerning pitfall is related to the inclusion/exclusion criteria, and the adherence to those for making decisions regarding study inclusion. First, studies that included mixed samples are considered eligible when composed by more than 60% of patients with schizophrenia. This cut-off is quite arbitrary, and certainly does not adhere to the research question about interventions effectiveness for patients with schizophrenia. Under this criterion, seven studies with patients suffering from bipolar, depressive, anxiety and personality disorders are included. Subjective perceptions of QoL are higher in patients with schizophrenia compared to those suffering from depressive disorders (Berghöfer et al., 2020) and lower compared to patients suffering from bipolar disorders (Chand et al., 2004). As patient populations vary in their QoL levels, the QoL intervention gains may also vary depending on the diagnosis. Ideally, the authors should have opted for excluding studies with mixed samples, or account for diagnosis as a heterogeneity source. An alternative would be to adopt a service-user perspective, broaden the scope to patients with Severe Mental Illness, and modify the title, content, and study aim to reflect the included population. Second, though the criteria require the inclusion of RCTs, two of the studies do not use this design. Third, one of the exclusion criteria states that integrated care programmes (e.g. Assertive Community Treatment-ACT) were excluded because although they included psychological interventions, they examined complete programmes that include many other care components. Under this criterion, four studies testing the OPUS, the COAST, the NAVIGATE, and the HIT, all

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multielement interventions, should have been excluded. Fourth, the meta-analysis included two peer-led interventions, although this type of interventions should be examined separately, following the [NICE guidelines for psychosis and schizophrenia \(2014\)](#). There is also a distinction between second and third generation interventions used as a potential moderator. Given the wide range of interventions based on different theoretical backgrounds (i.e. behavioural, CBT, solution-focused, art-therapies, etc.), the criteria for allocating the interventions to these categories are not explained and, importantly, do not adhere to any known categorization of psychological interventions. In terms of analysis, the extraction of the WHOQoL-BREF total score for calculating the effect sizes of four of the included studies is problematic, as this score is not meaningful. A potential solution would be to include all effect sizes provided by this instrument's dimensions by using a multilevel approach that accounts for data dependencies.

On a positive note, this meta-analysis is the first attempt to synthesize information regarding the QoL improvements that psychological interventions may bring to psychiatric patients, which makes this work valuable. The findings suggest that when QoL is considered the interventions' primary outcome it increases more than when it is considered a secondary outcome. This draws the attention of researchers and clinicians on a major issue regarding service design, as it showcases the need to put the service user's QoL on the spotlight. However a) the quite fair amount of studies that fulfilled the inclusion criteria and were missed ($k = 21$), possibly due to the limited databases search and selected key words, b) the inclusion of eight studies that did not fulfill the established inclusion criteria (non RCTs, integrated care programmes, peer-led interventions), c) the arbitrary consideration of the population as patients with schizophrenia when at least seven studies included mixed samples, and d) the lack of distinction between QoL and wellbeing measures, as well as the mix of objective and subjective effect sizes that lacks of any psychometric or clinical meaning, point towards serious methodological flaws that may have contaminated the findings, may have affected the accuracy of the meta-analytic calculations, and thus may have led to erroneous conclusions. Therefore, the contribution of this meta-analysis to informing decisions made in the clinical practice and research is low at its best, and any conclusions extracted should be used with cautiousness, inviting for future endeavors that follow solid methodological procedures.

References

- Awad, A.G., Voruganti, L.N., 2012. Measuring quality of life in patients with schizophrenia. *Pharmacoecon* 30 (3), 183–195. <https://doi.org/10.2165/11594470-000000000-00000>.
- Berghöfer, A., Martin, L., Hense, S., Weinmann, S., Roll, S., 2020. Quality of life in patients with severe mental illness: a cross-sectional survey in an integrated outpatient health care model. *Qual. Life Res.* 29 (8), 2073–2087. <https://doi.org/10.1007/s11136-020-02470-0>.
- Chand, P.K., Mattoo, S.K., Sharan, P., 2004. Quality of life and its correlates in patients with bipolar disorder stabilized on lithium prophylaxis. *Psychiatr. Clin. Neurosci.* 58 (3), 311–318. <https://doi.org/10.1111/j.1440-1819.2004.01237.x>.
- Eack, S.M., Newhill, C.E., 2007. Psychiatric symptoms and quality of life in schizophrenia: a meta-analysis. *Schiz. Bull.* 33 (5), 1225–1237. <https://doi.org/10.1093/schbul/sbl071>.
- Harvey, P.D., Bellack, A.S., 2009. Toward a terminology for functional recovery in schizophrenia: is functional remission a viable concept? *Schiz. Bull.* 35 (2), 300–306. <https://doi.org/10.1093/schbul/sbn171>.
- National Institute for Health and Care Excellence (NICE), 2014. Psychosis and schizophrenia: Treatment and management. (Clinical Guideline 178.). <http://guidance.nice.org.uk/CG178>.
- Navarez-Flores, A., Sanderson, K., Breslin, M., Carr, V., Morgan, V., Neil, A., 2019. Systematic review of global functioning and quality of life in people with psychotic disorders. *Epidemiol. Psychiatr. Sci.* 28 (1), 31–44. <https://doi.org/10.1017/S2045796018000549>.
- Valiente, C., Espinosa, R., Trucharte, A., Nieto, J., Martinez-Prado, L., 2019. The challenge of well-being and quality of life: a meta-analysis of psychological interventions in schizophrenia. *Schiz. Res.* 208, 16–24. <https://doi.org/10.1016/j.schres.2019.01.040>.
- Petkari, E., Pietschnig, J., 2015. Associations of quality of life with service satisfaction in psychotic patients: a meta-analysis. *PLoS ONE* 10 (8), e0135267. <https://doi.org/10.1371/journal.pone.0135267>.
- Schrank, B., Riches, S., Coggins, T., Tylee, A., Slade, M., 2013a. From objectivity to subjectivity: conceptualization and measurement of well-being in mental health. *Neuropsychiatry* 3 (5), 525. <https://doi.org/10.2217/np.13.58>.
- Schrank, B., Bird, V., Tylee, A., Coggins, T., Rashid, T., Slade, M., 2013b. Conceptualising and measuring the well-being of people with psychosis: systematic review and narrative synthesis. *Soc. Sci. Med.* 92, 9–21. <https://doi.org/10.1016/j.socscimed.2013.05.011>.
- Tolman, A.W., Kurtz, M.M., 2012. Neurocognitive predictors of objective and subjective quality of life in individuals with schizophrenia: a meta-analytic investigation. *Schiz. Bull.* 38 (2), 304–315. <https://doi.org/10.1093/schbul/sbq077>.

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