

The Evolution of Social Anxiety: Tests of Two Theories

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Abstract:

Social anxiety, the psychological state of showing fear and avoidance in social situations, remains prevalent in modern society. The research in this article is based on the theoretical background of social threat, which states that people in group life need social anxiety to avoid potential threats that may affect social status or accessible social resources. The prediction of the article is that Social Rank Theory and Social Bonds Theory can be successfully tested, with one relating to social hierarchies in which people maintain their social status by avoiding conflict and maintaining a positive image through social anxiety, while the other states that social anxiety can help maintain existing social bonds. The experiment tests whether the loss of social status and social bonds produces social anxiety. By setting up scenarios and collecting data about participants' individual levels of social anxiety, it will eventually be possible to conclude how the potential threats present in the different scenarios affect people's anxiety levels, and whether the possible experimental results can test the two theories.

Keywords: social anxiety; threat detection; social rank theory; social bonds theory

1. Introduction

Social anxiety is the psychological state characterized by a persistent fear and avoidance of social situations where one can potentially be scrutinized and evaluated by others [1]. Individuals with social anxiety tend to pay excessive attention to others' judgement and evaluations and focus on the potential negative outcomes in social interactions, which causes them to worry about being embarrassed and humiliated [2]. They also display shyness when encountering new people and show intense and consistent discomfort with manifestations such as blushing and avoiding when socially interacting with others [3, 4]. Besides psychological manifestations, intense physical symptoms such as racing heart, sweating, shaking, and difficulty concentrating may also be involved [3].

Social anxiety disorder, an extreme version of social anxiety, seriously interferes with people's daily lives since

excessive and intense fear and a strong desire to avoid from socially interacting will cause them to exhibit severe social deprivation and social withdrawal and intense disgust about themselves [5]. However, different from social anxiety disorder, social anxiety is very prevalent over the world with more than 50 percent of American people and Chinese people self-perceiving them as social anxiety [6], and do not involve severe interference and repercussion. Considering the social anxiety as a widespread phenomenon, This research will discuss the the possible evolutionary reasons for social anxiety.

1.1 Evolutionary Models of Social Anxiety

Social anxiety's prevalence engenders a question about its evolutionary origins since one possible reason for its universality can be that social anxiety is an adaptation that provides benefits to an individual's fitness [7]. That is, social anxiety in ancient times increased people's chances

to survive and reproduce; thus, these genes were passed down to be shared worldwide. One of the evolutionary explanations to justify the presence of social anxiety is that it helps humans manage social threats.

Like other social species, humans live in groups. Group living, which provides humans opportunities to cooperate, is considered advantageous from an evolutionary perspective. Appropriate cooperation can effectively improve the efficiency of finding food, increase the chance of escaping predation [8]. However, natural and social resources are not unlimited, meaning that individuals in a social group must compete for resources while cooperating, a disadvantage of living in groups. When people's behavior leads to a lower evaluation in the eyes of others, they may suffer from social deprivation or even bullying and injury by others, reducing their opportunity to obtain scarce resources and lowering their probability of survival and reproduction [9]. Thus, social interactions are considered risky since social contact could be beneficial or harmful in acquiring more natural and social resources. Based on that risky circumstance, one benefit of social anxiety has been proposed: social anxiety makes people vigilant in social interactions to detect potential threats in socializing: according to the current situations, people display different levels of social anxiety to motivate them to take actions in order to avoid poor evaluations. Furthermore, two models adopting this comprehension have been proposed: social rank theory and social bonds theory.

Human society has many social structures, including social rank system and affiliation system. All social animals have social hierarchies since there is a direct relationship between social rank and inclusive fitness [10]. At the same time, having social bonds also provides individual fitness [11]. When people improve their social status, their living conditions will improve; as people form firm social bonds, they get more chances to get favors from others. However, their social behavior may reduce their social status or the bond between their friends and themselves. As a result, two main branches of theories explaining that social anxiety evolved to avoid these potential disadvantages have been proposed: social rank theory and social bond theory. Even though these two theories emphasize different aspects, their essence is the same; they both argue that the evolution of social anxiety is to help people reduce social threats [5].

1.2 Social rank theory

Social rank theory builds on the threat-detection approach, which detects threats from living in a status hierarchy. Our ancestors followed a model of social structure in which there was a clear hierarchy of dominance [12]. Social anxiety evolved from an awareness that under the serious

hierarchy of dominance in which people live, those of higher status have more access to more resources [12]. Social rank theory suggests that social anxiety can prevent loss of social rank. People with social anxiety are better suited for survival and longevity in social groups [13]. By lowering the wariness of higher-ranking people, they can better secure their social status. The solidity of social rank directly determines an individual's opportunities to cooperate with other members of society. People are usually willing to cooperate more with individuals with a higher and more stable social rank, both economically and in terms of social status [14]. Lower and precarious social status ultimately leads to a higher risk of mortality (e.g., poor living conditions, lack of safety facilities) and fewer accessible resources (e.g., resources of mating selection, food resources) [15]. As a result, individuals can survive and thrive in the long term within a social hierarchy, maintaining a solid social position through social anxiety.

1.3 Social bonds theory

Social bond theory is also built on the threat-detection approach, but the fear of negative evaluations from members of the community is a central part [16]. The feeling of social anxiety serves as a signal to alert the individual that he is in danger of being ostracized by members of his social group [17]. The greater the risk than reward presented in social situations, the higher the level of social anxiety is generated. It can lead individuals to develop avoidant behaviors, choosing to socialize less due to the fear of being judged negatively [18]. Individuals who possess social anxiety are likewise more likely to second-guess potentially harmful messages from the words or behaviors of other social members. This overly guarded behavior towards others can eventually lead to difficulties in normal social interactions. Although social anxiety for the most part causes new social bonds to be difficult to be created, it can be effective in dealing with some of the threats to existing social bonds. For socially anxious people, losing existing social bonds is frightening, so they will do whatever it takes to maintain these existing bonds. Reducing and limiting interactions with the outside world is a way for them to reduce stress. In reality, people with feelings of social anxiety may choose to continue a harmful friendship because they are afraid of being alone or unsure if they will be able to make new friends [19]. This friendship is often one-sided, and the person will choose to give up their emotional needs and even tolerate criticism and neglect from their friends to maintain the relationship.

1.4 Research Question

The research aims to test the social rank theory and the social bonds theory. In another words, the following de-

signed experiment is going to examine whether social anxiety's benefits on social rank and social bonds are the purpose of people's social anxiety. In order to achieve our goals, two predictions have been proposed: losing social ranks induces social anxiety and secondly, losing social bonds induces social anxiety. If the experiment's results correspond with these predictions, meaning that social ranks and social bonds are factors causing the positive changes of the level of social anxiety, social rank theory and social bonds theory are supported.

2. Method

2.1 Participants

Study participants will be college students between 18 and 23 because college is a critical period for individuals to explore identity between adolescence and adulthood. College students usually do well in this regard, and they can gain insight into the emotional changes and social dynamics of the characters in the story. They also have strong social cognitive ability and can understand the meaning of the character's situation in the story and the social status change.

2.2 Procedure

There will be two experiments conducted in this study. In the first experiment, participants will read a comic strip depicting a scenario in which a character experiences a potential loss of social status. For instance, the character may be an employee who makes a mistake during a company event and gets reprimanded by his boss in a public setting. This scenario is designed to evoke feelings of social anxiety in individuals. In the second experiment, the focus will shift to examining the correlation between social anxiety and social bonds theory. Participants will read another comic strip, which narrates the story of a person attending a party with friends, suddenly his friend excludes him then chooses to engage with someone else. In these two experiments, it can evoke the anxiety feeling for an individual.

2.3 Measures

Researchers can employ different measurement tools to assess the level of social anxiety experienced by participants before and after reading the comic strip and to compare the results by using tools such as social anxiety scales and questionnaires.

For example, the Liebowitz Social Anxiety Scale Self-Rated Edition (LSAS-SR) is designed to provide patients with a more convenient way to self-assess and can save time and effort. The LSAS-SR has been validated through various studies, suggesting high levels of reliability and validity. Also, it is often used in clinical settings

and research studies to measure the severity of social anxiety symptoms [20]. Questions might include "Did you feel nervous after reading the story?" or "Are you worried about your social standing?" These inquiries aim to capture immediate emotional responses such as nervousness, restlessness, or fear, providing qualitative data to complement the quantitative measures obtained from the LSAS-SR.

In addition to the LSAS-SR, a questionnaire can help to capture the changes in anxiety. The questionnaire would involve a series of statements that test about the level of social anxiety, such as "I feel like I am at risk of losing my social status" or "cannot get their approval," and ask participants to indicate their agreement on a Likert scale from 1 ("strongly disagree") to 5 ("strongly agree") [21]. In order to manage the data more effectively, the low point in every questionnaire would be correlated to the low level of social anxiety, and the high point would be correlated to the high level of social anxiety.

2.4 Data Analysis

Since we employed a Likert scale for the questionnaire, it consists of 10 statements, each worth 5 points, resulting in a total possible score of 50. The score range for an individual is from 10 to 50, indicating that a score of 10 signifies the lowest level of anxiety, whereas a score of 50 indicates the highest level of anxiety.

3. Discussion

It is commonly accepted that individuals with a higher level of social anxiety tend to avoid social situations. This behavior can be explained through social status theory and social bonds theory. According to [22] research, respectively, people encounter social bonds and social status loss, they tend to show a higher level of social anxiety and avoidance motivation. Therefore, based on the prior experiment, if an individual's level of social anxiety increases upon encountering a high potential for status loss, in this situation, an individual is likely to exhibit avoidance behavior due to heightened awareness of social threats and fear of negative evaluation. Similarly, in Experiment 2, if an individual's anxiety level increases when faced with a high potential for losing social bonds, we may conclude that there is also a positive correlation between social anxiety and the loss of social bonds. Consequently, individuals may avoid social interactions, as exclusion and neglect from their existing social group can intensify their fear of social failure.

4. Limitation

Still, there are potential issues related to our experiments. First, our experiment may lack internal validity because

we could not control for all confounding variables, such as gender differences, age differences, cultural differences, etc. when participants answered questionnaires about comic strips. As a result, each outcome may be personally biased and can not generalize to all groups of people. There will also be distorted associations when failing to control for confounders. Secondly, we have only two cartoons indicating two situations, and the scenes depicted in the cartoons can only be applied to a limited extent. They cannot meet the social anxiety situation for all groups of people. Since different groups of people may substitute different feelings for the scenes depicted in the cartoons due to age or gender differences, the results will be biased. We would have to ensure that all participants understand the purpose and procedure of the experiment and participate voluntarily, and that no unnecessary psychological stress or harm is caused to participants during the experiment.

If we found that there is actually no correlation between Social Status and Social Bond with Social Anxiety, and it is possible that other theory explains Social Anxiety. This theory accounts for both situational factors (such as the importance of the social interaction) and dispositional traits (such as individual differences in the tendency to feel socially anxious)[23]. Finally, ethical issues may also be implied in our study. We would have to ensure that all participants understand the purpose and procedure of the experiment and participate voluntarily, and that no unnecessary psychological stress or harm is caused to participants during the experiment.

5. Conclusion

In this paper, we summarize the results of several studies on social anxiety and present a possible way to test our hypothesis that social anxiety increases in the face of possible loss of social status and disruption of social bonds. With the post-experiment questionnaire, we may be able to examine possible associations of loss of social status and social bonds with social anxiety. We might show it is possible that having the feeling of social anxiety “is a signal that the individual is at the risk of being rejected or excluded by members of their social group” and is the “threat-detection approach that evolved in our species to detect threats from living in a status hierarchy, including the loss of status”[5]

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