

Cognition and the maintenance of social anxiety disorder: A correlational study

Abstract

Background: Beliefs that are negatively biased, inaccurate, and rigid are thought to play a key role in the mood and anxiety disorders. Social anxiety disorder involves the fear of social situations, including situations that involve scrutiny or contact with strangers. Anxiety is maintained in part by estimates of the probability and cost of feared negative outcomes. Social phobia may be unique among the anxiety disorders in that it is characterized by overestimates of the cost of events that are objectively non-catastrophic. **Objective:** The current study was conducted to study the role of cost and probability of feared negative outcomes in. **Sample:** 50 students with a mean age of 21 years constituted the sample for the study. **Tools:** Data were collected using Outcome Probability and Cost Questionnaire (Uren, Szabó, & Lovibond, 2004) and Liebowitz Social Anxiety Scale (Liebowitz, 1987). **Results:** Results pointed to a positive correlation between cost and probability of feared negative outcomes and social anxiety. **Conclusion:** The present study was undertaken in order to investigate the relationship between cost and probability of feared negative outcomes with social anxiety, it can be concluded that there is a significant positive relationship between cost, probability of feared negative outcomes, avoidance of social situations and social anxiety.

Keywords: Social Anxiety, cost, probability, feared negative outcomes.

Himanshi Singh

*Research Associate, NDDTC,
Department of Psychiatry,
AIIMS New Delhi, India.*

Correspondence Address:

*Himanshi Singh
Research Associate,
NDDTC, Department of Psychiatry,
AIIMS New Delhi, India.
Email: 30himanshi@gmail.com*

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Introduction

“Social anxiety disorder (SAD) involves the fear of social situations, including situations that involve scrutiny or contact with strangers”, Kaplan and Sadock (1988). The term social anxiety reflects the distinct differentiation of social anxiety disorder from specific phobia, which is the intense and persistent fear of an object or situation. Person may have specific fears about performing specific activities such as speaking in front of others, or may experience a nonspecific

fear of “embarrassing oneself”. Beliefs that are negatively biased, inaccurate, and rigid are thought to play a key role in the mood and anxiety disorders. Anxiety is maintained in part by estimates of the probability and cost of feared negative outcomes. Social phobia may be unique among the anxiety disorders in that it is characterized by overestimates of the cost of events that are objectively non-catastrophic (e.g., committing social mishaps).

Cognitive models of mood and anxiety disorders posit that

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maladaptive beliefs that are central to one's identity and are negatively biased, inaccurate, and rigid (e.g., "core beliefs") play a causal role in generation of the emotional disturbance characterizing these disorders. Empirical research has provided evidence that these types of maladaptive beliefs are associated with psychopathology and are generally stable but sometimes vary with the severity of symptomatology. Although research has shown that the onset of SAD is typically during adolescence, very little research has been conducted investigating the etiology and treatment of SAD in adolescents. It is common for children and adolescents to report many types of fears and worries. However, these fears are usually transitory and are not impairing for most youths. SAD in adolescents is related to increased comorbidity with depressive disorders, somatoform disorders, and substance use disorders, adolescents with SAD have few friends, poor school performance, difficulties with intimate relationships, and increased alcohol use.

These findings indicate that SAD during childhood and adolescence is associated with significant problems in functioning. Along with the depressive symptoms in adolescents with SAD it was found that the clinical syndrome of SAD in children and adolescents is very similar to the presentation in adults. In addition, both populations describe similar types of feared social situations with public speaking and going to parties representing the most commonly feared situations.

In evaluating the significance of probability and cost biases in social phobia, it is necessary to first characterize the nature and extent of these biases. Substantial research has demonstrated that individuals with social phobia tend to overestimate the probability of negative social events.

Smári, Bjarnadóttir, and Bragadóttir (1998) assessed probability bias and found a significant positive correlation between a social anxiety self-report measure and probability overestimates.

Foa, Franklin, Perry, and Herbert (1996) indicates that individuals with social phobia demonstrate a probability bias in response to positive, mildly negative, and severely negative social outcomes. Research supports the view that social phobia is associated with a pervasive bias regarding the probability of social events.

Theorists have argued that inflated probability estimates of the likelihood of negative social events are unlikely to cause anxiety unless the negative social event is considered aversive or to have negative consequence. That is, if an event is perceived as likely but not harmful, it will not be appraised as threatening or anxiety provoking. Therefore, inflated cost estimates for negative social events have been hypothesized to be the driving force behind social phobia fears (Foa & Kozak, 1986).

Smári et al., (1998) asked non-clinical participants to rate the severity of five negative social events and found that cost estimates were significantly correlated with social anxiety symptoms. Uren, Szabó, and Lovibond (2004) replicated these findings in a clinical sample and found that, compared to non-anxious controls, the clinically socially anxious rated the negative social outcomes as more distressing, which the authors interpret as evidence of overestimates in the appraisal of the cost of the outcomes. Two other studies found evidence of cost bias in clinical participants when compared to non-anxious controls. One found overestimates in the cost of mildly negative social events (Foa et al., 1996), and another found overestimates in both mildly and profoundly negative social events (McManus et al., 2000).

Three studies (Stopa & Clark; 2000; Gilboa-Schechtman, Franklin, & Foa, 2000; Wilson & Rapee, 2005) have used open-ended assessments in an effort to clarify why individuals with social phobia perceive negative social events as more costly. Stopa and Clark (2000) found that individuals with social phobia were more likely to generate negative and catastrophic explanations for events than controls.

Gilboa-Schechtman, Franklin, and Foa (2000) found for positive events, which is consistent with the notion that positive events can also be interpreted as threatening by people with social phobia because they increase standards for future performances (Wallace & Alden, 1995; Heimberg et al., 2010). Lastly, Wilson and Rapee (2005) asked people diagnosed with social phobia and non-socially anxious controls to imagine themselves in a negative social situation. Results showed that social anxiety was associated with the tendency to believe that negative social events would result in negative evaluation by other people, indicate negative personal characteristics, and yield adverse consequences in the long-term future.

Theoretical models of social phobia (Clark & Wells, 1995; Rapee & Heimberg, 1997) emphasize the importance of biased cognitive processing in the development and maintenance of anxiety disorders. Social phobia is characterized by social fears—concerns about social embarrassment, humiliation, and subsequent rejection by others (American Psychiatric Association, 2000). Beck (1976) suggested that cognitive biases exacerbate and perpetuate these social fears via biased processing of social information.

In short, probability and cost biases are believed to result in greater availability of social threat information in memory, increased attentiveness to social threat cues, and inflated estimates of the probability and cost of negative social events. Social phobia may be unique among the anxiety disorders in that it is characterized by overestimates of the cost of events that are objectively non-catastrophic. Anxiety is maintained in part by estimates of the probability and cost of feared negative outcomes. A report presented findings on the frequency, comorbidity of social phobia and social fears among 1035 adolescents, it was found that seventeen (1.6%) of the adolescents met the DSM-IV criteria for social phobia sometimes in their life more girls than boys received the diagnosis of social phobia and the frequency of the disorder increased with age (Essau,

Conradt, & Petermann, 1999). Theories and models given by Greenberg; Foa (1986); Clarks & Wells (1995); Rapee & Heimberg (1997); Gilboa-Schechtman (2000) clearly implies that cognitive biases largely influence the social behavior of an individual. Overestimation of cost and probability of negative outcomes distort one's cognition about reality and lead to social anxiety disorder, reduction in such overestimations can lead to symptomatic improvement.

Objectives

- To study the role of cost of feared negative outcomes in a social situation in social anxiety.
- To study the role of probability of negative outcomes in social anxiety.

Hypothesis

- H1- cost of feared negative outcomes will be positively related to social anxiety and avoidance of social situations
- H2- probability of feared negative outcomes will be positively related to social anxiety and avoidance of social situations

Sample-The sample consisted of 50 college students with mean age of 21 years from Jaipur.

Design-Correlation design

Tools-The following tools and techniques were used to measure different variables:

- 1) Outcome Probability and Cost Questionnaire (Uren, Szabó, & Lovibond, 2004): The Outcome Probability Questionnaire is a 12-item self-report questionnaire that assesses an individual's estimate of the probability that negative socially threatening events will occur. Items are scored on a 9-point Likert scale (0 = not at all, 8 = extremely) with summary scores ranging from 0 to

96. Outcome Cost Questionnaire is a 12-item self-report questionnaire that assesses an individual's estimate of the cost of negative social events. Items are scored on a 9-point Likert scale (0 = not at all, 8 = extremely) with summary scores ranging from 0 to 96. Total score in each can be obtained by adding even numbered items (items 2, 4, 6, 8, etc.) to obtain social outcomes score and odd numbered items (items 1, 3, 5, 7, 9, etc.) to obtain a total physical outcomes score.

- 2) Liebowitz Social Anxiety Scale (Liebowitz, 1987): The scale features 24 items, which are divided into two subscales. 13 questions relate to performance anxiety and 11 concern social situations. The scale is composed of 24 items divided into 2 subscales, 13 concerning performance anxiety, and 11 pertaining to social situations. The 24 items are first rated on a Likert scale from 0 to 3 on fear felt during the situations, and then the same items are rated regarding avoidance of the situation. Combining the total scores for the Fear and Avoidance sections provides an overall score with a maximum of 144 points. Research supports a cut-off point of 30, in which SAD is unlikely. The next cut-off point is at 60, at which SAD is probable. Scores in this range are typical of persons entering treatment for the non-generalized type of SAD. Scores between 60 and 90 indicate that SAD is very probable. Scores in this range are typical of persons entering treatment for the generalized type of SAD. Scores higher than 90 indicate that SAD is highly probable.

Procedure-

Firstly, questionnaires were selected for the purpose of testing the variables in the study. Then, a sample was selected on the basis of the inclusion and exclusion criteria. After that, questionnaires were distributed to the sample and raw data was obtained and finally raw data was converted into statistical analysis and the interpretations were made.

Results

Table 1: Descriptive Statistics

Variables	Mean	SD
Cost of feared negative outcomes	29.03	12.67
Probability of negative outcomes	30.35	14.34
Social anxiety	26.15	9.23
Avoidance of social situations	33.21	10.44

Table 2: Zero Order Correlation between the Variables

Variables	Probability of negative outcomes	Social anxiety	Avoidance of social situations
Cost of feared negative outcomes	0.88**	0.37**	0.42**
Probability of negative outcomes		0.34*	0.41**
Social anxiety			0.85**

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

Discussion

The table 1 shows the descriptive statistics of the variables in the sample of the current study. Correlation shows association between cost of feared negative outcomes, probability of negative outcomes, social anxiety and avoidance of social situations. Correlational analysis was conducted and table 2 shows the bivariate correlations between cost of feared negative outcomes, probability of negative outcomes, social anxiety and avoidance of social situations.

Social anxiety disorder is a persistent fear of one or more social situations where embarrassment may occur and the fear or anxiety is out of proportion to the actual threat posed by the social situation as determined by the person's cultural norms. Typical social situations can be grouped into those that involve interaction, observation and performance. (ICD-10 1992; DSM-IV-TR, 2000). Anxiety is maintained in part by estimates of the probability and cost of feared negative outcomes.

The present study aims to explore the relationship between probability and cost of feared negative outcomes. Also it aims to explore how these estimates leads to social phobia.

Hypothesis 1 of the study proposed a positive association between cost of feared negative outcomes to social anxiety and avoidance of social situations.

The results supported the hypothesis and it was found that: Probability of negative outcomes does have a significant positive correlation (0.88, $p < 0.01$) with cost of feared negative outcomes. Results denoted that as the level of probability of negative outcomes increases, so will the cost of feared negative outcomes. Similar findings have been reported by Hofmann (2007) while examining probability of negative outcomes in association with cost of feared negative outcomes. Results validated probability of negative outcomes as positively correlated with cost of feared negative outcomes. In the second variable i.e. Social anxiety also have a significant positive correlation (0.37, $p < 0.01$) with cost of feared negative outcomes. Higher the level of cost of feared negative outcomes, greater will be the level of social anxiety. Uren, Szabó & Lovibond (2001) and Foa & Kozak (1986) have reported similar findings and results showed social anxiety as positively correlated with cost of feared negative outcomes.

In the another domain i.e. Avoidance of social situations are positively correlated (0.42, $p < 0.01$) with cost of feared negative outcomes. Hofmann (2007) reported that in order to avoid social mishaps, individuals with SAD revert to maladaptive coping strategies, including avoidance and safety behaviours, followed by post-event rumination.

Hypothesis 2 of the study proposed a positive association between probability of negative outcomes to social anxiety and avoidance of social situations. The results supported the hypothesis and it was found that: Probability of negative outcomes is positively correlated (0.33, $p < 0.05$) with social anxiety. Outcome Probability and Cost

Questionnaire proposed that there is a positive relation between probability of feared negative outcomes and social anxiety. Similar results were obtained by Manus, Clark and Hackmann (2001) in which they proposed that anxiety disorder is associated with a specific tendency to overestimate the danger inherent in particular situations. Significant positive correlation (0.41, $p < 0.01$) was found between probability of negative outcomes and avoidance of social situations. Study done by Hofmann (2007) has similar findings. Social anxiety do have a positive correlation (0.85, $p < 0.01$) with avoidance of social situations. This result is supported by cognitive model by Clarks and Wells (1995) in which social phobic complains to be comfortable in avoiding the social situations rather than being a center of attraction.

The present study attempted to study role of cost and probability of feared negative outcomes in social anxiety and from the above discussion it can be concluded that significant positive correlation was seen between cost of feared negative outcomes and probability of negative outcomes, social anxiety and cost of feared negative outcomes, avoidance of social situations and cost of feared negative outcomes. Positive relation has also seen between probability of negative outcomes and social anxiety, social anxiety and avoidance of social situations and probability of negative outcomes and avoidance of social situations.

Implications

In India one of every four Indians are suffering from social anxiety. For a person to accept the fact that he is suffering from social anxiety is very difficult. Symptoms like blushing, dizziness, confusion, shyness, negative cognitions; fear can be controlled through following implications: the tendency toward focusing on anxiety symptoms or negative cognitions in a fearful social situation can be retrained by encouraging individuals to direct their attention toward the situation or other external cues instead of their bodily symptoms, fearful thoughts, or negative

aspects of themselves. Self-perception can be modified by the use of video feedback, audio feedback, mirror exposures, and group feedback. Behavioral experiments in which the person purposefully creates social mishaps to observe the consequences can be an effective method for targeting the patients' overestimation of social cost. Lastly, post-event rumination can be targeted by psychologists by helping patients process negative social events more adaptively through guided questions (e.g. "How will your life change as a result of a particular social mishap?").

Conclusion

The present study was undertaken in order to investigate the relationship between cost and probability of feared negative outcomes with social anxiety. From the above results it can be concluded that there is a significant positive relationship between cost, probability of feared negative outcomes, avoidance of social situations and social anxiety.

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