

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Psychometric validation of the Perceived Stress Scale (PSS-10) among family caregivers of people with schizophrenia in China
AUTHORS	Tao, Xiao; Zhu, Feng; Wang, Dan; Liu, Xiang; Xi, Shi-jun; YU, YU

VERSION 1 – REVIEW

REVIEWER	Aysegul Tonyali University of Health Sciences Bakirkoy Mazhar Osman Mental Health Training and Research Hospital
REVIEW RETURNED	13-Jul-2023

GENERAL COMMENTS	It is important in terms of being a rare study evaluating the factor analysis of PSS-10 in the Chinese population in a population of schizophrenia caregivers. However, some edits are needed.
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REVIEWER	Krystyna Jaracz Poznan University of Medical Sciences
REVIEW RETURNED	08-Aug-2023

GENERAL COMMENTS	<p>I would like to thank the Editor for inviting me to review this manuscript. The study focuses on examining the psychometric properties of the Chinese version of the PSS-10 scale among family caregivers of individuals diagnosed with schizophrenia. The authors investigated internal consistency reliability, test-retest reliability, factorial structure, and concurrent validity.</p> <p>The aim of the study is well justified, and the results are presented concisely yet clearly and comprehensibly. The analyses were conducted using appropriate statistical methods. I have no questions or critical remarks. The paper is valuable, providing researchers and practitioners with a useful tool for assessing the intensity of stress arising from the potentially stress-inducing life situation of caring for a family member with schizophrenia.</p>
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REVIEWER	R Ramayah University Sains Malaysia - Health Campus Hamdan Tahir Library
REVIEW RETURNED	09-Oct-2023

GENERAL COMMENTS	<p>The paper is generally well developed and presented but will need some improvements before it can be acceptable.</p> <ol style="list-style-type: none">1. Why is there a need to test this often validated instrument in the current context.2. What was expected to be different if not then this is a replication in a different setting with no significant contributions.3. I think a split sample testing would be a better way of validating rather than running them all together.
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	<p>4. Since the scale is 2-dimensional, are they supposed to be correlated?</p> <p>5. From the results presented in Figure 1 looks like the 2 sub scales are not correlated thus the question of whether they are dimensions of PSS?</p> <p>6. Also to achieve model fit the authors have correlated the error terms of e3 and e8 of different dimensions, also e5 and e6 which is not acceptable.</p> <p>7. Was convergent and discriminant validity achieved?</p> <p>8. Discussion may need to be rewritten based on the new analysis.</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Dr. Aysegul Tonyali, University of Health Sciences Bakirkoy Mazhar Osman Mental Health Training and Research Hospital

Comments to the Author:

It is important in terms of being a rare study evaluating the factor analysis of PSS-10 in the Chinese population in a population of schizophrenia caregivers. However, some edits are needed.

****editor's note: As the comments from reviewer 1 look incomplete, we have tried multiple times to obtain the full set of comments from the reviewer. As we have not received a response and we have obtained a third review (see below).****

R: We appreciate the editor's efforts in getting a review and response. We have invited a native-English speaker to edit the paper and polish the language. We believe the manuscript now is much improved.

Reviewer: 2

Dr. Krystyna Jaracz, Poznan Univ Med Sci

Comments to the Author:

I would like to thank the Editor for inviting me to review this manuscript. The study focuses on examining the psychometric properties of the Chinese version of the PSS-10 scale among family caregivers of individuals diagnosed with schizophrenia. The authors investigated internal consistency reliability, test-retest reliability, factorial structure, and concurrent validity.

The aim of the study is well justified, and the results are presented concisely yet clearly and comprehensibly. The analyses were conducted using appropriate statistical methods. I have no questions or critical remarks. The paper is valuable, providing researchers and practitioners with a useful tool for assessing the intensity of stress arising from the potentially stress-inducing life situation of caring for a family member with schizophrenia.

R: Thank you very much for your positive feedback.

Reviewer: 3

Dr. R Ramayah, University Sains Malaysia - Health Campus Hamdan Tahir Library

Comments to the Author:

The paper is generally well developed and presented but will need some improvements before it can be acceptable.

1. Why is there a need to test this often-validated instrument in the current context.
2. What was expected to be different if not then this is a replication in a different setting with no significant contributions.

Reply to 1 & 2: Thank you for your questions. We have carefully revised the introduction section and added more descriptions to justify our study. The study was conducted for the consideration of the following two research gaps in the literature:

First, although PSS-10 has been widely validated among various populations, it has never been tested among family caregivers of people with schizophrenia, who are under great stress due to heavy and multiple caregiving responsibilities. In China, these family caregivers represent a large and invisible group to substitute for the under-resourced mental health service system to provide free, high-quality care to people with schizophrenia. It is both important and meaningful to assess their stress levels using reliable and valid scales, which not only helps strengthen our understanding of their mental well-being to guide further intervention and support, but also can be used to assess future intervention effects.

In addition, although there are abundant psychometric testing studies on PSS-10, inconsistencies exist in the results of its factor structure. Although the original developer considered it as a uni-dimensional measure, subsequent studies have proposed a two-factor structure, and there are also a few studies showing a three-factor structure. Given the conflicting evidence on its factor structure, we conducted the current study with a focus on factor analysis to add more evidence to the literature. Specifically, we tested the factor structure of PSS-10 by randomly dividing the sample into two groups for both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA).

As a result, we believe that our study is well-justified with unique contributions to the wide literature on the psychometric testing of PSS-10 among family caregivers of people with schizophrenia in China.

3. I think a split sample testing would be a better way of validating rather than running them all together.

R: Thanks for your constructive comments. We have rerun the factor analysis by randomly dividing the sample into two groups for both exploratory factor analysis (EFA) to build the model and confirmatory factor analysis (CFA) to verify the model. Based on the new analysis, we have updated and basically rewritten the results section.

4. Since the scale is 2-dimensional, are they supposed to be correlated?

5. From the results presented in Figure 1 looks like the 2 sub scales are not correlated thus the question of whether they are dimensions of PSS?

Reply to 4 & 5: Sorry for the error. After rechecking the data, we found the correlation coefficient of the two dimensions should be 0.60 instead of 0.06, which is now corrected in the revised results section.

6. Also to achieve model fit the authors have correlated the error terms of e3 and e8 of different dimensions, also e5 and e6 which is not acceptable.

R: Thanks for pointing this out, which was corrected in the revised version with a new figure.

7. Was convergent and discriminant validity achieved?

R: Based on the reviewer's question, we have added more analysis and the results showed satisfactory convergent and discriminant, please see the CFA results section for details. Here we listed the summary of results in the abstract:

“Convergent validity was supported by high standard regression weight (SRW=0.78-0.92), average variance extracted (AVE=0.79-0.81), and composite reliability (CR=0.88-0.94), while discriminant validity was confirmed by higher AVE estimates than the squared inter-construct correlations.”

8. Discussion may need to be rewritten based on the new analysis.

R: Based on the reviewer’s suggestion, we have rewritten the discussion part to be in line with the new analysis results.

VERSION 2 – REVIEW

REVIEWER	R Ramayah University Sains Malaysia - Health Campus Hamdan Tahir Library
REVIEW RETURNED	09-Nov-2023
GENERAL COMMENTS	The revisions are acceptable and the paper flows much better now.