

Reviewer #1:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: Comments on the manuscript (reference number 75971) by Fonseka and Woo, submitted to WJP. This manuscript provides evidence for the use of social media platforms in the identification of schizophrenia. I have some curiosities, which are pointed below-

1. Although authors have discussed clinical utility of Facebook, Twitter, and other platforms for identifying psychotic patients, negative aspects or misuse of these platforms have not been discussed.

We thank the reviewer for pointing this important aspect. Under the heading of future directions, particularly in paragraph 3 (on page 10 of manuscript), we have incorporated the following, “The negative effects of platforms such as Horyzons should also be taken into consideration for future research. Social media users with SMI report various concerns about privacy vulnerabilities. Specifically, these concerns involve the fear of stigma and judgment by others, impact on personal relationships, hostility towards participants, being hurt, and endangering employment. In a survey of 90 social media users with SMI, approximately one-third reported being concerned about privacy^[38]. These concerns are legitimate, and platform developers should continue to involve participants in the development of their systems and ensure that privacy is prioritized. Likewise, enrolled participants should be educated on how to protect themselves from the potential risks related to stigma, self-disclosure, and other related concerns. These platforms must also take precautions to prevent spreading misinformation, worsening participant symptoms, and delaying professional help when necessary^[38].”

2. Schizophrenia is not diagnosed by the presence of depression, anxiety, or suicidality only because, these are separate psychiatric domains. However, the frequency of these symptoms may be high in schizophrenia subjects.

We thank the reviewer for pointing this important aspect. As such, under the category of social media, in various paragraphs, we have pointed out the difference of schizophrenia and other psychiatric domains. For example, on page 4, paragraph 1, “Blinded clinical raters assessed eight participants with schizophrenia, seven with depression, and eight health controls using symptom severity scales, including the Brief Psychiatric Rating Scale for psychotic symptoms and the Community Assessment of Psychotic Experiences for global functioning. The clinical raters included psychiatrists and other mental health clinicians, who rated participants on the corresponding scales by both de-identified Facebook posts and in-person assessments. The ratings for the Facebook posts were significantly correlated with in-person assessments across all three categories of psychotic symptoms, depressive symptoms, and global functioning. These results validate the clinical relevance of social media posts.”

3. The main diagnostic criteria for schizophrenia or the true paranoid schizophrenia are the appearance of hallucination, delusion, or unusual thought contents.

We completely agree with this reviewer. We have reflected such diagnostic criteria under the category of diagnosis. On page 3, “Blinded clinical raters assessed eight participants with schizophrenia, seven with depression, and eight health controls using symptom severity scales, including the Brief Psychiatric Rating Scale for psychotic symptoms and the Community Assessment of Psychotic Experiences for global functioning.” On page 4, the study by Birnbaum et al did acknowledge the diagnosis was self-disclosed. On page 5, we have also explicitly stated that one of the studies performed by Alvarez-Jimenez et al was not in schizophrenia patients. We have also stated explicitly on page 5, “Alvarez-Jimenez *et al* also led the first intervention in first-episode psychosis patients.”

4. If such platforms like Horyzons or others are developed, there are chances of misused by individuals with criminal mentality, these aspects should be discussed.

We thank the reviewer for pointing this important aspect. This limitation is pointed out by Reviewer 1 under comment 1. We have incorporated suggestion and, under the heading of future directions, particularly in paragraph 3 (on page 10 of manuscript), we have incorporated the following, “The negative effects of platforms such as Horyzons should also be taken into consideration for future research. Social media users with SMI report various concerns about privacy vulnerabilities. Specifically, these concerns involve the fear of stigma and judgment by others, impact on personal relationships, hostility towards participants, being hurt, and endangering employment. In a survey of 90 social media users with SMI, approximately one-third reported being concerned about privacy^[38]. These concerns are legitimate, and platform developers should continue to involve participants in the development of their systems and ensure that privacy is prioritized. Likewise, enrolled participants should be educated on how to protect themselves from the potential risks related to stigma, self-disclosure, and other related concerns. These platforms must also take precautions to prevent spreading misinformation, worsening participant symptoms, and delaying professional help when necessary^[38].”

5. The significance of these platforms in increasing early medication intervention and adherence should also be discussed. 6. While the use of these platforms clearly suggest improvement in social functioning of psychiatric patients, benefits related to academic and working environment should also be discussed.

We truly appreciate this reviewer for the 2 points above. As such, on page 6, we have included the following information in hope of clarifying the significance of these platforms in increasing early medical intervention and adherence, as well as improvement in social functioning. “While no significant effects were found, participants in the intervention group demonstrated a 5.5 times greater increase in their odds of finding employment or furthering their education compared to the control group. Participants can choose from a selection of activities, and topics related to

occupational preparation were among the most selected. This included activities such as “Nailing the interview,” “How to write a resume,” and “Getting your public persona ready.” This content likely contributed to the improved vocational and educational attainment compared to the TAU group, in which vocational/educational measures declined over the length of the study. Likewise, 13% of the Horyzons group were hospitalized due to psychosis compared to 27% of the control group, but again this difference was not significant. The level of engagement with the Horyzons platform may play a role, as 55.5% of intervention participants logged on for at least 6 mo, and 47% logged on for at least 9 mo^[14]. Although medication adherence was not a target measure in these studies, it is likely that the reduced hospitalization rates and other benefits are in part due to treatment adherence reinforced through platform participation. The awareness of symptom exacerbations to both participants and moderators may identify medication nonadherence and allow for timely dose adjustments as well. Overall, the Horyzons platform continues to hold promise as a feasible opportunity to prevent relapse and bridge patients from early psychosis treatment to multiple fundamental resources^[14-15]. The study was originally developed and performed in Australia, but has since expanded to several other countries as well^[15-17], further supporting the accessibility of social media interventions.”

Reviewer #2:

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: The manuscript is well-written and contributes to understanding the use of social media for the diagnosis and clinical management of schizophrenia and enlightens future research.

We truly appreciate this reviewer for the kind comments.

Science editor: The manuscript is well-written and contributes to understanding the use of social media for the diagnosis and clinical management of schizophrenia and enlightens future research. The author should include a discussion of the negative effects of Horyzons, or other such platforms. The significance of these platforms in increasing early medication intervention and adherence should also be discussed. While the use of these platforms clearly suggest improvement in social functioning of psychiatric patients, benefits related to academic and working environment should also be discussed.

We truly appreciate the science editor for the comments. We have included a discussion of the negative effects of Horyzons, or other such platforms on page 10, “The negative effects of platforms such as Horyzons should also be taken into consideration for future research. Social media users with SMI report various concerns about privacy vulnerabilities. Specifically, these concerns involve the fear of stigma and judgment by others, impact on personal relationships, hostility towards participants, being hurt, and endangering employment. In a survey of 90 social media users with SMI, approximately one-third reported being concerned about privacy^[38]. These concerns are legitimate, and platform developers should continue to involve participants in the development of their systems and ensure that privacy is prioritized. Likewise, enrolled participants should be educated on how to protect themselves from the potential risks related to stigma, self-disclosure, and other related concerns. These platforms must also take precautions to prevent spreading misinformation, worsening participant symptoms, and delaying professional

help when necessary^[38]. Lastly, the aforementioned improvement in vocational and educational outcomes seems to be dependent on user engagement, as those in the top quartile of logins (greater than 77 times over the course of the study) demonstrated significantly greater effects compared to those in the bottom quartile of logins (less than 9 times)^[14]. Since these improvements seem to follow a dose-response relationship, platforms should screen for participants in this lower quartile of engagement, as they are not receiving the intended intervention effects, but may benefit from additional one-on-one time with moderators or specifically designed interventions.”

We have also incorporated discussion on the significance of these platforms in increasing early medication intervention/adherence, along with improvement in social functioning of psychiatric patients, on page 6, “While no significant effects were found, participants in the intervention group demonstrated a 5.5 times greater increase in their odds of finding employment or furthering their education compared to the control group. Participants can choose from a selection of activities, and topics related to occupational preparation were among the most selected. This included activities such as “Nailing the interview,” “How to write a resume,” and “Getting your public persona ready.” This content likely contributed to the improved vocational and educational attainment compared to the TAU group, in which vocational/educational measures declined over the length of the study. Likewise, 13% of the Horyzons group were hospitalized due to psychosis compared to 27% of the control group, but again this difference was not significant. The level of engagement with the Horyzons platform may play a role, as 55.5% of intervention participants logged on for at least 6 mo, and 47% logged on for at least 9 mo^[14]. Although medication adherence was not a target measure in these studies, it is likely that the reduced hospitalization rates and other benefits are in part due to treatment adherence reinforced through platform participation. The awareness of symptom exacerbations to both participants and moderators may identify medication nonadherence and allow for timely dose adjustments as well. Overall, the Horyzons platform continues to hold promise as a feasible opportunity to prevent relapse and bridge patients from early psychosis treatment to multiple fundamental resources^[14-15]. The study was originally developed and performed in Australia, but has since expanded to several other countries as well^[15-17], further supporting the accessibility of social media interventions.”