Original Paper

Self-Focused Attention and Social Anxiety: The Mediating Role of Control

Liu Beiying[1*]

[1] Guangzhou Huashang Vocational College, Guangzhou 511300, Guangdong, China

[*] Liu Beiying, Guangzhou Huashang Vocational College, Guangzhou 511300, Guangdong, China

Abstract

Objective: To study the relationship between control, self-focused attention (self-consciousness), and social anxiety. Methods: A total of 100 online questionnaires were distributed and collected, utilizing the Self-Consciousness Scale, Shapiro Control Questionnaire, and Social Interaction Anxiety Scale. A mediating relationship model was constructed. Results: Social anxiety had a significant negative correlation with control and a significant positive correlation with public self-consciousness, but no significant correlation with private self-consciousness. Control partially mediated the relationship between public self-consciousness and social anxiety and masked the relationship between private self-consciousness and social anxiety. Conclusion: The higher the level of public self-consciousness, the more severe the individual's social anxiety, with control playing a mediating role between public self-consciousness and social anxiety. There is no significant relationship between private self-consciousness and social anxiety; however, control has a masking effect on this relationship.

Keywords

self-focused attention, social anxiety, control, mediating role

1. Introduction

Social anxiety disorder refers to the prolonged, intense fear and avoidant behavior experienced by individuals in one or more social situations due to the perception of being scrutinized by others. Self-focused attention plays a critical role in the onset, maintenance, and exacerbation of social anxiety. Reducing an individual's self-focused attention can lower the degree of social anxiety. In psychopathological research, self-focused attention, also known as self-consciousness, refers to the tendency to focus attention on self-characteristics presented to others, such as appearance and behavior. Private self-consciousness refers to the tendency to focus on internal, personal self-information, such as

memory and physiological feelings. Increased public self-consciousness is associated with higher levels of social anxiety, while the level of private self-consciousness does not correlate with social anxiety. From another perspective, control refers to the belief in one's ability to initiate and regulate one's behavior, considered a crucial factor in the onset and maintenance of anxiety. Control plays a foundational role in the formation and persistence of social anxiety. For example, control can mediate the relationship between social anxiety and specific behaviors, such as safety behaviors, catastrophic thinking, and social environmental factors like overprotective parenting. In general, maintaining safety behaviors can enhance an individual's sense of control, reducing the severity of social anxiety. The development of catastrophic thinking can decrease the sense of control, exacerbating social anxiety (Mörtberg, Hoffart, Boecking et al., 2015; Desnoyers, Kocovski, Fleming et al., 2017). Overprotective parenting can reduce the child's sense of control, increasing the severity of their social anxiety. While previous studies have explored the relationship between control, self-focused attention, and social anxiety, few have analyzed the interconnection between these three variables. Recent research suggests that self-focused attention may be related to control, as changes in self-focused attention induced by hypnosis can alter an individual's sense of control. Synthesizing these findings, it can be inferred that control may mediate the relationship between self-focused attention and social anxiety. This study preliminarily examines the relationship between control, self-focused attention, and social anxiety using various questionnaires. Self-focused attention is divided into two components: public self-consciousness and private self-consciousness. The mediating role of control between these components and social anxiety is then explored (Schulz, Alpers, & Hofmann, 2008; Schreiber, Heimlich, Schweitzer et al., 2015).

2. Materials and Methods

2.1 Materials

A total of 100 online questionnaires were distributed and collected. The general information of the respondents is shown in Table 1:

Table 1. General Information of Respondents

General Information	Number
Gender	
Male	42
Female	58
Age (years)	18-36
Average Age (years)	24.82±2.13
Region	
Southwest Region	39

North China	32
East China	17
Central China	5
South China	3
Northwest Region	2
Northeast Region	2
Status	
Full-time Students	59
Employed	37
Unemployed	4
Education Level	
Associate and Bachelor's Degrees	57
Master's Degree and Above	32
High School	10
Junior High School and Below	1

2.2 Tools

2.2.1 Control

The control subscale of the Shapiro Control Questionnaire was used for the survey. The scale consists of four parts: control, control style, control motivation, and control mechanism. The control subscale generally assesses self-evaluated control. It includes 16 items, each scored from 1 to 7, with higher scores indicating a higher degree of control (Grisham, King, Makkar et al., 2015; Mahone, Bruch, & Heimberg, 1993).

2.2.2 Self-Focused Attention

The Self-Consciousness Scale's public and private self-consciousness subscales were used for evaluation. The scale includes public self-consciousness, private self-consciousness, and social anxiety. The public and private self-consciousness subscales generally assess self-evaluated public and private self-focused attention. The scale contains 19 items: 6 items for public self-consciousness, 8 items for private self-consciousness, and 5 items for social anxiety. Higher scores indicate higher levels of public self-consciousness, private self-consciousness, or social anxiety (Cabete, 2016; Fang, Baran, Beatty et al., 2022).

2.2.3 Social Anxiety

The Social Interaction Anxiety Scale was used to assess the degree of social anxiety. The scale consists of 19 items, each scored from 1 to 5, with higher scores indicating a higher severity of social anxiety. To control for questionnaire order and avoid influencing responses, a Latin square design was used to balance the order of questionnaires. Three versions of the questionnaire were distributed, each with a

different order of scales. Each respondent completed only one version (Noda S, Shirotsuki K, Sasagawa, 2022; Pitura & Maranzan, 2018).

3. Results

3.1 Common Method Bias Test

All items from the three questionnaires were included, and exploratory factor analysis was performed. The results showed that 10 factors had eigenvalues greater than 1, with the first factor explaining less than 40% of the variance. This indicates that common method bias was not significant in this study (Pitura & Maranzan, 2018; Sarfan, Cody, & Clerkin, 2019).

3.2 Correlation between Control, Self-Focused Attention, and Social Anxiety

Control was positively correlated with self-consciousness and private self-consciousness and negatively correlated with social anxiety. Public and private self-consciousness were positively correlated with social anxiety (see Table 2).

Table 2. Correlation of Sense of Control, Self-focused Attention and Social Anxiety

Measure	M (SD)	1	2	3	4	5
1. Control	78.05 (13.45)	-				
2. Self-Consciousness	34.44 (8.19)	0.30	-			
3. Public Self-Consciousness	14.61 (4.52)	0.06	0.86	-		
4. Private Self-Consciousness	19.81 (4.82)	0.45	0.87	0.52	-	
5. SIAS	46.02 (14.68)	0.48	0.11	0.24	0.03	-

Note: P<0.01

3.3 Mediation Analysis

The structural equation model was constructed using Amos24, and the Bootstrap method was applied to test the significance of the mediating role of control between self-focused attention and social anxiety (Higa & Daleiden, 2008; Bögels & Lamers, 2002). The public and private self-consciousness scores were used as total variables, control scores as mediating variables, and SIAS scores as dependent variables. The structural equation model is shown in Figure 1.
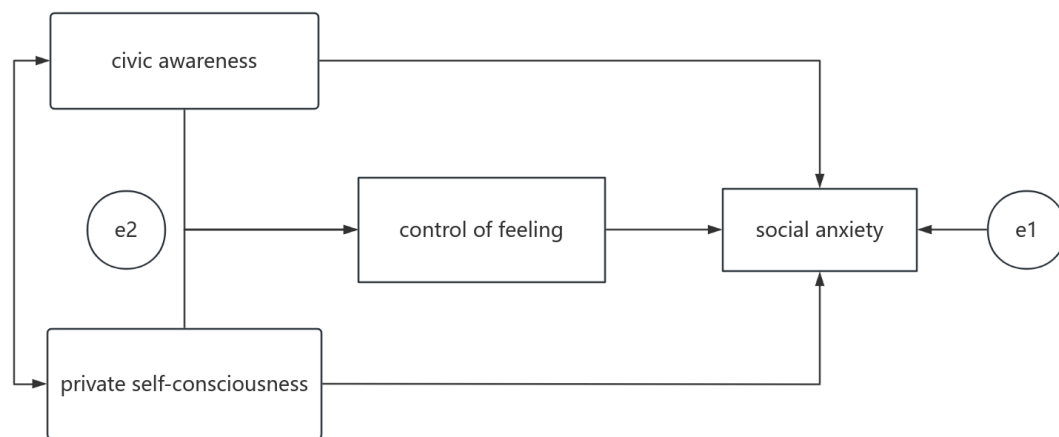
170

Figure 1. Structural Equation Model

Note: P<0.001, e1 represents the unique variable of the dependent variable that cannot be explained or predicted by the independent or mediating variables; e2 represents the unique variable of the mediating variable that cannot be explained by the independent variable. From the above figure, we analyzed the mediation effect, applying the Bootstrap method to analyze the mediating effect of control on self-focused attention and social anxiety. The regression coefficient for the prediction of social anxiety by public self-consciousness was 0.37 (Bögels & Lamers, 2002; Renner, Valentiner, & Holzman, 2017). The regression coefficient for the prediction of control by public self-consciousness was -0.26. The regression coefficient for the prediction of social anxiety by control was -0.53, indicating that there was a partial mediating effect. This suggests that control partially mediates the relationship between public self-consciousness and social anxiety. Using the same method to analyze private self-consciousness, the regression coefficient for the prediction of social anxiety by private self-consciousness was -0.25. The regression coefficient for the prediction of control by private self-consciousness was 0.59. The regression coefficient for the prediction of social anxiety by control was -0.53, indicating a masking effect in the mediation.

4. Discussion

The Impact of Self-Focused Attention on Cognition: (1) Unreasonable Allocation of Cognitive Resources: When an individual enters a threatening social environment, a socially anxious person tends to focus attention on themselves, believing they are the center of others' attention (Teachman, Woody, & Friedman, 2005; Hedman, Mörtberg, Hesser et al., 2013). They strictly monitor and scrutinize themselves, which consumes a significant amount of cognitive resources. This results in fewer resources available for observing external information, such as the environment and other people. For instance, this heightened self-focus reduces the frequency of eye contact with others, preventing further

engagement in conversation and diminishing the processing of the social environment. Socially anxious individuals believe that others can perceive their anxieties, predict poor performance, and anticipate embarrassment and negative evaluations. These irrational beliefs further consume cognitive resources, preventing their appropriate allocation to social tasks. Additionally, the misallocation of these resources likely contributes to the formation of more negative cognitive patterns. (2) Excessive Negative Beliefs and Psychological Representation: Self-focused attention leads to increased negative cognitions and self-images. Socially anxious individuals tend to exaggerate their poor performance and worry about negative feedback or evaluations from others. They have a negative bias in evaluating themselves and society, often recalling past failures and poor performances. These negative representations fill their minds, leading them to believe they lack the special skills or abilities necessary for effective communication. They see themselves as having a low success rate in social situations (Hedman, Mörtberg, Hesser et al., 2013 Pena & Losada, 2017). As a result, when their attention is self-focused, they perceive a discrepancy between their performance and expected standards. If their performance does not meet others' expectations, they quickly assume they are being negatively evaluated, and this belief persists beyond the immediate situation. Throughout their performance, socially anxious individuals experience more intense and frequent negative psychological representations, and they overestimate the likelihood of receiving negative evaluations from others. This leads to exaggerated negative perceptions of social interactions. Socially anxious individuals tend to focus on their negative beliefs, such as assuming that others have a low opinion of them and rarely offer positive evaluations. Thus, interventions should target two critical areas: adjusting the characteristics of self-focused attention in socially anxious individuals and correcting their distorted self-related beliefs. Additionally, research shows that socially anxious individuals may appear less likable in social environments. Therefore, interventions should not only address self-focused attention and negative beliefs but also identify and mitigate factors affecting their social performance to reduce anxiety levels effectively.

This study explored the relationship between control, self-focused attention, and social anxiety using corresponding scales and analyzed the potential mechanisms by which self-focused attention influences social anxiety through control. Previous research has found a significant negative correlation between control and social anxiety, indicating that lower levels of control are associated with higher levels of social anxiety, consistent with traditional clinical research findings. There is a significant positive correlation between public self-consciousness and social anxiety, and no significant correlation between private self-consciousness and social anxiety, also consistent with previous clinical research. This suggests that individuals with a greater tendency to focus. On outwardly visible self-characteristics, such as appearance and behavior, are more likely to experience social anxiety (Yoon, Kim, Shin et al., 2016; Norasakkunkit, Kitayama, & Uchida, 2012). The focus on internal information, such as memory and physiological feelings, does not correlate with social anxiety. Mediation analysis revealed that control partially mediates the relationship between self-focused

172

attention and social anxiety, consistent with the study's hypothesis. Control plays different roles in the relationship between the two components of self-focused attention and social anxiety and can effectively explain the results of the correlation analysis. From one perspective, control partially mediates the relationship between public self-consciousness and social anxiety, suggesting that the effect of public self-consciousness on social anxiety is partly due to changes in control. Public self-consciousness not only directly affects social anxiety but also influences control, indirectly affecting social anxiety. Generally, higher public self-consciousness increases the severity of social anxiety. Simultaneously, higher public self-consciousness decreases control, increasing social anxiety. This finding is consistent with previous research results; public self-consciousness is closely related to increased severity of social anxiety, and control plays a fundamental role in the relationship between social anxiety-related symptoms and influencing factors. Control can mediate the relationship between safety behaviors, catastrophic thinking, overprotective parenting, and social anxiety, and it can also mediate the relationship between public self-consciousness and social anxiety (Wan, Li, & Fang, 2024). From another perspective, control can mask the relationship between private self-consciousness and social anxiety. The masking effect refers to the phenomenon where indirect effects counterbalance direct effects, reducing the total effect or making it non-significant. In other words, control effectively masks the relationship between private self-consciousness and social anxiety, leading to a lack of significant correlation between the two. This finding may explain the lack of significant correlation between private self-consciousness and social anxiety in this and previous studies. As individuals' private self-consciousness increases, control also increases, which can inhibit the increase in social anxiety severity. Therefore, control buffers the relationship between private self-consciousness and social anxiety, possibly because protective factors exist between the two.

A notable issue in this study is the lack of significant correlation between public self-consciousness and control. However, when testing the mediation effect, the regression coefficient for the prediction of control by public self-consciousness is significant. Previous research has indicated that a lack of significant correlation between two variables does not necessarily imply a lack of significant predictive relationship. Correlation is not a sufficient or necessary condition for predicting relationships. Other researchers have noted that significant correlation between different variables is not a prerequisite for mediation effects. Therefore, although there is no significant correlation between public self-consciousness and control, public self-consciousness can effectively predict control, proving that control can mediate the relationship between public self-consciousness and social anxiety. The innovation and advantage of this study lie in exploring the relationship between control, self-focused attention, and social anxiety. From a social anxiety perspective, cognitive self-focused attention and intuitive control are linked, indicating that control plays a significant role in the relationship between self-focused attention and social anxiety. The study results confirm that control plays a foundational role in forming and maintaining social anxiety and demonstrates that control can mediate the

relationship between public self-consciousness and social anxiety. Additionally, the study fills a gap in previous research, showing that the lack of correlation between private self-consciousness and social anxiety may be due to the masking effect and buffering role of control. However, this study's limitations include the use of cross-sectional data to construct the relationship model between control, self-focused attention, and social anxiety, limiting the causal inferences of the mediation effects. Furthermore, although the use of online questionnaires expanded the sample range, it also increased the difficulty of collecting questionnaires. Future research could distribute questionnaires offline and collect longitudinal data to verify the causal relationship between these factors. Moreover, this study examined general control, which is relatively broad. Future research could narrow and refine the scope of control to explore specific areas, such as control over anxiety or physical control, to more accurately analyze the mediating role of control in the relationship between self-focused attention and social anxiety.

References

Bögels, S. M., & Lamers, C. T. J. (2002). The causal role of self-awareness in blushing-anxious, socially-anxious and social phobics individuals. *Behaviour research and therapy*, *40*(12), 1367-1384.

Cabete, N. S. (2016). Be Compassionate with Your Socially Anxious Mind: Shame, Self-Criticism and Self-Compassion in the Relationship Between Self-Focused Attention and Social Anxiety in Adolescents. Universidade de Coimbra (Portugal).

Desnoyers, A. J., Kocovski, N. L., Fleming, J. E. et al. (2017). Self-focused attention and safety behaviors across group therapies for social anxiety disorder. *Anxiety, Stress, & Co***, *30*(4), 441-455.

Fang, A., Baran, B., Beatty, C. C. et al. (2022). Maladaptive self-focused attention and default mode network connectivity: A transdiagnostic investigation across social anxiety and body dysmorphic disorders. *Social cognitive and affective neuroscience*, *17*(7), 645-654.

Grisham, J. R., King, B. J., Makkar, S. R. et al. (2015). The contributions of arousal and self-focused attention to avoidance in social anxiety. *Anxiety, Stress, & Co***, *28*(3), 303-320.

Hedman, E., Mörtberg, E., Hesser, H. et al. (2013). Mediators in psychological treatment of social anxiety disorder: Individual cognitive therapy compared to cognitive behavioral group therapy. *Behaviour research and therapy*, *51*(10), 696-705.

Higa, C. K., & Daleiden, E. L. (2008). Social anxiety and cognitive biases in non-referred children: The interaction of self-focused attention and threat interpretation biases. *Journal of Anxiety disorders*, *22*(3), 441-452.

Mahone, E. M., Bruch, M. A., & Heimberg, R. G. (1993). Focus of attention and social anxiety: The role of negative self-thoughts and perceived positive attributes of the other. *Cognitive Therapy and*

Research, *17*, 209-224.

Mörtberg, E., Hoffart, A., Boecking, B. et al. (2015). Shifting the focus of one's attention mediates improvement in cognitive therapy for social anxiety disorder. *Behavioural and Cognitive Psychotherapy*, *43*(1), 63-73.

Noda, S., Shirotsuki, K., & Sasagawa, S. (2022). Self-focused attention, cost/probability bias, and avoidance behavior mediate the relationship between trait mindfulness and social anxiety: A cross-sectional study. *Frontiers in Psychology*, *13*, 942801.

Norasakkunkit, V., Kitayama, S., & Uchida, Y. (2012). Social anxiety and holistic cognition: Self-focused social anxiety in the United States and other-focused social anxiety in Japan. *Journal of Cross-Cultural Psychology*, *43*(5), 742-757.

Pena, M., & Losada, L. (2017). Test anxiety in Spanish adolescents: Examining the role of emotional attention, and ruminative self-focus and regulation. *Frontiers in psychology*, *8*, 1423.

Pitura, V. A., & Maranzan, K. A. (2018). Do trait anticipatory processing, self-focused attention, and post-event processing explain the relationship between social anxiety and negative drinking motives in undergraduates? *Addiction Research & Theory*, *26*(3), 212-220.

Renner, K. A., Valentiner, D. P., & Holzman, J. B. (2017). Focus-of-attention behavioral experiment: An examination of a therapeutic procedure to reduce social anxiety. *Cognitive Behaviour Therapy*, *46*(1), 60-74.

Sarfan, L. D., Cody, M. W., & Clerkin, E. M. (2019). The mediating role of state maladaptive emotion regulation in the relation between social anxiety symptoms and self-evaluation bias. *Cognition and Emotion*, *33*(2), 361-369.

Schreiber, F., Heimlich, C., Schweitzer, C. et al. (2015). Cognitive therapy for social anxiety disorder: The impact of the "self-focused attention and safety behaviours experiment" on the course of treatment. *Behavioural and Cognitive Psychotherapy*, *43*(2), 158-166.

Schulz, S. M., Alpers, G. W., & Hofmann, S. G. (2008). Negative self-focused cognitions mediate the effect of trait social anxiety on state anxiety. *Behaviour research and therapy*, *46*(4), 438-449.

Teachman, B. A., Woody, S. R., & Friedman, M. A. (2005). Focus of attention and causal attributions in social anxiety. Cower PL. *New research on the psychology of fear*, *45*, 25-41.

Wan, Z., Li, S., & Fang, S. (2024). The Effect of Negative Physical Self on Social Anxiety in College Students: The Bidirectional Chain Mediation Roles of Fear of Negative Evaluation and Regulatory Emotional Self-Efficacy. *Psychology Research and Behavior Management*, 2055-2066.

Yoon, H. J., Kim, J. S., Shin, Y. B. et al. (2016). Neural activity during self-referential working memory and the underlying role of the amygdala in social anxiety disorder. *Neuroscience letters*, *627*, 139-147.