# The Relationship Between Negative and Positive Affectivity, Self-focused Attention and Attentional Control With Severity of Social Anxiety Symptoms

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## ABSTRACT

**Objective:** This study aimed to investigate the role of negative and positive affectivity, self-focused attention, and attentional control in social anxiety symptoms.

**Methods:** A sample of 382 students of Isfahan University was selected and the participants completed Social Phobia Inventory (SPIN), Positive and Negative Affect Schedule (PANAS), Attentional Control Scale (ACS), and Focus of Attention Questionnaire (FAQ). Data were analyzed by Pearson correlatiosn and multiple regression analysis. Statistical analysis were performed using the SPSS 20.

**Results:** The results indicated that there were positive significant relationships between negative affectivity, self-focused attention and social anxiety symptoms. Also findings showed negative and significant relationships between positive affectivity, attentional control and social anxiety symptoms. In regression analysis, negative and positive affectivity, self-focused attention, and attentional control were predictors of social anxiety symptoms.

**Conclusion:** In this study, our findings suggested that negative and positive affectivity, self-focused attention, and attentional control have important role in the development and maintenance of social anxiety symptoms.

## 1. Introduction

Social phobia or social anxiety is defined by marked and persistent fear or anxiety in one or more social situations in which the individual is exposed to possible scrutiny by others. The social situation are avoided or endured with intense fear and this fear or avoidance causes clinically significant distress or impairment in social, occupational or other important areas of functioning (APA, 2013). Research revealed that social anxiety disorder can be quite incapacitating. The vast majority of individuals with social anxiety disorder report that their career, academic, and general social functioning have been seriously impaired by their fears (Stein & Kean, 2000; Furmark, 2002).

Theoretical literature suggest that the negative and positive affectivity may contribute to the development of emotional disorders (Watson & Tellegen, 1985). Negative affect (NA) is a general dimension of subjective distress and includes a broad range of negative mood, including anger, fear, sadness, disgust, and guilt. In contrast, positive affect (PA) reflect the extent to which a person feels enthusiastic, active, and alert (Watson & Tellegen, 1985). These two factors represent affective state dimensions, but Tellegen (1985) has demonstrated that they are related to corresponding affective trait dimensions of posi-

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tive and negative emotionality. PA and NA traits roughly correspond to dominant personality factors of extraversion and neuroticism. He also suggested that low PA and high NA (both state and trait) are major distinguishing feature of depression and anxiety. According to tripartite model (Clark & Watson, 1991), the negative affect is a nonspecific factor that is common to both depression and anxiety. In contrast, the positive affect is a specific factor, which is relatively unique to depression and the second specific factor that is relatively unique to anxiety is physiological hyperarousal. Despite general support for the tripartite model, there is evidence that social anxiety disorder, as well as depression, may be characterized by low positive affect (Brown, Chorpita, & Barlow, 1998; Chorpita, Plummer, & Moffitt, 2000; Watson & Naragon-Gainey, 2010).

Besides tripartite model, the two most prominent cognitive models of social anxiety (Clark & wells, 1995; Rapee, & Heimberg, 1997) suggest that problems with attention are important characteristics of social anxiety disorder. In social situations, individuals with social anxiety direct their attention inward and engage in excessive self-monitoring. It seems that socially anxious persons direct too much attention to themselves during social interactions and made a mental self-presentation of their outward appearance according to internal cues (i.e., their thoughts, feelings, behaviors, and somatic responses). As a result of their internal focus, they are assumed to engage in self-evaluation and have little attention for their task, the other persons, and their environment (Clark & wells, 1995; Rapee, & Heimberg, 1997). Deiters, Stevens, Hermann, and Gerlach (2013) showed that during speech anticipation, high speech anxious participants responded significantly faster to internal cues. Also, a meta-analysis synthesized 226 effect sizes reflecting the relation between self-focused attention and negative affect. It seems that heightened self-focused attention is assumed to play an important role in the maintenance of social anxiety (Mor & Winquist, 2002).

In other words, socially anxious people had difficulty in attentional shifting from the aspect of self (e.g., own thoughts, emotions, or appearance) to external stimuli. These attentional biases may be due to their impairment of attentional control (Moriya & Tanno, 2008). Attentional control refers to a general capacity to effortfully regulate attention, namely focus as well as shift attention when desired (Derryberry & Reed, 2002). low attentional control might be a vulnerable factor for internalizing disorders, because they are less able to direct attention away from anxiety/depression provoking stimuli (switching), and are at the same time less able to focus their attention on the task at the other hand (focusing) (Sportel, Nauta, de Hullu, de Jong & Hartman, 2011). There is emerging evidence that social anxiety is associated with reduced attentional control (Moriya & Tanno, 2008). Muris, de Jong, and Engelen (2004) showed that neuroticism and attentional control both explained a unique and significant proportion of variance in anxiety disorders symptoms.

With regard to literature, the objective of the present study was to investigate the role of negative and positive affectivity, self-focused attention, and attentional control in the prediction of the severity of social anxiety symptoms.

## 2. Methods

This was a descriptive-correlative and cross-sectional study. The population of this study was all undergraduate students Isfahan University. The sample size in last studies was in a range of 100 to 300 participants(Bardeen & Orcutt, 2001; Muris & el al., 2004). According to these studies our sample consisted of 467 participants who were selected by stratified sampling method. After obtaining permission from Esfahan university, Sampling was made according to sex and major fields of study. All participants were informed about the goals of the survey and they received the rules and instructions of filling out the questionnaire and then completed them. Excluding criteria were as follows: having an obvious mental disorder symptom according to the participant self- report, consumption of specific drugs, and presenting invalid and incomplete information. Finally, data of 382 participants were used in analysis( 8 questionnaires were excluded because of mental disorder symptoms, 59 were excluded because of filling out the questionnaires incompletely and 18 were excluded because of multivariate outliers).

### Measures

Social Phobia inventory (SPIN); (Connor et al., 2000): SPIN is a 17-item self-report measure designed to assess severity of social phobia. Items are measured on a 5-point Likert scale in 3 symptom dimensions: (a) fear, (b) avoidance, and (c) physiological arousal. This measure has excellent psychometric properties (Connor et al., 2000). Rezaei Dogaheh (2013) reported suitable internal consistency (Cronbach $\alpha = 0.66$ and 0.87 for clinical and non-clinical group, respectively). $\alpha$ value in the present sample was 0.92.

Positive and Negative Affect Schedule (PANAS); (Watson, Clark, & Tellegen, 1988): PANAS is a measure that

**Table 1.** Mean and standard deviation of variables.

| Variable | Mean | SD |
|---|---|---|
| Social anxiety | 17.75 | 12.50 |
| Positive affect | 32.53 | 6.20 |
| Negative affect | 27.44 | 7.67 |
| Attentional control | 50.99 | 6.84 |
| Self-focused attention | 13.35 | 3.42 |



includes two 10-item scales, one for PA and one for NA. Participants indicate on a 1 (very slightly or not at all) to 5 (extremely) Likert scale, the degree to which they generally experience each of 20 affective descriptors (e.g., guilty, excited, distressed, and proud). This measure has demonstrated good reliability and validity (Watson et al., 1998). α values in the present study for positive and negative affect were 0.80 and 0.86, respectively.

Attentional Control Scale (ACS); (Derryberry & Reed, 2002): The attentional control scale is a 20-item self-report questionnaire designed to assess one's ability to (a) focus attention, (b) shift attention, and (c) flexibly control thought. A total score is calculated by summing the items; lower scores indicate difficulty in attentional control. Although ACS was designed to assess three constructs related to attentional control, namely focusing, shifting, and flexibility. Result from a study of the factor structure of the ACS supported a two-factor structure (Olafsson et al., 2011). In Olafsson et al. study, the internal consistency was good for the focusing factor (α=0.82) and the shifting factor (α=0.68). The cronbach 's alpha coefficients for total score and both factors in the present sample were 0.76, 0.67, 0.61, respectively.

Focus of Attention Questionnaire (FAQ); (Woody, 1996): FAQ is a 10-item self-report measure designed to assess the extent to which an individual is focusing on internal stimuli (the self; FAQ self) or external stimuli (the environment; FAQ external) during a social situation. Items are scored on a 5-point Likert scale (1= not at all, 5= totally). Higher score on the FAQ self indicates more attention toward internal stimuli. In adult, the FAQ has demonstrated good internal consistency (α = 0.76 for self and α = 0.72 for external-focus) (Woody et al., 1997). In the present sample, The cronbach 's alpha coefficients for both factors were 0.68, and 0.72, respectively.

### Statistical analysis

Statistical analysis were performed using the SPSS 20. In order to analysis the data, we used descriptive (mean and standard deviation) and inferential statistic (correlation and stepwise regression analysis). At first, Pearson correlation was assessed to examine the relationship between variables of the study. After that, a stepwise regression analysis was performed in order to determine the proportion of each variable in explaining the variance of severity of social anxiety symptoms($p<0.001$).

## 3. Results

Table 1 shows the mean and standard deviation of social anxiety, positive affect, negative affect, attentional control, and self-focused attention scores.

Table 2 shows a significant and negative correlation among positive affect and attentional control with social anxiety that means lower scores in positive affect and

**Table 2.** Result of pearson correlation test among all variables of the study.

| Variable | Social anxiety | Positive affect | Negative affect | Self-focused attention | Attentional control |
|---|---|---|---|---|---|
| Social anxiety | 1 | -0.585** | 0.653** | 0 .601** | -0.644** |
| Positive affect | | 1 | -0.371** | -0.446** | 0.551** |
| Negative affect | | | 1 | 0.511** | -0.632** |
| Self-focused attention | | | | 1 | -0.501** |
| Attentional control | | | | | 1 |

* P< 0.05, **P< 0.01

**Table 3.** Results of stepwise multiple regression for negative and positive affect, self-focused attention, and attentional control, predicting severity of social anxiety.

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | P Value | Adjusted $R^2$ |
|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | |
| Step 1 | Negative affect | 1.06 | 0.06 | 0.65 | 16.803 | 0.0001 | 0.425 |
| Step 2 | Negative affect | 0.82 | 0.06 | 0.50 | 13.816 | 0.0001 | |
| | Positive affect | -0.80 | 0.07 | -0.39 | -10.866 | 0.0001 | 0.560 |
| Step 3 | Negative affect | 0.66 | 0.06 | 0.40 | 10.584 | 0.0001 | |
| | Positive affect | -0.65 | 0.07 | -0.32 | -8.781 | 0.0001 | |
| | Self-focused attention | 0.91 | 0.14 | 0.24 | 6.267 | 0.0001 | 0.601 |
| Step 4 | Negative affect | 0.53 | 0.07 | 0.32 | 7.593 | 0.0001 | |
| | Positive affect | -0.53 | 0.07 | -0.26 | -6.735 | 0.0001 | |
| | Self-focused attention | 0.82 | 0.14 | 0.22 | 5.739 | 0.0001 | 0.615 |
| | Attentional control | -0.32 | 0.08 | -0.18 | -3.886 | 0.0001 | |

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attentional control are correlated with higher scores in social anxiety. Also, the results show that there is a significant and positive relationship between negative affect, self-focused attention and social anxiety. It means that higher scores in negative affect and self-focused attention are associated with higher scores in social anxiety.

Regression analysis was used to determine the proportion of negative and positive affect, self-focused attention, and attentional control in explaining the variance of severity of social anxiety. Results are summarized in Table 3.

At the first step we test multiple regression statistical assumption by checking for multivariate outliers with mahalanobis distance. Based on this outcome 18 cases should be eliminated from the analysis. After that, we assess collinearity statistics and our result showed that the tolerance of all the predictors are far in excess 0.01 and therefore suggest that multicollinearity is not a problem.

As table 3 shows, when a negative affect enters the regression, adjusted R2 is 0.425, which means that 42.5% of the variance of social anxiety is explained by negative affect. In the next step, positive affect is entered and adjusted $R^2$ is 0.560, which means that negative and positive affect can explain 56% of the variance of social anxiety. In the third step, self-focused attention is added to the regression and adjusted R2 rises to 0.601, which means that negative and positive affect and self-focused attention can explain 60% of the variance of social anxiety. At the last step, attentional control is added to regression and adjusted $R^2$ is 0.615, which means that negative and positive affect, self-focused attention, and attentional control can explain 61.5% of the variance of social anxiety.

In the present study, the equation representing the prediction model is this:

Social anxiety= 0.32 negative affectivity – 0.26 positive affectivity + 0.22 self- focused attention – 0.18 attentional control

It means that when the score of negative affectivity increase on point, the mean of severity of social anxiety rises 0.53 point and also 1 unit change in positive affectivity corresponds to an decrement of 0.26 in social anxiety. Also with one point elevation in self-focused attention score, there is an increase of 0.22 in social anxiety. Finally 1 unit change in attentional control, the mean of social anxiety decline 0.18 point.

## 4. Discussion

The recent study aimed to investigate the relationship between negative and positive affectivity, self-focused attention, attentional control, and severity of social anxiety symptoms in nonclinical sample. Result showed a significant positive correlation between negative affectivity, self-focused attention and social anxiety symptom. Also, there was significant and negative correlation between positive affectivity, attentional control and total scores of social anxiety symptoms. The core feature of socially anxious people is the fear of negative evaluation

by others. So they avoid social situation or endure it by intense fear. As a result, they experience low life satisfaction and social inhibition. Watson and Tellegen (1985) proposed that positive affect reflect activity, high energy, and alertness, while negative affect is a general dimension of distress and include anger, fear, and nervousness. Thus, regarding tripartite model, it seems that negative and positive affectivity can be contributed to unique variance of social anxiety symptoms. These findings are consistent with the findings of previous studies that showed high negative affect and low positive affect are related to the social anxiety (Brown et al., 1998; Chorpita et al., 2000; Watson & Naragon-Gainey, 2010).

In addition, social anxiety is related to impairment in attentional control. Findings indicated that socially anxious individuals have lower ability to control their attention. This outcome is in line with previous studies (Bardeen, Tull, Stevens, & Gratz, 2014; Muris, Mayer, Lint, & Hofman, 2008; Rezaei Dogaheh, Mohammadkhani, & Dolatshahi, 2011). Recent findings suggest that attentional control may be used to focus and shift attention from threatening stimuli to another one (Bardeen & Orcutt, 2011). According to attentional control theory ( Eysenck, Derakshan, Santo & Calvo, 2007), individuals experiencing extreme anxiety may have greater difficulty using attentional control to reduce their distress, especially if they have lower levels of attentional control at baseline. Lonigan and Phillips (2001) assumed that attention control plays an important role in the development of anxiety disorders. They proposed that when attention control is low, the individuals are less capable of regulating their attention. It means that when people confronted with stressful situation or event, attentional control may help them to reduce emotional reactivity.

The result of this study also showed that there is a relationship between self-focused attention and social anxiety symptoms. Socially anxious people become self-focused and have difficulty in switching their attention to external stimuli (Spurr & Stopa, 2002). We assume that socially anxious people could not control their attention, and as a result, could not switch their attention to other external stimuli. Several studies support the casual role of self-focused attention in development and persistence of social anxiety disorder (Zou, Hudson & Rapee, 2007; Schultz & Heimberg, 2008; Kley, Tuschen-Caffir & Heinrichs, 2012; Gaydukevych & Kocovski, 2012). Based on cognitive model of social anxiety, social anxiety is associated with heightened self-focusing during social situation (Clark & Wells, 1995; Rapee & Heimberg, 1997). In fact, they focused internally to the aspects of self like behavior, thought, emotions or appearance.

It has been suggested that successful social interaction requires an appropriate balance between self-focused and external attention (Wells & Matthews, 1996). As a result of their internal focus, they are assumed to engage in self-evaluation. On the other hand, they direct too much attention to themselves during social interaction, thus spare little attention to their task or environment. As mentioned before, it can be interpreted that negative and positive affectivity, self-focused attention, and attentional control explain a significant proportion of variance in social anxiety symptoms. The present study provides further evidence for important role of these variables in the development and maintenance of social anxiety.

This study had some limitations too. First of all, it was a observational study in nature, so that we cannot infer causal relationships about the findings. Second, this study relied on nonclinical sample, so it is difficult to generalize these findings to clinical sample. Moreover, data were collected by self-report instrument that should be considered. Future researches should examine these results with other factors related to social anxiety such as attention bias that was not included in this study. Additional research is needed to determine whether this conclusion could be generalized to clinical diagnoses. Also, these findings have implication in prevention and treatment of social anxiety. For example, this finding suggests that treatment protocols contain attention-based component and computerized attention training program may be beneficial for individuals with social anxiety disorder.

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