Original Article

Investigating the Role of Interpersonal Sensitivity, Anger, and Perfectionism in Social Anxiety

Abstract

Background: The investigation of personality characteristics and emotional experiences of the people suffering from anxiety disorders is one of the most important issues which are considered by researchers and clinicians. Perfectionism, sensitivity to interpersonal rejection, and anger are personality traits related to social anxiety. In social anxiety disorder, it has also been focused on anger as a personality characteristic and as an emotional condition. The main purpose of this work is to investigate the role of these variables in predicting social anxiety among a nonclinical group of Iranian students. Methods: In this cross-sectional study, 131 students completed the self-report version of Liebowitz Social Anxiety Scale Self-Report version (LSAS-SR), Frost Multidimensional Perfectionism Scale (FMPS), Interpersonal Sensitivity Measure (IPSM), and State and Trait Anger Expression Inventory. Multiple linear regressions were conducted to examine the concurrent associations between perfectionism, interpersonal sensitivity and quality of emotional experience, and expression of anger with severity of self-report social anxiety. Results: Greater levels of FMPS total were significantly associated with a greater level of LSAS total, fear, and avoidance of social and functional situations (P = 0.022, P = 0.024, and P = 0.006). Moreover, a significant positive correlation between IPSM total (P = 0.015) with fear and also between anger expression index (P = 0.009) with avoidance subscale were found. Conclusions: In accordance to the previous researches, we found that perfectionism, interpersonal sensitivity, anger experience, and anger expression skills are related to social anxiety. How these personality traits are related to fear and avoidance of social situations and their concurrent effects on predicting social anxiety were discussed.

Keywords: Anger, interpersonal sensitivity, perfectionism, social anxiety

Introduction

All the people have a basic drive for getting touch with others, being loved, and respected by them. In fact, the most horrible fears are the worry about, not to be loved, and being ignorant of other people.[1] Considering the importance of social communications, the human beings are naturally feared of being assessed negatively by others. In general, maladaptive expression of this adaptive concern is called as social anxiety disorder (SAD).[2] The main core of this disorder is the intense and constant fear of one or some social or functional situations in which embarrassment, rejection, or scrutiny are possible. This fear leads to avoidance of the situation or endures it with sever anxiety or distress.[3]

One of the most important issues regarded by researchers and clinicians is to investigate personality characteristics and emotional experiences of the

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people suffering from anxiety disorders. Personality traits are partly permanent characteristics, affecting the individual's thoughts, emotions, and behaviors.[4] Among these traits, some of them are more related to mental disorders and are known as risk factors or vulnerabilities which can mediate the development of psychopathological conditions and/or maintain symptoms. The presence of these characteristics with negative experiences and stressors in the person's life can lead to developmental disorders or/and maintain the symptoms. and sensitivity Perfectionism interpersonal rejection are two personality traits related to SAD which are concerned by researchers and clinicians in recent decades. Anger has been also focused on as a personality characteristic and also an emotional condition in anxiety disorders.

Anger is defined as a syndrome including relatively definite feelings, cognition, and physiological reactions which is

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accompanied by the desire to damage a target.^[5] The results of different studies show that the people suffering from SAD show a relatively special pattern of anger experience and expression. In comparison with a nonanxious control group, they are more susceptible to experience anger in various conditions. They also experience and express anger, possibly more without a trigger or stimulating: express their anger when they are criticized by others, and the possibility of anger suppression is higher among them.^[6-10]

The experience and expression of anger can fall the people suffering from SAD into a difficult situation. Although the anger may be stimulated by perceived negative evaluation, [9,11] if expressed, it may increase the real or imaginative risk of more negative evaluations. Thus, the anger can be the trigger of anxiety and would be suppressed to reduce anxiety. In Erwin *et al.* study, in comparison with a nonanxious control group, people with SAD reported the higher levels of overall anger experience, anger in response to the perception of negative evaluations, and also anger suppression.^[7]

Perfectionism is a personality trait which is known by a strong need to achieve the high standards of performance with over self-criticism. The studies show that perfectionism is understood more in multidimensionally conceptualizing framework. Frost *et al.* illustrated six dimensions of perfectionism such as (1) personal standards (PSs), (2) parental expectations (PEs), (3) parental criticism (PC), (4) concern over mistakes (COMs), (5) doubts over actions (DAs), and also (6) organization (O). Perfectionists' beliefs are regarded to have an important role in the development and maintaining of SAD. [15]

Several investigations show that the patients suffering from social anxiety consider high PSs for themselves to achieve predicted social standards and avoid shame. [16-18] However, they believe that they never achieve these standards. As a result, fall into a vicious cycle including prediction of failure and rejection which lead to the avoidance of social relationships. [19] Moreover, the studies in this field show that the dimensions of CM, PC, and DA can predict the group differences between the cases with SAD and nonclinical group. [17,20] In an Iranian nonclinical group, there was a positive correlation between social anxiety with CM and DA dimensions. Social Anxiety was also negatively related to PE. [21]

The sensitivity to interpersonal rejection is a construct which is known as a basic component in psychopathology of SAD.^[22] Boyce and Parker have introduced this construct with the name of interpersonal sensitivity as a susceptible variable for depression. They also made an instrument for measuring it.^[23]

They define this construct as over-awareness which is unnecessary toward the others' behaviors and feelings and also having sensitivity to it. Interpersonal sensitivity is characterized by a feeling of personal inadequacy and repeated misunderstanding of others' interpersonal behavior. It leads to feeling discomfort in the presence of other people and also interpersonal avoidance and nonassertive behavior. [23,24] The investigations show that this construct is not specified for depression but correlated with SAD. Its assessment instrument (Interpersonal Sensitivity Measure [IPSM]) can distinguish well the three groups of specific SAD (limited to a specific situation), generalized type of SAD (related to some social or functional situation), and nonclinical population. [20,25]

The studies also illustrate that the level of interpersonal sensitivity can predict social anxiety. [20,26,27] Despite all of this evidence, at least in one study, no relation was found between social anxiety and interpersonal sensitivity. [28]

In spite of the importance of these personality characteristics in social anxiety, few studies have been conducted to investigate their role in psychopathology of SAD. In addition, it seems to be necessary to repeat these studies among different population and cultures. Confirming the relation between these variables and social anxiety can be helpful to generalizability of these psychopathological relations in varied communities. Moreover, it has not been yet studied the simultaneous role of anger, perfectionism, and interpersonal sensitivity in predicting social anxiety. The aim of this investigation is to study the relation between social anxiety with interpersonal sensitivity, anger, and perfectionism and also the role of these variables in predicting social anxiety among a nonclinical group of Iranian students. Considering the results of previous studies, we hypothesize that these personality traits are related to fear and avoidance of social and functional situations.

Methods

In this cross-sectional study, a total of 131 nonclinical students of the Isfahan University of Medical Sciences, Isfahan, Iran, during 2015–2016 educational year were selected through multistage sampling method, considering the gender, faculty, and major. They all consent to participate in the study and were asked to complete Liebowitz Social Anxiety Scale Self-Report version (LSAS-SR), Frost Multidimensional Perfectionism Scale (FMPS), IPSM, and State and Trait Anger Expression Inventory (STAXI-2) Questionnaires.

LSAS-SR^[29] is the most applicable instrument for assessing social anxiety, including clinical and self-report forms. It has 24 items and measures the rate of fear and avoidance of functional and social interaction situations. The validity of its self-report form has been supported in several studies.^[30-34]

IPSM^[23] assesses the over-sensitivity toward others' interpersonal behavior, social feedback, and negative evaluations (actual or perceived) taken by other people. This measure has 36 items, a total score (IPSM-total),

and five subscales as followed; interpersonal awareness, need for approval, separation anxiety, timidity, and fragile inner-self. Psychometric properties of this instrument have been affirmed in different investigations.^[23,35]

FMPS scale was designed on the basis of multidimensional concept of perfectionism and includes 35 statements and 6 dimensions as followed; concern about mistake (COM), doubt about the action (DA), PEs, PC, PSs, and organization. [36] In Iran, reliability and validity of this scale have been confirmed. [21]

STAXI-2^[37] contains 57 statements which evaluate the anger experience, the tendency to express anger, and also the tendency to control it. This questionnaire has six subscales and one index:

- 1. State anger (S-Ang) measures three components of anger severity as an emotional state by 15 statements; feeling anger (S-Ang [F]), the tendency to express anger verbally, and the tendency to express anger physically
- 2. Anger trait (T-Ang) assessed individual differences in tendency to experience anger within the time by ten statements. This subscale includes anger temperament (T-Ang/T) and angry reaction (T-Ang/R)
- Anger expression-in (AX-I) assessed the frequency of anger feeling which has been experienced but not expressed. It includes eight statements
- 4. Anger expression-out (AX-O) measures the frequency of anger feeling directed toward other people and objects, verbally or physically through eight statements
- Anger control-out (AC-O) shows the frequency of the cases in which the person controls his/her anger expression-out
- Anger control-in (AC-I) evaluates the frequency in which the person controls his/her anger by relaxation or reconciliation.

In addition to these six subscales, the anger expression index (AX-Index) based on an individual's responses to the later four subscales is also measured. The validity and reliability of STAXI-2 have been also affirmed in Iran in a number of studies. [38,39]

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) Statistics version 22.0 (IBM Corp, Armonk, New York, United States). The Pearson's correlation coefficient was used to examine the relation between independent variables and total score of LSAS and its subscales. To assess the relative contribution of each independent variable on the variance of social LSAS-total scores and its subscales, multiple linear regression with backward elimination variable selection was performed.

Results

Most of the participants were female (22.9%), single (76.3%), and B.S. students (71.0%) and their mean (standard deviation) age was 22.40 (2.55) years.

Pearson's correlation coefficient [Table 1] showed that among the subscales of STAXI-2, S-Ang, AX-out, AX-In, and AX-Index had positive correlation with LSAS avoidance score. Anger expression-in and anger expression-out had negative correlation with the mentioned score. T-Ang and AX-In had a significant positive correlation with fear score and LSAS total. There was a significant positive correlation between FMPS total score and also CM, D, and PC subscales with fear, avoidance, and LSAS total score. PE had a significant positive correlation with avoidance and LSAS total score. In addition, there was a significant negative relation between organization and avoidance score.

Among IPSM subscales, there was a significant positive correlation between the need for approval and LSAS-total score. The rest of subscales and also IPSM-total score had a significant positive correlation with all three LSAS-total, fear, and avoidance scores.

Then, multiple linear regression [Table 2] showed that among the variables in the model, the total score of FMPS had a significant positive correlation with LSAS-total and also fear and avoidance subscales (P = 0.022, P = 0.024, and P = 0.006, respectively).

Moreover, a significant positive association between IPSM-total (P = 0.015) with fear and also between AX-Index (P = 0.009) with avoidance score was found.

Finally, Table 3 showed that among STAXI-2 subscales, AX-I had a significant positive relation (P = 0.023) with LSAS total score and AC-O had a negative correlation with it (P = 0.027). T-Ang (P = 0.045) and AX-I (P = 0.032) had significantly a positive relation with fear. On the other hand, the AC-O had significantly a negative relation with avoidance (P = 0.009).

Among FMPS subscales, the DA had significantly a positive correlation with LSAS total score fear and avoidance (P < 0.001, P < 0.001, and P = 1002, respectively). The PC had significantly positive relation with LSAS total score and avoidance (P = 0.025 and P < 0.001, respectively).

Among IPSM subscales, interpersonal awareness with LSAS-total and fear (P < 0.001 and P = 0.019, respectively) and fragile inner-self with avoidance (P < 0.001) were related to each other significantly.

Discussion and Conclusions

The goal of this research was to study the relation of social anxiety with perfectionism, interpersonal sensitivity, and the quality of experiencing and expressing the anger and also the role of these characteristics in predicting social anxiety in a nonclinical case group.

According to the results, the people experienced more anger in a situation (S-Ang) and their styles to express

Table 1: Correlation coefficient of State and Trait Anger Expression Inventory-2, Interpersonal Sensitivity Measure, and Frost Multidimensional Perfectionism Scale subscales with Liebowitz Social Anxiety Scale subscales

| | LSAS | | | | | | | |
|-------------------------|---------|----------------|--------------------|----------------|-----------------|---------|--|--|
| | Fear | | Avo | oid | Total | | | |
| | r | P | r | P | r | P | | |
| S-Ang | 0.058 | 0.547 | 0.248** | 0.010 | 0.118 | 0.243 | | |
| T-Ang | 0.226* | 0.019 | 0.176 | 0.072 | 0.202* | 0.048 | | |
| AX-O | 0.073 | 0.451 | 0.258** | 0.008 | 0.160 | 0.119 | | |
| AX-I | 0.268** | 0.005 | 0.248** | 0.010 | 0.265** | 0.008 | | |
| AC-O | -0.128 | 0.192 | -0.283** | 0.004 | -0.200 | 0.054 | | |
| AC-I | -0.149 | 0.125 0.280 | -0.247* 0.323** | 0.011 0.001 | -0.178 0.201 | 0.083 | | |
| AX-index | 0.110 | | | | | 0.062 | | |
| COM | 0.362** | < 0.001 | 0.339** | < 0.001 | 0.380** | < 0.001 | | |
| DA | 0.477** | < 0.001 | 0.455** | < 0.001 | 0.501** | < 0.001 | | |
| PE | 0.168 | 0.077 | 0.313** | 0.001 | 0.290** | 0.003 | | |
| PC | 0.282** | 0.003 | 0.472** | < 0.001 | 0.395** | < 0.001 | | |
| PS | 0.141 | 0.141 | 0.103 | 0.294 | 0.143 | 0.159 | | |
| O | -0.102 | 0.291 | -0.195* | 0.044 | -0.126 | 0.218 | | |
| FMPS total | 0.406** | < 0.001 | 0.476** | < 0.001 | 0.477** | < 0.001 | | |
| Interpersonal awareness | 0.506** | < 0.001 | 0.288** | 0.003 | 0.478** | < 0.001 | | |
| Need for approval | 0.252** | 0.008 | 0.032 | 0.744 | 0.214* | 0.034 | | |
| Separation anxiety | 0.426** | < 0.001 | 0.378** | < 0.001 | 0.470** | < 0.001 | | |
| Timidity | 0.334** | < 0.001 | 0.226* | 0.019 | 0.332** | 0.001 | | |
| Fragile inner self | 0.315** | 0.001 | 0.463** | < 0.001 | 0.464** | < 0.001 | | |
| IPSM total | 0.451** | < 0.001 | 0.311** | 0.002 | 0.465** | < 0.001 | | |

FMPS=Frost Multidimensional Perfectionism Scale, IPSM=Interpersonal Sensitivity Measure, AX-index=Anger expression-index, T-Ang=Anger trait, AX-I=Anger expression-in, AX-O=Anger expression-out, DA=Doubts over action, PC=Parental criticism, IPA=Interpersonal awareness, FIS=For self-reinforcing, S-Ang=State anger, AC-O=Anger control-out, AC-O=Anger control-in, COM=Concern over mistake, PE=Parental expectation, PS=Personal standard, O=Organization, LSAS=Liebowitz Social Anxiety Scale

Table 2: Multiple regression results for studying the role of Frost Multidimensional Perfectionism Scale's and Interpersonal Sensitivity Measure's total scores and state anger, anger trait, anger expression-index subscales of State and Trait Anger Expression Inventory-2 in explaining Liebowitz Social Anxiety Scale's total score, fear, and avoidance

| Dependent | Independent | В | SE | β | P | R^2 | Adjusted R ² |
|-----------|-------------|-------|-------|-------|-------|-------|-------------------------|
| Fear | FMPS-total | 0.208 | 0.091 | 0.264 | 0.024 | 0.217 | 0.196 |
| | IPSM-total | 0.241 | 0.097 | 0.286 | 0.015 | | |
| Avoid | AX-index | 0.290 | 0.107 | 0.293 | 0.009 | 0.462 | 0.213 |
| | FMPS-total | 0.226 | 0.080 | 0.306 | 0.006 | | |
| Total | FMPS-total | 0.009 | 0.004 | 0.277 | 0.022 | 0.152 | 0.126 |

SE=Standard error, FMPS=Frost Multidimensional Perfectionism Scale, IPSM=Interpersonal Sensitivity Measure, AX-index=Anger expression-index

anger were more maladaptive (AX-I, AX-O), tried more to avoid anxiety-provoking situations. On the other hand, the people having more ability in controlling their anger toward other people (AC-O) and objects and also in controlling their inner sense of anger through relaxation or reconciliation (AC-I), avoid functional or social situations less. Furthermore, the persons being more prone to experience anger within the time and without specific stimuli (T-Ang) have more fear of functional or social situations. Multiple regression analysis showed that experiencing anger in different situations and without the presence of specific stimuli (T-Ang) accompanied with suppressing anger (AX-I) predicts 16% of fear of functional or social situations. Inability

in anger controlling and directing it toward other people or objects explains 13% of avoidance score. Anger suppression (AX-I) and inability in controlling aggression toward other people and objects (AC-O) clarify 11% of LSAS total variance. These findings are compatible with the studies reporting the relation between anger experience quality and its expression ways with social anxiety. [6-8,10] It seems that expressing anger outside for the people having higher social anxiety can lead to real or imaginative risk of more negative evaluations. Hence, the anger can elicit anxiety and may be suppressed to decrease it. In fact, feeling discomfort with anger and its suppression, which are presented by hidden criticizing the others and experiencing the annoyance feeling, are all

Table 3: Multiple regression results for investigating the role of State and Trait Anger Expression Inventory-2 subscales, Frost Multidimensional Perfectionism Scale-total, and Interpersonal Sensitivity Measure-total in predicting Liebowitz Social Anxiety Scale-total fear and avoidance

| Independent | Dependent | Subscale | В | SE | β | P | R^2 | Adjusted R ² |
|-------------|-----------|----------|--------|-------|--------|---------|-------|-------------------------|
| Anger | Fear | T.Ang | 0.564 | 0.278 | 0.276 | 0.045 | 0.162 | 0.100 |
| | | AX-I | 0.818 | 0.376 | 0.242 | 0.032 | | |
| | Avoid | AC-O | -0.696 | 0.259 | -0.276 | 0.009 | 0.132 | 0.067 |
| | Total | AX-I | 1.895 | 0.815 | 0.286 | 0.023 | 0.113 | 0.040 |
| | | AC-O | -1.287 | 0.569 | -0.268 | 0.027 | | |
| Perfect | Fear | DA | 1.849 | 0.343 | 0.479 | < 0.001 | 0.229 | 0.221 |
| | Avoid | DA | 1.203 | 0.375 | 0.310 | 0.002 | 0.333 | 0.318 |
| | | PC | 1.308 | 0.35 | 0.362 | < 0.001 | | |
| | Total | DA | 2.801 | 0.719 | 0.401 | < 0.001 | 0.308 | 0.292 |
| | | PC | 1.532 | 0.671 | 0.235 | 0.025 | | |
| IPSM | Fear | IPA | 1.467 | 0.258 | 0.501 | < 0.001 | 0.251 | 0.243 |
| | Avoid | FIS | 1.489 | 0.349 | 0.399 | < 0.001 | 0.159 | 0.151 |
| | Total | IPA | 1.600 | 0.672 | 0.298 | 0.019 | 0.206 | 0.196 |

IPSM=Interpersonal Sensitivity Measure, T-Ang=Anger trait, AX-I=Anger expression-in, AX-O=Anger expression-out, DA=Doubts over action, PC=Parental criticism, IPA=Interpersonal awareness, FIS=For self-reinforcing, SE=Standard error, AC-O=Anger control-out

the characteristics of anger expression among the people suffering from SAD.^[7]

Accompanying with previous studies, [18,20,21,40] the relation between perfectionism and social anxiety was affirmed in the present investigation. According to the findings of these studies, the more a person worries about making mistakes (COM), experiences doubt about the perfection of his/her own deeds, has a perception about his/her PC, the more he/she experiences fear and avoidance of social or functional situations.

In the previous studies, PE, organization, and PS have been reported as the adaptive dimensions of perfectionism. [16-18,21,41] This study also confirmed the results of the previous studies about organization and PS. However, it seems that the PE dimensions of perfectionism may have positive and negative aspects and may be connected with specific psychopathologies in certain conditions. However, it needs to be studied more.

Among the subscales of FMPS, doubt about actions explains 22% of fear scores variance. The DA also alongside PC predicts 33% and 30% of the variance of avoidance scores and LSAS-total scores, respectively. The hesitation about personal ability for doing the actions perfectly and also criticism expectations and sensitivity to this can lead to fear and avoid social and functional situations. These two dimensions of perfectionism are related to different psychopathologies in most studies done in this field. They seem to form the central core of maladaptive perfectionism.

According to our results, the people having over-awareness of others' behaviors and feelings, and also highly sensitive person, experience more fear and avoidance of social and functional situations.

These findings can support the studies which affirm the role of interpersonal sensitivity in psychopathology of social anxiety. [20,25-27] It sounds that this personality characteristic has an important role in developing social anxiety and maintaining its symptoms. According to the results of multiple regressions, interpersonal awareness is the predictor of fear and the total score of LSAS and fragile inner self is the predictor of avoidance. Therefore, being aware and worried in the social interactions, the person high stress about the impact which he/she can put on others (interpersonal awareness), having a negative attitude toward oneself, fear of being ridiculous, and the need for others continually approval for self-reinforcing (FIS) may lead to fear and avoidance of social situations.

The results of analyzing multiple regressions to study concurrent effects of variables in predicting the social anxiety showed that the higher levels of FMPS-total and IPSM-total scores predicted the greater fear of social and functional situations. Higher levels of FMPS-total alongside the lower levels of AX-Index also were associated with a greater avoidance score. Furthermore, FMPS-total clarified 15% of LSAS-total scores variances. Therefore, it seems that perfectionism can lead to both fear and avoidance of functional and social situations. However, interpersonal sensitivity only predicts fear, and quality of anger expression is only related to avoidance. IPSM-total score was also just the predictor of fear in Kumari et al. study.[20] In fact, interpersonal sensitivity may create a general sensitivity or arousability which increases the sense of fear in social situations.

In summary, according to this study, hesitation about perfection of the actions, fear of being criticized derived from PC, high sensitivity and awareness in interpersonal relations, having a negative attitude toward oneself, and experiencing anger alongside its maladaptive expression skills can lead to experience fear and avoidance of interpersonal and/or functional situations.

It is suggested conducting the studies in which the relations between these variables with social anxiety are investigated in different communities and in larger samples. In addition, investigating and adjusting the effects of confounding variables such as gender or other demographic characteristics or personality traits can help to explain more and complete the findings of this investigation and previous studies.

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Conflicts of interest

There are no conflicts of interest.

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