

Dear Editors, dear Reviewers,

Thank you very much for your valuable input concerning our review entitled “Psychological impact of the COVID-19 pandemic on individuals with serious mental disorders: A review of the literature”.

We revised the manuscript according to your suggestions. We hope the changes meet your expectations and that the manuscript is now ready for publication in the *World Journal of Psychiatry*.

Explanations: Sentences that demonstrate changes in the manuscript are underlined in the comments in the point-to-point-response. This content changes are highlighted green in the manuscript file.

With best regards

Nina Dalkner, Eva Fleischmann and colleagues

Point by Point Response to Reviewer 1

Comment 1:

While I could find more than 10 reviews on SMI over the past one year, only three were systematic reviews. The first by Brown et al. was published in May 2020 and included only 3 studies. The second by the CEBM, Oxford (Barber et al. Aug 20- <https://www.cebm.net/wp-content/uploads/2020/08/SMI.jpg>) included 4 studies. The most recent one by Zhand & Joobar in 2021 is much broader in scope and includes 47 studies and reviews. Some of the areas covered by the authors' review have been included by Zhand & Joobar. Therefore, there is a need for more systematic reviews on this topic and the authors' efforts are to be commended. However, they have not provided a proper background to their review by mentioning all the other ones and their findings or conclusions. This background would have emphasized the need for the authors to undertake their review. It might have allowed the authors to make a stronger case for conducting their review. Therefore, I would suggest that they make the necessary changes in this regard.

We agree and these valuable additions were added to our introduction. The following sentences were added or changed: “Another review by Zhand and Joobar[49] included 47 studies and the final search was done in July 2020, however, the authors focused mainly on schizophrenia spectrum disorders, not mentioning BD and MDD.

Furthermore, a systematic reviews by Barber at al.[48], reviewed in June 2020, was found. The search yielded four studies, finding that individuals with SMI might show a decline of mental health due to COVID-19-related governmental measures. Furthermore, they experienced increased psychological distress during the crisis.

In comparison with already existing reviews, the current one adds to the existing literature by focusing on the mental health outcome of individuals with SMI in general, encompassing solely papers providing scientific data and including studies that were published at a later time.”

The review by the CEBM could be found neither in MEDLINE nor in PubMed and the review by Zhand and Joobar was published (on January 12th) after we had performed our

final search (on January 9th). It should be noted that this review is not a systematic review, but a narrative review.

However, we did not find the review by Brown et al. to be appropriate for our review. It included not only studies conducted during the COVID-19 pandemic, but other pandemics and epidemics as well. Furthermore, solely three studies included individuals with pre-existing schizophrenia, neither of which was published during the current pandemic. Mostly, the studies analyzed healthy individuals with sudden psychosis, which did not fit the criteria of our search.

Comment 2:

For example, the period of their search is not mentioned.

It is mentioned that „publications [...] up until January 9th, 2021, were included“. As this was seemingly misleading, we rephrased the sentence: „The final search was conducted on January 9th, 2021.”

Comment 3:

It is not clear why the number of studies in their review was much less than the review by Zhand & Joobar.

The review by Zhand and Joobar included commentaries, guidelines as well as case reports. In contrast, we only included original data and single case studies were excluded, this was declared in the text. Notably, the number of case reports concerning schizophrenic spectrum disorders is large. Moreover, we did not include the whole spectrum of psychotic disorders, this was one limitation; however, our focus was primarily on schizophrenia.

Comment 4:

There are problems with their search terms. For example, the phrase "serious mental illness" is not included. They could have missed some papers with this title. It seems to me that they could have missed some studies that included all types of psychiatric disorders including SMIs.

This is a valid concern, however, one of our search terms was “mental illness“. Therefore, every study including the term „serious mental illness“ was found in our search.

Comment 5:

Finally, the quality of the articles included should have been assessed properly. Although the authors mention the methodological limitations of the studies included, rating should have been done using a standardized instrument.

This is indeed problematic. Therefore, we added the following sentence: “The studies were very heterogenous in samples and study design. Furthermore, not all trials investigated a defined intervention with comparable targets.”

Therefore, we decided to discuss methodology and interpretation of the results in a descriptive way only. In the limitations, we added the need for meta-analyses in the future.

Comment 6:

There are problems that resulted from not following a systematic approach to analyzing the data.

For example, the authors state that this about their aims: " The following questions will be answered: How are individuals with SMI affected by the pandemic in comparison to healthy controls (HC) and what are the main psychiatric symptoms they are displaying? What are risk and protective factors that influence the severity of psychiatric symptoms and who is particularly vulnerable to these factors? How does symptomatology and frequency of illness episodes change during the course of the pandemic?"

The authors have organized their results according to the type of disorders, e.g. SMI, affective disorders, bipolar disorder, major depression, and schizophrenia. It would have been helpful if they had also categorized their results (according to the questions listed above) into symptoms, risk/protective factors, and course of illness.

Thank you for this helpful comment. We organized the results according to the aims. How are individuals with SMI affected by the pandemic in comparison to healthy controls (HC) and what are the main psychiatric symptoms they are displaying? What are risk and protective factors that influence the severity of psychiatric symptoms and who is particularly vulnerable to these factors? How does symptomatology and frequency of illness episodes change during the course of the pandemic?"

As the discussion had been partially organized in such a way before, only few changes were made.

Comment 7:

This [the organization of the results according to the questions] would have made for a more accurate interpretation of the data.

For example - About the course of illness in the section on SMI, the authors write in their results that: "... two studies found that psychiatric symptoms remained stable over time in individuals with SMI[48,49], while another one found that the relapse rate did not significantly increase during the pandemic[36]. The few participants experiencing a worsening of symptomatology in these three studies were elderly individuals[49] or had been hospitalized at a more recent date than the individuals who remained stable[36]."

But in the table - the findings of the study by Riblet et al. (ref. 49) are: "There were no relevant changes concerning psychiatric symptoms during the pandemic compared to before. Few participants, who were significantly older (M = 71.7 years) experienced a decrease in symptomatology."

Thus, this study did not have any information on relapse rates, while the other two (refs. 48 and 36) appeared to have findings related to relapse.

Thank you for this hint. It appears that this was indeed a mistake, as the older patients actually experienced an increase in symptomatology. Thus, the corrected sentence is: "Few participants, who were significantly older (M = 71.7 years) experienced an increase in symptomatology."

Comment 8:

Similarly, it is stated that: "On the other hand, a high amount of studies showed a third of individuals with SMI to exhibit symptoms indicative of a recurrence of their illness[50,51]" – but I could find no mention of recurrence in these 2 studies. So, better categorization of studies and more careful analysis of their findings is required.

We understand that the phrase “Up to 34% of enrolled patients believed that their condition worsened during the state of emergency” (Pogany et al., 2020) does in fact not mean that a recurrence has taken place. Consequently, we reworded the sentence: "On the other hand, several studies showed a third of individuals with SMI to exhibit symptoms indicative of a recurrence of their illness or worsening of symptomatology [50,51]."

The study by Muruganandam, Neelamegam, Menon, Alexander, and Chaturvedi (2020) contains the sentence “Thirty percent showed features of relapse [i.e. recurrence] of symptoms during this lockdown period”, which we found to be appropriately phrased for making this statement in our review.

Comment 9:

Certain conclusions have been made in the discussion section, which do not seem to be fully borne out by the results of the studies included in the review.

For example - "Notwithstanding, these results suggest that individuals with mental illness were less affected by the pandemic than HC[25,27]."

I could not find ref. 27 (Skoda et al.) in the table.

It is true that the observation that individuals with SMI were initially less affected by the pandemic was only stated by one study that explicitly included individuals with SMI. However, as this result was found in other studies researching individuals with mental illness in comparison with HC, we found it an interesting result to mention in our review and compared it to these other studies. Therefore, we added the following phrase to our sentence: “Notwithstanding, these results suggest that individuals with SMI were less affected by the pandemic than HC[25], which was found in numerous studies researching not only individuals with SMI but mental illness in general[27,82] and might be applicable to this specific subgroup as well.”

[27] is the study by Skoda et al. As it did not state which mental disorders were included, it did not fit the criteria of this review but was only mentioned in the discussion. We additionally added a study by Yocum et al.[82] to support our suggestion.

Comment 10:

A number of statements have been made about patients with schizophrenia being less affected by the pandemic than those with affective disorders - e.g. "Although those diagnosed with SZ were more worried and anxious than HC[79], they seemed to be least affected by the crisis among individuals with SMI, as the majority of SZ patients reported only little or no changes in their mental health[48,55]."

I could not find any mention of a comparison between these 2 groups in the study by Pinkham et al. (ref. 48). So, this conclusion appears to be based on a single study.

Moreover, it is rather counter-intuitive, because the weight of the current evidence seems to be showing that people with schizophrenia are disproportionately affected by the pandemic. (See for example, Nemani et al. JAMA Psychiatry 2021;78(4):380-386)

As pointed out, the study by Pinkham et al. did not compare both groups in terms of changes in mood symptomatology, however, it does support the statement that “[...individuals with SMI] seemed to be least affected by the crisis among individuals with SMI, **as the majority of SZ patients reported only little or no changes in their health** [57,58,66].” Additionally, we added the study by Hölzle et al. [66] describing the same finding. Likewise, another paragraph states that although the majority of individuals with schizophrenia were apparently least impacted among individuals with SMI, they seemed to experience exacerbation more often.

The study by Nemani et al. showed that schizophrenia was associated with a higher risk of COVID-19-related mortality compared with affective disorders. While they were indeed disproportionately affected with regard to their physical condition, our findings suggest that this might not be the case when examining their mental state. As the cited sentence might not be specific enough, we rephrased: “[...] they seemed to be least affected by the crisis in connection with their mental well-being among individuals with SMI, as the majority of SZ patients reported only little or no changes in their mental health[57,58,66].”

Individuals with affective disorders showed an impairment in mental health, while those with SZ seemed to be mostly unaffected by the pandemic at least as regards their psychiatric symptomatology.

Comment 11:

Reference numbers of studies should be included in the table.

As you suggested, we included all reference numbers in the table.

Comment 12:

The word - teletherapy is somewhat idiosyncratic. Perhaps the authors should use more conventional terms such as telemental health services.

This was changed as suggested.

Response to Reviewer 2

Comment 1

The citation here is inconsistent with reference [1], and the origin of the COVID-19 is still uncertain. It may be more appropriate to delete this sentence.

Thank you for detecting this mistake. We changed the reference accordingly. As the origin of the virus is not known, we used the word „detected“.

Comment 2

6.8-8.5%

This was amended.

Comment 3

Schizophrenia ?

Yes, you are correct.

Comment 4

It may be more appropriate to use the word “countries and areas” instead of the “countries”.

This was changed in the text.

Point by Point Response to the Science Editor

Comment 1

The questions raised by the reviewers should be answered.

We tried to answer the questions, hopefully according to the standards of your journal.

Comment 2

The “Article Highlights” section is missing. Please add the “Article Highlights” section at the end of the main text.

We added the “Article Highlights” section at the end of the main text.