The Impact of Distorted Perception on Social Anxiety Disorder and Relevant Cultural Factors

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Abstract. Social anxiety disorder (SAD) is an anxiety disorder that occurs in social situations. Patients with SAD often have trouble with social contact. For example, they may have an extreme fear of talking with others and worry about being noticed. The symptoms of SAD usually last for a long period. Specifically, SAD would cause serious negative effects on patients' life and work. With a review of previous literature, this paper focuses on two potential risk factors of SAD: distorted perceptions and cultural influence. According to studies of atypical social perceptions, people with SAD tend to believe that others, including themselves, hold a negative impression of them, and they cannot control their perception of emotions, which would cause their anxiety. The impacts of distorted perception also cover post-event perception (PEP) and perception of self-performance in SAD. PEP is driven by positive metacognitive beliefs and negative self-perception. Furthermore, the interaction of self-perception and external feedback would affect patients with social anxiety's post-event reflection. Cultural variations occur in SAD as well. There are different possibilities of suffering from SAD among nations with different cultural atmospheres, such as individualism or collectivism. Also, certain types of SAD have been proved to be influenced by specific cultures, e.g., Taijin kyofusho (TKS). More research is still needed to explore the complex relationship between SAD and the two factors. Based on previous literature, this paper clarifies how distorted perception and cultural atmosphere contribute to the development of SAD, which can provide guidance to interventions for SAD.

Keywords: Social Anxiety Disorder · Distorted Perception · PEP · Cultural Factors

1 Introduction

Social anxiety disorder (SAD) refers to the persistent and severe fear of being exposed to strangers or being stared in social situations, which can seriously affect the life of its sufferers. For patients with SAD, tension, or anxiety usually lasts for a long period. When the patients are socializing, such as speaking and eating in public places, introducing

themselves to strangers, receiving visitors, and being stared at, the jitters often occur. In the same social setting, people with SAD experience a greater sense of fear than typically developing people and can even experience physical reactions including a rapid heartbeat, sweating, and shaking [1]. People with social anxiety disorder may be trapped in a vicious cycle where fear of being judged leads to lack of social skills. The shortage of social experience is caused by the shortage of social skills. Plus, avoidance of certain situations because of lack of experience, and avoidance leads to fear of being judged were also present. Perception refers to feeling and consciousness. Facial expression perception, body language perception, speech tone perception, and text reading perception are all specific perceptions. Perception is a unique characteristic of living things, especially human beings. People with keen perception react more intensely to stimuli given by the outside world than control group. People with different perceptual abilities are also likely to have different social abilities and experiences, because people with different perceptual abilities may have different emotional and behavioral responses to the same event. Because different perceptions lead to different social experiences, it's possible that people with SAD have different perceptions compared to the general population.

Environmental, biochemical, and genetic factors may all play a role in social anxiety disorder, according to previous research [2]. However, more trials and data are required to illustrate the necessary relationship between them, as well as the relative importance of the various explanations [3]. There have been no more extensive trials on family inheritance, not just genes, but also family education, peer contact, and gender, even though numerous research has undertaken detailed assessments of SAD. It is yet to be determined whether SAD is mainly triggered by genes or by family environment. There is also a physiological difference between males and females with SAD because of the gender differences, and it has yet to be determined if androgens and estrogens affect the onset and development of SAD. Last but not least, there's an issue regarding which treatment is the most effective one. People's levels of brain development vary according to their age groupings that might also impact the effectiveness of treatments.

While social anxiety has become a debated topic now, more and more people pay attention to its etiology, development, and treatment. Since social anxiety is a response to the social environment, most research studies focus on the environmental and biological factors, especially the influence of inheritance and the difference between genders. However, more studies are required to clarify the complex relationships. Furthermore, it is essential to understand other potential risk factors. Very limited studies investigated how distorted perception and relevant cultural factors affect SAD. Therefore, by reviewing previous literature, this paper aims to analyze the perceptual and cultural factors in SAD, to have a deeper understanding regarding SAD and its treatment. This review covered three basic parts: atypical social perception in SAD, atypical post-event perception and self-perception in SAD, and cultural differences in social anxiety. The part of perceptual factors includes several critical models of the perception of social interaction and performance. The part of cultural factors involves two experiments which investigated the culturally specific phenomena of SAD and a review of a specific type of SAD - Taijin kyofusho (TKS). Overall, this paper covers the ignored but essential factors of SAD: distorted perceptions and cultural influences. It could help people have a deeper

understanding of SAD and its etiology. This review can also provide guidance to the development of interventions for SAD with considering the cultural factors.

2 Atypical Social Perception in SAD

The atypical social perceptions of people with social anxiety are caused by the belief that others, including themselves, have a negative view of them. Based on the review of the literature on the causes of social phobia and studied the effects of people's self-cognition and others' cognition on social phobia [4]. The specific research subjects were 1740 undergraduates who took psychology courses and obtained additional credits for participating in research experiments. They were tested for depression, severity and impact on life through social anxiety scale and Sheehan Disability Scale [4]. There are 31 experimental sessions in total, with two people with social anxiety disorder and two people without social anxiety disorder. In each session. In every trait measured, those with high levels of social anxiety believed others had a negative opinion of them, according to the study's findings. The social relations model was utilized in this study to provide a fresh look at the perceptions and meta-perceptions of people with pathological levels of social anxiety. According to the findings, the people with SAD thinks that other people's prejudice is more about their own unfavorable self-concept and how interacting partners see them [4]. This negative opinion is not shared by interactive partners. Finally, the researchers discovered that SA have a poor perception of themselves and believe that others have a negative perception of them. These strong views about oneself and others may be central to the pathophysiology of social phobia, and they should be a focus of therapeutic intervention.

The atypical social cognition of people with social phobia may also be due to their often inability to control the perception of emotions. There was a research focused on the relationship between catastrophic thinking and anxiety in social phobia, and it evaluated the relevant literature to show that the perception of emotional control lies at the heart of anxiety condition [5]. The purpose of this study was to see if there was a link between perceived emotional control, estimated social costs, and subjective anxiety. Three structural equation models were compared. The social phobia and anxiety scale, Liebowitz Social Anxiety Scale, anxiety management questionnaire, and social cost questionnaire were used to collect data [5]. Model 1 believes that social cost and perceived anxiety control influence social anxiety in separate ways. Model 2 is in line with the cognitive model, which places a premium on social costs. Model 3 implies that perceived emotion control partially mediates the association between anticipated social costs and social anxiety, as predicted by emotion theory. A total of 144 social phobia sufferers were enlisted to self-report on the three models. The findings suggest that the social environment may contributes to anxiety, and that people with social phobia believe their anxiety symptoms are out of their control. Changes in perceived anxiety control may also regulate changes in projected societal costs.

Finally, atypical social cognition in people with social anxiety disorder can also be caused by their preoccupation with their physical state. There is a research focused on the pulse perception of social anxiety before and during speech expectation in their study [6]. They looked at the cognitive model of social phobia as well as some studies that showed

that people with social anxiety disorder have a distorted self-image in social situations, which is influenced at least in part by internal receptive cues, and that heartbeat perception is linked to social anxiety [6]. The German version of the dread of negative appraisal scale was utilized by survey participants. The perception of social situations for 1500 freshmen is the administration of screening questionnaires as part of an online survey. The heartbeat detection paradigm created by Schandry is used to measure heartbeat detection. When speaking and not speaking, participants' heart rates and anxiety levels were assessed and compared to their own. The results reveal that, as compared to people with low level of social anxiety, people with high level of social anxiety is always able to detect their heartbeat at baseline and throughout predicted speech. Because more real heartbeats were recognized, the high anxiety group had lower error ratings. The findings revealed that people with high social anxiety identified their heartbeat more accurately at baseline and during planned speaking, which could lead to an excessive belief in symptom visibility and unfavorable judgment [6].

3 Atypical Post-event Perception and Self-perception in SAD

3.1 Post-event Perception in SAD

Post-event perception(PEP) is a valuable phenomenon in the cognitive model of SAD. It emphasizes the biased cognitive processing after the occurrence of social events and is a key factor for the maintenance of anxiety symptoms. People with SAD have more PEP behaviors after socializing, positive metacognitive beliefs and negative self-perception drive PEP. Post-event rumination is a phenomenon similar to PEP, in which an unsuccessful or unsatisfactory social event often leads to Post-event rumination. People with SAD tend to do more negative thinking after social events, leading to a vicious cycle of social anxiety. PEP is combined with existing CBT models for social anxiety to reduce anxiety symptoms by improving patients' self-perception through methods such as exposure therapy. In the study of Gavric et al., positive metacognitive beliefs and perceptions of the capability contribution to PEP performance in SAD patients was assessed by questionnaire and scale [7]. The subjects were divided into three control groups: SAD patients, anxious control group and a healthy control group. The study have shown that individuals with high levels of social anxiety were more likely to have PEP and be affected by PEP than a control group with healthy levels of social anxiety. In this study, SAD patients were found to have more PEP behavior after the speech, because they found themselves salient during the speech when they were alone. People with social anxiety are actively recalling and reactivating their memory of the speech long after the event, and SAD patients can use PEP to facilitate memory changes. Patients with SAD are significantly affected by positive metacognitive beliefs, which may mean that PEP initiation and persistence in SAD are affected by positive metacognitive beliefs. The results show that positive metacognitive beliefs and performance perception play important mediating roles. Positive metacognitive beliefs and negative self-perception drive PEP in SAD patients.

Hofmann summarized and reconsidered existing CBT models and treatment approaches to develop a solution-specific CBT model for SAD. This model assumes that social phobia is related to impractical social standards and a lack of choices about

achievable social goals [8]. When SAD patients face scary and challenging social situations, they become more aware of their own anxiety and overvalue the negative effects of social interaction, believe that the SAD patients cannot control their internal emotional reactions, and believe that their social ability are inadequate to deal effectively with the social environment. After the situation has passed, the individual ruminates afterwards, leading to more social fear in the afterward. This model has direct therapeutic significance. It can help patients revise definitions of social standards and goals and reduce anxiety in such situations; By encouraging individuals to turn their attention to external cues rather than their own negative state, exposure exercises can help patients perceive that their own feelings are not dangerous; The model modifies patients' self-perception through video and audio feedback. Patients who overestimate social costs are treated by artificially creating social disasters. In this model, safe behaviors and avoidance strategies are key maintenance elements that help SAD patients adapt to deal with negative social events through repeated and continuous exposure to social environments. In conclusion, positive metacognitive beliefs and negative self-perception drive PEP, and the corresponding exposure exercise can effectively improve the self-evaluation of SAD patients, thereby reducing social anxiety.

3.2 Perception of Self-performance in SAD

The post-event processing of SAD patients is influenced by a feedback system, which includes feedback from others as well as feedback about their own behavior. SAD patients are more sensitive to feedback from different sources and have a low cognitive evaluation of self-performance, which affects social performance. External feedback interacts with the perception of their own performance, and this comprehensive evaluation will affect the reflection of patients with social anxiety after the event. In the study by Zou and Abbott, clinical group and control group were selected by using the Social Phobia Scale and the Brief Fear of Negative Evaluation Scale [9, 10]. Perception of performance on PEP was studied through behavioral experiments and interactive tasks [11]. This study found that feedback with medium scores was particularly detrimental to self-performance evaluation and negative reflection in SAD patients, possibly because the feedback system is subjective, so the real situation may be ambiguous, and this ambiguity increases the likelihood of PEP occurrence. Studies have shown that distorted cognition during PEP can affect cognitive processes. People with social anxiety disorder are prone to distorted cognition in anxiety-induced situations, and social feedback may also affect such cognition. Therefore, in the social context, patients with SAD will consider the self-perception of their own performance and external social feedback, and the two factors will interact with each other, and this self-evaluation in turn affects their reflection afterwards. Another finding was that the social anxiety group reported significantly higher levels of positive and negative rumination than the control group. Feedback doesn't stop them from thinking positively. One possible explanation for this phenomenon is that people with SAD are more used to thinking through all aspects of social interactions, but experience greater levels of negative thinking when faced with ambiguity. In general, medium feedback can lead to negative self-performance evaluation and reflection of SAD patients, and the subjectivity of feedback system can easily lead to PEP. And

because SAD patients think broadly about all aspects of social performance, they have higher levels of both positive and negative rumination than the control group.

4   Cultural Differences in Social Anxiety

4.1   Cultural Differences of Social Anxiety Trait in Typical Development

Because different cultures own different social norms, people from different nations will have different perceptions of the same behavior. That's why cultural differences exist in the development of SAD. Heinrichs et al. conducted an experiment to explore how patients from collectivistic and individualistic countries are different from each other [12]. In the study by Heinrichs et al., the cultural influence was considered as a potential factor related to social anxiety and was investigated through vignettes to discover the relationship between cultural norms and social anxiety. In the study, 909 participants from eight countries needed to complete 16 vignettes regarding different behaviors in different social situations; their responses would be divided into two dimensions: personal norm and cultural norm. It was found that individualistic nations were less receptive of socially withdrawn and reticent attitudes than collectivist cultures, and individualistic nations also showed lower degrees of social anxiety and blushing panic than collectivistic countries; however, because socially reticent conduct did not give an unfavorable impression or strike someone as strange, the clinical diagnostic was less frequent in collectivistic nations. Although individuals' own perceptions on socially withdrawn conduct did not change significantly across individualistic and collectivistic cultures, it also indicates that countries with different social norms and cultures caused individuals' different perceptions of social anxiety.

4.2   Cultural Variation in SAD

Some main differences come from individual's perception of social anxiety and risk of suffering from SAD among nations. Certain types of SAD can also be the evidence of cultural variation in SAD. Some SADs have been proved to be influenced cultural environment specifically: TKS is a common example among nations like Japan and Korea instead of other European countries, and the spread of TKS could be attributed to social media to some extent. Mohammadi et al. conducted a study in an Iranian population to explore the cultural aspects of social anxiety disorder [13]. In the study, a qualitative content analysis research was adopted among 16 participants from different ethical backgrounds with social anxiety disorder: they needed to answer relevant questions including anxiety-related personal experiences and perceptions, anxiety-related causes, and anxiety-related coping mechanisms. The result indicated that SAD symptoms and related psychological processes were a worldwide issue, but people had different perception of social anxiety. Also, some types of SAD might be more culturally influenced, so therapy should be adapted to their needs. Therefore, although social phobia is a global issue, but nations of different cultures have particular effect on the disorder.

Other studies also find the different rates of SAD among nations and explain that TKS is influenced by a specific culture. For instance, Hinton et al. investigated the

cultural aspects of social anxiety and social anxiety disorder through the review of the literature on the prevalence rates, expressions, and treatments of SAD [14]. Specifically, they also reviewed further potential factors that caused the differences in social anxiety including different cultures, like individualism/collectivism, perception of social norms, self-construal, gender roles, and gender role identification. Their findings showed that the prevalence and manifestation of social anxiety/SAD were culturally specific: the lowest rates of SAD were found in Asian cultures, whereas the greatest rates were found in Russian and American populations. A specific example of SAD, TKS, was proposed to explain the phenomenon: although TKS could be found in other cultures, symptoms clustered in specific cultural circumstances, and a syndrome label had been assigned to them; therefore, the key factor that caused TKS was the particular cultural atmosphere in Korea and Japan. From the example of TKS, it can be found that different cultures cause different influence on the development of SAD, thus causing different symptoms of SAD.

5   Conclusion

This review discussed SAD from three different aspects. First, social cognition and perception in SAD are atypical. For example, they perceive others to have a negative opinion of them, and they often have no control over their own perception of emotions. Atypical post-event perception and self-perception are also found in SAD. In the manifestation of atypical social perception in SAD, it discussed that patients with social phobia have difficulty in controlling their emotions and have a strong heartbeat perception and that the condition is caused by many factors. SAD patients are more sensitive to feedback from different sources and have a lower cognitive evaluation of self-expression. Cultures with different social norms are likely to cause individuals to have different views regarding social anxiety. In individualistic countries, people are more receptive to social withdrawal and silence compared to collectivist cultures, which may lead to different perceptions of social anxiety. Plus, some subtypes of SAD have been shown to be particularly influenced by cultural context, with the prevalence and manifestations of social anxiety being culturally specific. In addition, many widespread social anxiety problems are related with social media and other forms of mass media. Overall, cultural influences are an important factor of social anxiety.

There are some limitations in previous studies. The characteristics and changes during the premorbid and prodromal stages are unclear. In addition, the existing studies on SAD are all comparative experiments, and there are few long-term follow-up studies, so it is difficult to understand the long-term effects of relevant treatment. Future research trends should conduct more longitudinal experiments and focus more on the premorbid and prodromal stages of SAD. This review deepened the understanding of perception in SAD, which could provide guidance for the development of interventions for SAD patients in different cultural contexts.

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