

Emotional Stimulus Sensitivity among Chinese: Is There a Correlation with Dissociative Experiences?

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Abstract: Using the Dissociative Experience Scale (DES-II) and the Emotional Sensitivity Scale (ESS), this study examines the association between emotional sensitivity and dissociative experiences in a Chinese population. Most of the dissociation research has concentrated on Western people; however, this study bridges the cultural divide by looking at comparable occurrences in China. The results indicate a strong positive connection between emotional sensitivity and dissociation after adjusting for gender, anxiety, and depression. These results imply that people who are more sensitive to emotions may be more likely to have dissociative experiences, maybe because of having trouble controlling strong feelings. This study emphasizes the necessity for culturally competent therapies and advances our understanding of dissociation in non-Western environments.

Keywords: Dissociative experience, Emotional stimulus sensitivity, China

1. Introduction

Dissociation is an intricate mental phenomenon denoting disintegration from various aspects of the mind, including thinking, feeling, recollection, or an individual sense of self. This phenomenon is capable of manifesting in a variety of ways, such as experiences that are comparatively mild, like not remembering a name for a moment, to more severe and chronic experiences that interfere with one's daily life. Researchers often use the revised Dissociative Experience Scale (DES-II) to evaluate the depth and frequency of the dissociative experiences [1]. Through a single-item measure, these analytics would provide a common ground for the assessment and comparison of the dissociative tendencies of individuals on the statistical level. The DES-II is especially helpful, both in clinical settings where one needs to be familiar with the frequency and intensity of dissociative symptoms, and in research where studies need to be based on accurate diagnostic tools.

Most of the research of dissociation have been mainly conducted within the cultures that are commonly referred to as WEIRD (Western, Educated, Industrialized, Rich, and Democratic). As a result, the current understanding on possible variations of such a phenomenon among non-Western cultures, mainly in China, remains limited. A psychological concept of dissociation is not well acknowledged in the nation's culture or system of psychology, although it receives growing recognition in contemporary Chinese popular culture [2]. This unknowledge may be influenced as something cultural if their explanation is given to the dissociative symptoms.

In Chinese society, dissociative phenomena, such as dissociation, would often be put in a specific religious context in a belief of spirit possession or ancestral influence [3]. Hence, persons suffering from dissociation will not strive for therapy in the psychological or psychiatric domain. Conversely,

some individuals may seek help from local traditional practitioners, such as Taoist priests or alternative medical healers, who would recommend treatments that work as psychological placebo, which does no good but relieve psychological symptoms. Such cultural context influences highly the diagnosis and therapy of dissociation, while also manifests the need for culturally based research and clinical strategies in exploring and coping with dissociation in the Chinese populations.

Additionally, existing studies on dissociation have focused more on the relationship between trauma and dissociation, particularly childhood trauma, or viewed dissociation as a side effect of complex disorders, like Post-Traumatic Stress Disorder (PTSD) [4]. The approaches have nourished valuable knowledge; however, the neurocognitive theories that underlie the phenomenon of dissociation are still circumstantial and not so much tested. This gap in subjective knows is basically because of the intrinsic complexity of dissociative events, which do not yield right away to simple explanations.

In the case of traditional clinical models, dissociation arises from a diminished sensitivity to emotional stimuli, leading to impaired encoding and recall of experiences during emotionally charged events [5]. This perspective holds that those dissociating may "switch off" emotional signals while going through these situations. The result of this will be a disconnection from the event and possibly an inaccurate event recall. Whereas, by the side of this is the results coming from other studies such as research by A. Oathes, H. Ray, which will challenge the assumption [6]. Information obtained from such research showed that people with dissociation prided themselves when it came to processing of emotional stimuli, not just equivalently, but even acuter than people without dissociation. This suggests that disassociators can learn to function in an environment with more exposure to emotional stimuli than previously thought, which could lead to dissociative experiences serving as a means of coping with overwhelming emotional stimuli. The development of these new findings has implications for a major revision of the cognitive processes underlying this phenomenon and adds urgency to the task of further research on the intricacies of emotional sensitivity associated with dissociative responses.

Since the memories of dissociators are all autobiographical, that is, the memory of events that they have personally experienced [7]. Therefore, the objective of this study is to ascertain if the two concepts (emotional sensitivity and dissociation) are related to each other among the events of daily life. The Emotional Sensitivity Scale (ESS) was utilized to reflect one's reactions and outcome of their appraisal to emotional events; the aim is to assess their ability or speed to relate/feel those events were brought on by the evoked emotions. Here, simply all items are daily life occurrences. I hypothesize that there is a positive correlation between emotional reactions to events and dissociative experiences, after excluding the influence of confounding variables such as depression and anxiety, since it has been shown in previous studies that dissociation is often associated with depression and anxiety [8]. The use of Chinese samples in this study will not only further examine this process of disassociation in the context of China but also intensify the psychological understanding of individuals in this region. Moreover, we will be able to seek for other applicable treatment options for the Chinese dissociators.

2. Methods

2.1. Participants

Participants were recruited online using popular Chinese social media platforms such as WeChat and QQ. They accessed the questionnaire by scanning a QR code that was shared on these platforms. A total of 176 individuals participated in the survey; however, 26 participants were excluded for not meeting the age requirements specified by the DES-II.

The final sample consisted of 150 participants, including 38 males and 112 females. The male participants ranged in age from 18 to 50 years, with a mean age of 23.29 years ($SD = 6.69$). The female participants ranged in age from 18 to 41 years, with a mean age of 21.91 years ($SD = 3.51$). In terms of education, seven participants had completed high school, 71 had a college degree, 57 held a bachelor's degree, and 15 had a graduate degree or higher. This diverse sample provides a broad perspective on the relationship between emotional eating and dissociative experiences across different ages and educational backgrounds.

2.2. Procedure

I examined participants' dissociation using the DES-II, a 28-item self-report scale. It is a Likert scale ranging from 0% (never) to 100% (always), i.e., it contains 11 options in 10% increments. It is used to measure dissociative experiences in daily life related to depersonalization, derealization, amnesia, and preoccupation. DES-II can be used to diagnose dissociative disorders and to assess the severity of dissociative symptoms.

The EES was used to measure participants' emotional sensitivity to events, and it is a 43-item self-report measure, all rated on a 4-point Likert scale ranging from 0 "strongly disagree" to 3 "strongly agree". This scale was adapted from the Emotional Sensitivity Scale (ESS) [9], using the same factors, with the only change being the choice of self-test. The ESS consists of two factors: Negative Emotional Sensitivity (NES) (self-centered), with 28 items, and Positive Emotional Sensitivity (PES), with 15 items. PES is an index of empathic concern, while personal distress is characteristic of the negative NES scale.

The Beck Depression Inventory (BDI) is a 21-item self-report scale that measures characteristic attitudes and symptoms of depression and is the most common depression screening tool. It is scored between 0 and 3, and all but two items have four statements of increasing intensity within the domain. Participants select the option that best describes their state based on how they have felt over the past two weeks, with a total score range of 0 to 63.

The trait version of the State-Trait Anxiety Inventory (STAI) is also used, a 20-item self-report scale. This section assesses an individual's chronic tendency to be anxious and reflects an individual's general level or tendency to be anxious. Each question is scored on a 4-point scale (1 = not at all, 4 = a lot), with a total score range of 20 to 80.

2.3. Analysis

Statistical analysis was conducted by means of Python. Through the descriptive statistics, the demographic data and sample characteristics have been examined. The relationship between the ESS and the DES-II scores was determined by the Pearson correlation coefficient, i.e., the value of Pearson r . For a deeper understanding of the effects of depression and anxiety on dissociative experiences, the mechanism of linear regression was further employed, with depression and anxiety as the predictors and the DES-II scores being predicted. The residuals of the model, which represent the DES-II scores resulting from the adjusting for depression and anxiety, were, thus, finally computed. The results which indicate the association and the significance (p-value) between these residuals, i.e., the DES-II scores with depression and anxiety excluded and the ESS scores, were obtained as they were obtained using the Pearson r method. This method of analysis did make it possible to show in more detail the connection between ESS and the DES-II scores, regardless of depression and anxiety.

3. The results and discussions

3.1. Statistical results

As expected, the first associations between DES-II and ESS scores were moderate and significant statistically. The Pearson correlation coefficient demonstrated a positive linear relationship between ESS and DES-II scores which are moderate with $r = 0.5006$ and $p < 0.01$. This implies that with an increase in ESS scores, DES-II scores likewise can be another possibility.

Then, the linear regression was used to control the effects of depression and anxiety on the DES-II scores, and the correlation between ESS and DES-II scores decreased but remained statistically significant as $r = 0.1988$ and $p < 0.05$. These findings show that even after accounting for depression and anxiety, the positive association between ESS and DES scores remains significant.

3.2. Discussions

This study made use of a self-report measurement scale that analyzed a correlation between ESS scales and DES-II scales among Chinese people. Moreover, the analysis was done by controlling for the influence of depression and anxiety aimed at avoiding confounding the results. Statistical analysis demonstrated the presence of a relationship: the group with the highest scores in ESS also reported high scores of DES-II.

This research study offers convincing proof of a significant association between the individuals who exhibit sensitivity to emotional stimuli and the ones whom it is likely to experience dissociation. These results suggest that those who have greater tendencies to be oversensitive to emotional triggers are more probable to enter dissociative states than the others. This could probably be since their emotional reactions are more severe than those of other people, thus making it almost impossible for them to use other emotional regulating strategies effectively. As a result, individuals like these may develop dissociation as a strategic device to escape or create some psychological distance from the unpleasant feeling or an emotionally charged situation.

Such a dissociative response can be seen as a coping mechanism that helps them to disconnect from the severity of their emotions in times when other ideas prove ineffective. Also, the regression model shows that not only depression but also anxiety hazardous correlate variables of dissociation. This suggests that individuals who experience severe depressive and anxiety levels more frequently report higher dissociative symptoms. This will contribute to the lifting of the veil on what most people understand about dissociation as just one form of another diagnosable mental disorder [10]. They also offer support in the sense that it is common for people who are depressed and anxious to resort to bouts of confusion.

It is also important to mention that, although anxiety traits and dissociation are correlated, the link is weak. Regarding the relationship between the traditional Chinese perspective and anxiety, it is likely that, based on the perspective, anxiety should be countered by action. Thus, in terms of behavior to go off the anxiety, many of the people in China may employ different activities instead of self-dissociation to reduce anxiety [11].

It is not unexpected that, once anxiety and sadness were considered, the effect size between dissociative tendencies and emotional sensitivity shrank from large to minor. change suggests that emotional sensitivity continues to have a strong but more moderate relationship with dissociative tendencies even when examined separately. smaller impact size indicates that emotional sensitivity itself is still a contributing element, even though anxiety and depression are major factors in enhancing the association between emotional sensitivity and dissociation.

Examining the fundamental traits of emotional sensitivity and dissociative tendencies helps explain this connection. People who are highly sensitive to emotions typically feel emotions more

profoundly and respond to emotional stimuli with greater intensity. They are so frequently more prone to experiencing emotional overload. Dissociation can function as a coping technique when these emotions become too strong to handle or comprehend. It gives emotionally sensitive people a means of separating themselves from intense emotions that could otherwise have detrimental effects on their mental and/or physical health, such as increased stress, anxiety, or even physical discomfort. Dissociation can occur when other emotional regulation techniques are inadequate or fail to reduce emotional pain, even if it is not always the natural coping mechanism for emotionally sensitive people.

The study's findings provide insightful information about the cognitive aspects of dissociation, information that will be especially helpful for Chinese research and treatment methods. We can learn more about the complex emotional and cognitive processes involved in dissociation by improving our comprehension of its cognitive components. Early support and intervention are made possible by the identification of people with high emotional sensitivity, who may be more prone to dissociative reactions. This proactive strategy can aid in halting the emergence of more serious psychological problems.

The present investigation is not without limits. First off, this study did not account for personality qualities, stress levels, or significant life events, among other factors that may influence dissociative experiences beyond sadness and anxiety. The robustness and interpretability of the results could be impacted by the lack of these controls. The nature of data collection using online questionnaires, which can cause respondent fatigue when too many self-report items are included, had a role in the choice to restrict the number of variables. Future studies should think about include a wider variety of possible confounding variables to overcome these restrictions. This will enable a more thorough control analysis, which will improve the reliability and validity of the results.

Second, the Emotional Sensitivity Scale used in this research is a recently created tool. This measure was chosen because it was determined that a correlational research design using a self-report scale would be appropriate given the focus on emotional sensitivity. The scale is still not commonly used in the field, despite early validation studies showing its validity. Additional empirical replication is needed to confirm the scale's resilience. Furthermore, because it is a self-report measure, subjectivity is introduced because respondents' perceptions could be skewed by personal prejudices. Experiments conducted in controlled laboratory environments could be used into studies to improve the objectivity of subsequent research. For example, using the Emotional Stroop Task could generate data less vulnerable to bias and offer a more accurate measure of emotional sensitivity.

Lastly, because data collection is done online, there are additional environmental confounding variables that could affect participants' answers. For instance, a noisy setting may make it difficult for participants to concentrate, or outside distractions may prevent them from finishing the survey. Since these uncontrollable variables cannot be completely accounted for in the study, there are issues in assuring the consistency and trustworthiness of the data. Future studies should investigate ways to lessen the effects of these external factors, such adding attention tests or giving participants guidance on how to avoid being distracted while participating.

4. Conclusion

This study investigated the correlation between emotional sensitivity and dissociative experiences in a Chinese sample, addressing a gap in existing research that predominantly focuses on Western populations. The analysis, which controlled for depression and anxiety, revealed a significant positive correlation between emotional sensitivity and dissociative tendencies. This indicates that individuals with heightened emotional sensitivity are more prone to dissociative experiences, likely due to difficulties in managing intense emotions.

The decrease in the effect size of this correlation after accounting for depression and anxiety highlights the significant role these factors play in amplifying the relationship between emotional

sensitivity and dissociation. Despite this reduction, a moderate correlation persists, suggesting that emotional sensitivity independently contributes to dissociative tendencies.

The findings underscore the importance of considering cultural contexts in research on dissociation. They suggest that emotionally sensitive individuals may use dissociation as a coping mechanism to manage overwhelming emotional experiences. These insights contribute to a better understanding of dissociative phenomena in non-Western populations and emphasize the need for culturally appropriate interventions and treatments.

Future research should explore additional variables that may influence dissociative experiences and consider experimental methods to enhance the accuracy of assessments related to emotional sensitivity. Such efforts will further elucidate the complex relationship between emotional sensitivity and dissociation and improve intervention strategies tailored to diverse cultural contexts.

References

- [1] VANIJZENDOORN, M., & SCHUENGEL, C. (1996). *The measurement of dissociation in normal and clinical populations: Meta-analytic validation of the dissociative experiences scale (DES)*. *Clinical Psychology Review*, 16(5), 365–382. [https://doi.org/10.1016/0272-7358\(96\)00006-2](https://doi.org/10.1016/0272-7358(96)00006-2)
- [2] Xiao, Z., Yan, H., Wang, Z., Zou, Z., Xu, M.D., Y., Chen, M.D., J., Zhang, M.D., H., Ross, C. A., & Keyes, B. B. (2006). *Trauma and dissociation in China*. *American Journal of Psychiatry*, 163(8), 1388–1391. <https://doi.org/10.1176/ajp.2006.163.8.1388>
- [3] Fung, H. W., Geng, F., Yuan, D., Zhan, N., & Lee, V. W. (2023). *Childhood experiences and dissociation among high school students in China: Theoretical reexamination and clinical implications*. *International Journal of Social Psychiatry*, 69(8), 1949–1957. <https://doi.org/10.1177/00207640231181528>
- [4] Loewenstein, R. J. (2018). *Dissociation debates: Everything you know is wrong*. *Dialogues in Clinical Neuroscience*, 20(3), 229–242. <https://doi.org/10.31887/dcn.2018.20.3/rloewenstein>
- [5] Foa, E. B., & Kozak, M. J. (1986). *Emotional processing of fear: Exposure to corrective information*. *Psychological Bulletin*, 99(1), 20–35. <https://doi.org/10.1037//0033-2909.99.1.20>
- [6] Oathes, D. J., & Ray, W. J. (2008). *Dissociative tendencies and facilitated emotional processing*. *Emotion*, 8(5), 653–661. <https://doi.org/10.1037/a0013442>
- [7] Reinhold, N., & Markowitsch, H. J. (2009). *Retrograde episodic memory and emotion: A perspective from patients with dissociative amnesia*. *Neuropsychologia*, 47(11), 2197–2206. <https://doi.org/10.1016/j.neuropsychologia.2009.01.037>
- [8] Coutinho, J. F., Fernandes, S. V., Soares, J. M., Maia, L., Gonçalves, Ó. F., & Sampaio, A. (2015). *Default mode network dissociation in depressive and Anxiety States*. *Brain Imaging and Behavior*, 10(1), 147–157. <https://doi.org/10.1007/s11682-015-9375-7>
- [9] Guarino, R. 2003. *Emotional sensitivity: A new measure of emotional lability and its moderating role in the stress-illness relationship*. Unpublished Ph.D. thesis, Department of Psychology, University of York, York, UK
- [10] Lyssenko, L., Schmahl, C., Bockhacker, L., Vonderlin, R., Bohus, M., & Kleindienst, N. (2018). *Dissociation in psychiatric disorders: A meta-analysis of studies using the dissociative experiences scale*. *American Journal of Psychiatry*, 175(1), 37–46. <https://doi.org/10.1176/appi.ajp.2017.17010025>
- [11] Gu, H. (2021). *Mental health in Chinese international students: The relationship between test anxiety, anxiety levels and coping strategies*. 2021 2nd Asia-Pacific Conference on Image Processing, Electronics and Computers, 1110–1114. <https://doi.org/10.1145/3452446.3452732>