Author’s response to reviews

Title: Prevalence and Associated Factors of Alexithymia among Adult Prisoners in China: a Cross-sectional Study

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Author’s response to reviews:

RE: Alexithymia, Duration in Prison, Childhood Trauma and Negative Emotions: a Cross-sectional Study of 1,705 Prisoners in China（BPSY-D-17-00037）

June 21, 2017

Dear Dr. Yong Gui Yuan:

Thank you for your editorial letter dated on April 21, 2017 regarding our manuscript, “Alexithymia, Duration in Prison, Childhood Trauma and Negative Emotions: a Cross-sectional Study of 1,705 Prisoners in China” (MS Number: BPSY-D-17-00037). We would also like to express our thanks to you and the two external reviewers for your helpful comments and positive editorial decision with detailed resubmission guidelines. We have carefully studied the editorial letter and reviewer’s comments and closely followed their comments to guide our revision. Now we are pleased to resubmit our revised manuscript to you.

In the following sections, we address each of the reviewers’ comment (in bold, with the sign of “// ” we inserted within each paragraph to divide major sections, and with numbers we inserted in
the beginning of each paragraph for convenience of reference) with our responses and revisions appended (in bullet point). You and the reviewers can easily see how we have complied with the requests of the editor and reviewers. We will firstly respond to Reviewer 1, then to Reviewer 2, and finally to the editor so that we can address every comment effectively and efficiently.

I.THE REVIEWER #1’S COMMENTS AND OUR RESPONSES

1. The topic is very interesting and the sample size and sample procedure are good enough for the article to evolve into a good paper.

   We are grateful for the positive assessment of the manuscript.

2. The document needs serious editing and language correction. It has many grammar and spelling mistakes, and it's clearly not written by a native English speaker. Moreover, the writing style is too casual.

   • We appreciate this important comment.

3. Regarding the theoretical background, it lacks a clear description of the associations of alexithymia to impairments in emotional self-regulation and impairments in mentalizing.

   • We appreciate this thoughtful comment.

   • Firstly, Alexithymia is a personality construct characterized by the subclinical inability to identify and describe emotions in the self [1]. The core characteristics of alexithymia are as follows: (1) difficulty identifying feelings and distinguishing between feelings and the bodily
sensations of emotional arousal, (2) difficulty describing feelings to other people, (3) constricted imaginal processes, as evidenced by a scarcity of fantasies, (4) a stimulus-bound, externally oriented cognitive style [2]. This four-factor characterization of alexithymia has become the standard for describing the construct [3]. Thus, individuals suffering from alexithymia mostly have difficulty in emotional self-regulation.

• Secondly, a growing body of evidence has proved that lower level of emotion regulation is significantly related to both lower level of social competence and lower level of the expression of socially appropriate emotions, which also impair individual’s psychological mindedness and emotional intelligence [1,2,6,7]. Furthermore, Alexithymia causes problems of mentalization capacity by impairing individual’s ability to understand that one has his own thoughts, feelings and mental processes that motivate behavior, which are separated from others’ [4]. Therefore, alexithymics are more likely to have difficulty in emotional self-regulation and mentalizing.

• Following the reviewer’s comments, we have modified theoretical background (see background section, paragraph 1, page 2) to further clarify this issue.

4. The definition of the concept of childhood trauma (eg. refers to a repeated pattern of damaging interactions between parent(s) or other significant adults and child that becomes typical of the relationship) is more the definition of complex trauma.

• We appreciate this thoughtful comment on the concept of childhood trauma and have revised the definition as ‘childhood trauma refers to the experience of an event by a child that is emotionally painful or distressful, which often results in lasting mental and physical effects’ (see background section, paragraph 2, line 3-4, page 5).

5. The description of the aims of the study starts describing three specific "efforts" and then two aims. This organization seems unclear.

• Following the reviewer’s comments, we have revised the objectives of the study as ‘the aims of the present paper were to (1) investigate the prevalence of alexithymia among prisoners in China and (2) identify the risk and protective factors for alexithymia among prisoners’ (see background section, paragraph 2, line 1-2, page 6).
• To further clarify this issue, we have modified the title of the manuscript to better fit the aims of the study (Prevalence and associated factors of alexithymia among adult prisoners in China: a cross-sectional study). We have also modified the abstract (see abstract section, paragraph 1, line 1-2, page 2), background (see background section, paragraph 2-3, page 4), results (see result section, page 11-13) and discussion (see discussion section, paragraph 1-2, page 15) of the manuscript to specify our aims.

6. The TAS scale has repeatedly shown serious reliability issues regarding the EOT scales. You only report a global Cronbach alpha.

• We really appreciate these important comments on reliability and validity of scales.

First, to further clarify this issue, we have revised the method part of the manuscript by revising and adding reliability and validity of scales one by one (see measure section, page 8-9).

Firstly, regarding the Toronto Alexithymia Scale (TAS), we added reliabilities, including internal consistency reliabilities and test-retest reliability, and content validities. Secondly, regarding the Childhood Trauma Questionnaire (CTQ), we added reliabilities, including internal consistency reliabilities and test-retest reliability, and content validity. Thirdly, regarding the Beck Depression Inventory-Second Edition (BDI-II), we added reliabilities, including internal consistency reliabilities, test-retest reliability, and content validity. Fourthly, regarding the Beck Anxiety Inventory (BAI), we added reliabilities, including internal consistency reliabilities, test-retest reliability, and content validity.

7. The effect sizes are in general very small. TAS-20 total score has a significant and positive correlation with duration in prison (r = 0.15, p < 0.01). These sizes of correlations are almost negligible. The same with trauma, correlations are weak and are interpreted on the text as if they were strong.

We really appreciate these comments for deeper thinking and studying.

There is one possible reason to explain why prisoners with longer duration in prison didn’t show higher level of alexithymia. As the existing literature has indicated, there are two different
perspectives on the nature of alexithymia. From one perspective, some researchers suggested that alexithymia is state-dependent and disappears after stressful situation has been evoked or experience has changed [8-10]. From another perspective, other researchers defined alexithymia as an enduring psychological trait that does not alter over time and remains persistent due to neurological defects or internalized object-relations systems which radically alter normal neuronal activity [2,11,12]. Based on the later one, it seems that alexithymia is an enduring psychological trait that is relatively stable over time no matter how long the prisoners are kept in prison. Thus, individuals with longer duration of imprisonment didn’t show higher level of alexithymia.

Considering other risk and protective factors could influence alexithymia among prisoners, we also evaluate the relationship between some sociodemographic factors and alexithymia including age, gender, education, marital status, region of origin and maximum sentence length. Therefore, to better reflect the aims of the study, we have modified the title of the manuscript from “Alexithymia, Duration in Prison, Childhood Trauma and Negative Emotions: a Cross sectional Study of 1,705 Prisoners in China” to “Prevalence and associated factors of alexithymia among adult prisoners in China: a cross-sectional study”. We have also modified the abstract (see abstract section, paragraph1, line 1-2, page 2), background (see background section, paragraph2-3, page 4), results (see result section, page 11-13) and discussion (see discussion section, paragraph1-2, page 15) of the manuscript to specify our aims.

8. Regarding the hierarchical regression, I would recommend using the global score of trauma rather than separate scales.// Here some of the standardized betas are also very low. (eg. Duration in prison has a beta of .06. that is less than one percent of explained variance within the whole model. I would not call that a significant or relevant result. )

We are grateful for the thoughtful recommendations and have used the global score of trauma rather than separate scales as the independent variable.

To control for more potential confounding factors, we used multivariate binary logistic regression rather than hierarchical regression to determine the risk factors for alexithymia of prisoners, and crude odds ratios and adjusted odds ratios (OR) and 95% confidence intervals (CIs) for OR were calculated. In logistic regression modeling, the dependent variable was whether the prisoner was alexithymic or not (if yes, then y = 1; otherwise, y = 0). The
demographic information (age, gender, education, marital status and region of origin), imprisonment information (maximum sentence length and duration in prison), symptoms of negative emotion information (depression, anxiety and hopelessness) and experience of childhood trauma of prisoners were considered as the independent variables. In the logistic regression model, education of adult prisoners were found to be an effective protective method to reduce the prevalence of alexithymia. In addition, symptoms of negative emotion (anxiety, depression and hopelessness) and the experience of childhood trauma were identified as significant risk factors for the experiences of alexithymia.

9. I would focus more the results in terms of prevalence and comparison with normal population (of all prevalence of alexithymia, symptoms, and trauma) but the relationships between those variables have not shown to be so strong. I would still try a more advanced statistical analysis maybe a SEM model predicting alexithymia. (think of mediation/moderation). The study being cross-sectional would be a limitation but you would get a stronger argument on whether these variables are related or not. If not, focus the paper on prevalence.

We really appreciate these comments for deeper thinking and further revising.

Following this specific suggestion, we have modified the title as well as the discussion of our manuscript to put more focus on the prevalence of alexithymia, symptoms, and trauma.

Firstly, we modified the title of the manuscript to better fit the aims of the study (Prevalence and associated factors of alexithymia among adult prisoners in China: a cross-sectional study).

Secondly, we added prevalence of childhood trauma and symptoms of negative emotion among the prisoners in the sections of result (see result section, page 11-12) and discussion (see discussion section, paragraph1-2, page 15).

Thirdly, we also modified the abstract (see abstract section, paragraph1, line 1-2, page 2) and conclusion (see conclusion section, paragraph1, line 1-2, page 17) of the manuscript to better explain our results.
II. THE REVIEWER #2’S COMMENTS AND MY RESPONSES

1. I would like to congratulate the authors on an interesting and important paper. Your study highlights the impact of prison on prisoners mental health.

   We are grateful for the positive assessment of the manuscript.

2. Firstly, one aspect that I would suggest you address in more detail in your background section and in your discussion is how childhood trauma might influence emotion/affect regulation, since emotion regulation is at the core of alexithymia. Increasingly research studies are suggesting that trauma types (abuse versus neglect) may have a differential impact on emotion-regulation and I think this is an important issue to mention in your paper, since you only found two types of trauma to be significant predictors in your regression model. This suggests to me that the other trauma types might be less important in terms of emotion-regulation.

   We appreciate this important comment.

   Firstly, childhood trauma could increase the risk of alexithymia by impairing affect-regulating capacity [13,14]. In the area of developmental psychology, studies have found that for those who are exposed to adversity, dysfunctional emotion regulation was usually already presented in their childhood ages [15,16]. Since adaptive emotion regulation is learned in the interaction with primary caregivers, chronic interpersonal trauma in early developmental stages is assumed to disrupt the development of adaptive emotion regulation [17]. For example, in one study, Shipman and colleagues, found that compared to healthy controls, children who experienced abuse were less able to understand and regulate emotions. They also expected to be receiving less emotional support and have more interpersonal conflict in response to expression of negative emotional states. Additionally, children who experienced neglect were less able to understand negative emotions such as anger and sadness, and had fewer adaptive emotional-regulation skills[18]. Furthermore, those who experienced childhood trauma lack proper vocabularies to express experiences in which powerful and sometimes overwhelming feelings are involved. These studies suggest that maltreated children, whether they experienced abuse trauma or neglect, may be defective in understanding and regulating emotions, and thus may have higher probability to suffer from alexithymia.
To further clarify this issue and to respond to this important comment, we modified background (see background section, paragraph 2, page 5) and discussion (see discussion section, paragraph 1, page 15) of the manuscript by specifying this association in detail.

Secondly, the findings of the existing studies on associations between different trauma types and alexithymia are inconsistent. Some research showed that there was no strong association between history of childhood sexual abuse and alexithymia [19-21]. For example, Kooiman and colleagues found that childhood sexual or physical abuse did not predict alexithymia in psychiatric outpatients and they suggested that other factors in addition to these might also play important roles in the development of inadequate affect regulation [19]. Later, in a study conducted among adult male substance dependent patients, the association between history of childhood physical or sexual abuse and alexithymia was found to be insignificant, but emotional abuse was the only predictor of alexithymia [20]. On the contrary, other researchers found that history of childhood sexual abuse was the key determinant for alexithymia. For example, in one study among substance-abusing outpatients, history of sexual abuse was strongly associated with alexithymia [22]. In our first manuscript, the results show that only two types of childhood traumas (emotional abuse and physical neglect) were the primary predictors of the alexithymia among prisoners. The differences in our findings might be due to different assessment scales used, different samples selected, different data analyses performed or cultural differences.

According to the first reviewer’s suggestion (Regarding the hierarchical regression, I would recommend using the global score of trauma rather than separate scales), in the revised manuscript, we used the global score of trauma rather than separate scales as the independent variable in the regression model in order to reduce the impact of multicollinearity.

3. Furthermore, I would also suggest that if you have information on the psychiatric history of your sample it would be best to report on this in your paper. In other words, do you know how many study participants have been diagnosed with a psychiatric disorder (for example in the past 6 months). If you don't have access to this information then I would suggest that you mention this as a study limitation. The reason being that results indicating that longer term prisoners have higher rates of alexithymia in my opinion may be confounded by the fact that these participants have psychiatric illnesses and that the illness may in fact be one of the factors driving a higher incidence of alexithymia.
In this study, we have collected individual-level information (age, gender, education, marital status and region of origin), imprisonment information (Maximum sentence length and duration in prison), symptoms of negative emotion information (depression, anxiety and hopelessness) and experience of childhood trauma. However, we have not collected information concerning psychiatric history of prisoners. The investigation of this factor could be key directions for future research. Therefore, in the section of limitation, we have acknowledged this limitation and pointed this out for our future study (see discussion section, paragraph 2, line 6-7, page 17).

4. Lastly, were you able to control for adult trauma. In general prison can be a very violent environment and this has made me wonder whether the higher incidence in alexithymia might not also be due to trauma other than that experienced during childhood (i.e. trauma experienced after the age of 18 years while in prison). If you were unable to measure adult trauma I would suggest that you mention this as a study limitation.

We appreciate this important suggestion for deep thinking.

Firstly, adult trauma in prison mainly refers to prisoner abuse. Prisoner abuse is the mistreatment of persons while they are under arrest or incarcerated. This action includes physical abuse, psychological abuse, sexual abuse, enhanced interrogation, torture and other abuse (Retrieved from http://en.wikipedia.org/wiki/Types_of_marriages). Prisoner abuse was found to be very prevalent. For example, one report in US said about 10% of inmates report being sexually abused while incarcerated. About 29% of the victims reported bruises, black eyes, sprains, cuts and scratches; 23% reported more serious injuries, including stab wounds, internal injuries, and broken bones.

Secondly, research over the past several decades has demonstrated a strong link between adverse or even traumatic childhood experiences and alexithymia during adolescence and adulthood. However, studies on adult trauma and alexithymia are still limited. Based on the previous research, trauma exposure was found to be strongly associated with the risk for dysfunctional emotion regulation. This may subsequently lead to alexithymia through impairments in imagination, symbolization, lifelong anhedonia, and insecure attachment styles. Therefore, we could assumed that there is a strong link between traumatic experiences in prison and alexithymia among the prisoners.
• In this study, we have not collected information concerning adult trauma, therefore, it is hard to explain the cause of higher incidence in alexithymia among adult prisoners is due to adult trauma or childhood trauma or both.

• The investigation of adult trauma could be key direction for future research. Therefore, in the section of limitation; we have acknowledged this limitation and pointed this out for our future study (see discussion section, paragraph 2, line 6-7, page 17).

II. THE EDITOR’S COMMENTS AND MY RESPONSES

1. A point-by-point response letter must accompany your revised manuscript. This letter must provide a detailed response to each reviewer/editorial point raised, describing exactly what amendments have been made to the manuscript text and where these can be viewed (e.g. Methods section, line 12, page 5). Please also ensure that all changes to the manuscript are indicated in the text by highlighting or using track changes. If you disagree with any comments raised, please provide a detailed rebuttal to help explain and justify your decision.

• We are grateful for the thoughtful decision for inviting a revision. We truly appreciate the thoughtful recommendations for primary revision strategies in order to address the reviewers’ comments adequately and appropriately. We have used these recommendations carefully to guide the revision process and responded to the reviewer’s comments in detail in the Reviewer section.

• We have followed the guide when revising the manuscript and preparing all the source files of resubmission.

Overall, we really appreciate your letter and the reviewers’ insightful comments and have complied with the helpful suggestions to the best of our ability. We hope that these revisions will be satisfactory, and we will be glad to implement further changes that you might recommend.
Following the editorial letter, we have submitted the revised manuscript and the resubmission cover letter in Word to the BMC Psychiatry website, and meanwhile emailed you the revised manuscript in Word with the feature of Track Changes as well as the resubmission cover letter.

Thank you and the reviewers again for valuable suggestions. We look forward to hearing from you soon. Correspondence can be sent to: Li Chen at Department of Psychology, Wenzhou Medical University, Wenzhou, China; E-mail: psychologyhchenli@163.com; Office Phone: 86-577-86699128; Mobile Phone: +8613506648571; Fax number: 86-577-86699122.

Sincerely yours,

Li Chen

References


