

reply to peer-review report(s) and Science Editor and Company Editor-in-Chief's comments

Dear Editors and reviewer :

Thank you for your letter and for the reviewers' comments concerning our manuscript entitled "*Interaction of serum inflammatory cytokines, brain-derived neurotrophic factor and cognitive function in patients with first-episode schizophrenia*" (ID: 96275). Those comments are all valuable and very helpful for revising and improving our paper, as well as the important guiding significance to our researches. We have studied comments carefully and have made correction which we hope meet with approval. Revised portions are highlighted in yellow in the paper.

Reviewer #1:

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors:

Minor issues

1. The abstract should be written in a format that conforms to the standard format of the journal, and the authors are requested to revise it.

Response: We have revised the abstract to conform to the standard format of the journal. The abstract now includes sections for background, aim, methods, results, and conclusion, ensuring it meets the journal's requirements.

2. The results section is written too simply, the description of logical relationships should be added.

Response: We have expanded the results section to include more detailed descriptions of the logical relationships between the findings. This includes correlations between serum cytokine levels, BDNF levels, and cognitive function scores.

3. It is suggested that the authors should highlight in the discussion the innovations and differences of this study over what has been reported in the literature.

Response: We have revised the discussion section to emphasize the innovations and differences of our study compared to existing literature. This includes our focus on first-episode schizophrenia patients and the comprehensive evaluation of cognitive functions using the C-BCT.

Major issues as well as suggestions:

1. Control group selection: although a healthy control group has been set up in the study, the selection and matching of the control group may need to be more rigorous. For example, consideration could be given to adding aspects such as familial inheritance to minimize the potential impact of these factors on the results.

Response: We acknowledge the need for more rigorous selection and matching of the control

group. Future studies will consider additional factors such as familial inheritance to further minimize potential confounding effects.

2.Lack of longitudinal studies: Current studies are mostly cross-sectional and lack longitudinal data for long-term follow-up of patients. Future studies may consider designing longitudinal studies to observe the dynamic changes in BDNF levels and cognitive function during disease progression, and the relationship between these changes and treatment effects.

Response: We agree that longitudinal studies are essential. Future research will aim to design longitudinal studies to monitor the dynamic changes in BDNF levels and cognitive function over the course of the disease and in response to treatment.

3.The cognitive function assessment tools used in the current study may not comprehensively cover all cognitive domains. Future studies may consider using more comprehensive cognitive function assessment tools, such as neuropsychological test batteries, to more accurately assess patients' cognitive function.

Response: We acknowledge the limitation of the current cognitive function assessment tools. Future studies will utilize more comprehensive neuropsychological test batteries to better assess the full spectrum of cognitive impairments in schizophrenia patients.

4.Interference of other potential factors: There may be interference of other potential factors (e.g., genetic factors, environmental factors, medication, etc.) on the results in the study. Future studies may consider incorporating these potential factors as covariates or performing stratified analyses in data analysis to more accurately assess the relationship between BDNF levels and cognitive function.

Response: We recognize the potential interference of other factors. Future studies will incorporate potential confounding factors such as genetic predispositions, environmental influences, and medication use as covariates or perform stratified analyses to more accurately assess the relationship between BDNF levels and cognitive function.