State-Trait Anxiety and Co-morbid Depression among Anxiety Disorder Patients

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Abstract

Anxiety is an appropriate response to threats, but it can be abnormal when its level is out of proportion to a threat. In extreme forms, anxiety can impair our daily functioning. Anxiety disorders are basically related to stress, reactions to stress (usually maladaptive) and individual proneness to anxiety. An important aspect of anxiety disorders is the issue of co-morbidity. Even apart from the considerable co-morbidity figures between anxiety disorders themselves, co-morbidity rates between anxiety disorders and depressive disorders are very high. This study focused on state-trait anxiety and co-morbid depression among anxiety disorder patients. The results revealed that anxiety patients have significantly higher mean score for different dimensions of state-trait anxiety and co-morbid depression than healthy normals. There were moderate to high positive correlations between co-morbid depression and all the dimensions of state-trait anxiety except suspiciousness.

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Anxiety is a normal human emotion. But in excess, it destabilizes the individual. Anxiety is often a diffuse, unpleasant and uncomfortable feeling of apprehension, accompanied by one or more bodily sensations that characteristically recur in the same manner in the person. Anxiety is considered excessive or pathological when it arises in the absence of challenge or stress, when it is out of proportion to the challenge or stress in duration or severity, when it results in significant distress, and when it results in psychological, social, occupational, biological or other impairments. Anxiety encompasses behavioral, affective and cognitive responses to the perception of danger. Anxiety disorders are basically related to stress, reactions to stress (usually maladaptive) and individual proneness to anxiety. Anxiety disorders are one of the most prevalent of all psychiatric disorders in the general population. The DSM IV-TR recognizes the following specific types of anxiety disorders: phobic disorders, such as specific phobia, social phobia and agoraphobia; panic disorder with agoraphobia and without agoraphobia; generalized anxiety disorder; obsessive compulsive disorder; and acute and posttraumatic stress disorder.

In 1966, Spielberger suggested that conceptual anxiety could be introduced to multifaceted definitions of anxiety by distinguishing trait anxiety from state. Anxiety does not occur as a single phenomenon; its various forms of manifestation can be categorized under the two different headings of trait anxiety and state anxiety. According to the state-trait-anxiety model, the individual proneness for acute (state) anxiety reactions is in part depending on the level of trait-anxiety (Lazarus, 1991; Spielberger, 1972). Trait anxiety is a relatively stable aspect of personality. In their behavior, individuals with anxiety traits will tend to have an attitude reflecting their perception of certain environmental stimuli and situations as dangerous or threatening. Those who show a more developed anxiety trait are much prone to reacting to a large number and variety of stimuli, and tend to worry in situations which for most individuals would not represent a source of threat. State anxiety manifests itself as an interruption of an individual's emotional state, leading to a sudden subversion of one's emotional equilibrium. A person experiencing state anxiety will feel tension or worry, or might enter a state of

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restlessness. In such moments, the individual may feel very tense and easily react or over-react to external stimuli (Beck, Emery, & Greenberg, 1985).

An important aspect of anxiety disorders is the issue of co-morbidity, which complicates the interpretation of many studies (Regier, 1998). Even apart from the considerable co-morbidity figures between anxiety disorders themselves (especially panic disorder, social phobia, and obsessive compulsive disorder), co-morbidity rates between anxiety disorders and depressive disorders are very high ranging from 30 percent for co-existing in time to 60 percent lifetime. Individuals with anxiety disorders and co-morbid depression have more chronic and severe anxiety symptoms, are more impaired, and are at greater risk for suicide, than those without depression (De Graaf, 2004).

In general, the factors which cause anxiety are increasing day-by-day. An average high school kid today has the same level of anxiety as an average psychiatric patient had in the 1950s (Taylor, 2011). Psychologists have examined the possible reasons for this increase over the last five decades. Some of the reasons may be a decrease in "social connectedness" - people tend to move more, change jobs, participate less in civic organizations, and are less likely to participate in religious activities. Individual expectations also have changed in the last five decades. People expect to have a more affluent life-style, are driven by unrealistic ideas of what they need, and have unrealistic ideas about relationships and appearance. In modern societies, human beings are gradually becoming more uncompromising and egoistic resulting in unsuccessful marital and social relationships. Such situations adversely affect the young generation in the family and they feel absolutely insecured and left out.

The research on anxiety disorders has consistently revealed the fact that anxiety disorders are unceasing, relentless and can even grow worse if not properly treated. Anxiety disorders have a high impact on daily life (illness intrusiveness) and cause a great deal of suffering for the individual patient (Antony, 1998). Anxiety disorders are by far the most common psychiatric disorders (25%), followed by major depression (17%). Lifetime prevalence rates for all anxiety disorders are 19.2 percent for men, and 30.5 percent for women (Kessler, 1994). The status of research on anxiety disorders in India in relation to etiology, phenomenology, course, psychological correlates, outcome, and management is rather poor. The role of state-trait anxiety and co-morbid depression in anxiety disorders are not explored adequately. This lag in anxiety research warrants research on anxiety disorders in our culture, especially at this age of anxiety and apprehension. So the present study focuses on state-trait anxiety and co-morbid depression among anxiety disorder patients.

Objectives

1. To examine whether there are significant differences among the different clinical groups of anxiety patients in different dimensions of state-trait anxiety and co-morbid depression.
2. To examine whether there are significant differences between the clinical group and the non-clinical matched group (normal control group) in different dimensions of state-trait anxiety and co-morbid depression.
3. To examine the direction and the magnitude of the correlations among different dimensions of state-trait anxiety and co-morbid depression.

Method
Participants

The participants for the study consisted of two groups; a clinical group and a non-clinical comparison group. The clinical group comprised of 75 persons diagnosed with anxiety disorders based on DSM IV diagnostic criteria of anxiety disorders, and include generalized anxiety disorder (N=20), obsessive compulsive disorder (N=17), social anxiety disorder (N=22), and panic disorder (N=16). They were selected from the in-patient and

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out- patient units of different mental health centers/hospitals in Thrissur district, Kerala. The non-clinical comparison group was matched with respect to sex, age, economic status, and marital status with the clinical group. The age of the subjects ranged from 15 to 50 years. The samples were selected using stratified random sampling technique.

Instruments

1. State –Trait Anxiety Test (STAT).The State –Trait Anxiety Test was designed and developed by PSY-COM services. The test was developed as a means of getting clinical anxiety and state-trait information in anxiety problems in a rapid, objective, and standard manner. The test includes 40 items which measure five dimensions- tension, guilt proneness, maturity, suspiciousness, and self control. The split-half reliabilities are .93, .87, .82, .86, .92, .88, .91, and .92 for dimensions guilt proneness, maturity, self control, suspiciousness, tension, total, state, and trait anxiety respectively. Each question has three possible answers. Answers are scored based on the scoring key. The scores of all the dimensions added together to obtain a total score. The first 20 items measure intrinsic (trait) anxiety score (score-T), and the last 20 items measure an extrinsic (state) anxiety score (score-S). A higher score always means more anxiety.

2. Beck Depression Inventory (BDI-II).The Beck Depression Inventory (BDI) developed by Beck (1961) is one of the most widely used instruments for measuring the severity of depression. The Beck Depression Inventory-II (BDI-II) was a revision of the Beck depression inventory (BDI), developed in response to the DSM IV manual of APA. The test was shown to have a high one-week test–retest reliability (r =.93).The BDI-II consists of twenty one items about how the subject has been feeling in the last week. Each question has a set of four possible answer choices, ranging in intensity: Not at all=0, Mildly=1, Moderately=2, and Severely=3. A total score is obtained by adding up the scores obtained for all the items. The total score can range from 0 to 63 a high score indicating more severe depressive symptoms.

3. Personal Data Sheet. A personal data sheet was used to collect data regarding the socio demographic characteristics of the subjects. The personal details like like age, sex, religion, marital status, education, job, order of birth, place of residence, family history of mental illness, presence of stressful life events, and treatment history were collected using personal data sheet.

Procedure

Permission to conduct the study was obtained from the authorities and ethical committees of the concerned hospitals. The clinical sample was selected from amongst the identified anxiety patients of those hospitals/ clinics. The comparison group was selected from the general public and was matched with the clinical group on age, sex, education, and marital status. The research instruments were given to the participants and they were allowed to complete the questionnaires. The collected data were analyzed using statistical techniques of one-way ANOVA, Student's t-test, and Pearson's correlation coefficient.

Results and Discussion

The differences in the mean scores obtained by the four groups of anxiety patients-generalized anxiety disorder, obsessive compulsive disorder , social anxiety disorder, and panic disorder (N=16) in the different dimensions of state-trait anxiety and co-morbid depression were tested for significance using one-way ANOVA and results are presented in table 1.

The results of the one-way ANOVA obtained for the four anxiety patient group in the different dimensions of state-trait anxiety show that none of the F-values obtained are

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significant. These results indicate that as far as the different anxiety patients are concerned, they do not differ among themselves in any of the seven dimensions of state-trait anxiety or in total anxiety.

Results of the one-way ANOVA for the different anxiety patient groups in co-morbid depression show that there are no significant differences among the four groups of anxiety patients in co-morbid depression. No studies in the review comparing the severity of co-morbid depression in different anxiety disorders were found. But many studies supported the fact that co-morbidity is an important problem in anxiety disorders and co-morbid depression is the most common co-morbid disorder in this respect. For example, Gorman (1996) suggested that co-morbid depression occurs in up to 90 percent of the patients with anxiety disorders. Regier (1998) found that co-morbidity rates between anxiety disorders and depressive disorders are very high (especially for panic disorder with agoraphobia, social phobia, and obsessive compulsive disorder), ranging from 30 percent for co-existing in time to 60 percent lifetime.

Table 1

Summary of one-way ANOVA of different dimensions of state-trait anxiety and co-morbid depression for the clinical groups

Variables	Between groups		Within groups		
	Sum of squares	Mean squares	Sum of squares	Mean squares	F
Guilt Proneness	45.154	15.051	1233.193	17.369	.867
Maturity	1.112	.371	467.768	6.588	.056
Self Control	15.996	5.332	857.284	12.074	.442
Suspiciousness	2.377	.792	251.943	3.548	.223
Tension	15.715	5.238	895.032	12.606	.416
Trait	38.990	12.997	2736.957	38.549	.337
State	63.960	21.320	3208.520	45.190	.472
Total	103.154	34.385	9293.192	130.890	.263
Co-morbid depression	1381.268	460.423	16918.518	238.289	1.932

The results obtained in this section indicate that there are no significant differences among the four groups of anxiety patients (generalized anxiety disorder, obsessive compulsive disorder, social anxiety disorder, and panic disorder) in the different dimensions of state-trait anxiety and co-morbid depression. These lack of differences among the anxiety patient groups point out that irrespective of the diagnosis into different types of anxiety disorders, the anxiety patients are more of a homogenous group as far as the above variables are concerned. This points out the possibility that all these variables are common correlates of any or all anxiety disorders. Hence, in further analyses, the four different clinical groups are treated as a single group.

The mean and the standard deviation of the scores obtained by the clinical and the matched groups in the different dimensions of state-trait anxiety, co-morbid depression and the corresponding t-values are given in Table 2. Significant differences are found to exist in all the dimensions of state-trait anxiety (guilt proneness, maturity, self control, suspiciousness, and tension), in state anxiety, trait anxiety, and co-morbid depression.

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Table 2

Mean, Sd and 't' value of different dimensions of state-trait anxiety and co-morbid depression by the clinical and the matched groups

Dimensions	Clinical group(N=75)		Matched group (N=75)		't'
	Mean	SD	Mean	SD	
Guilt proneness	13.91	4.16	9.99	3.57	6.2**
Maturity	5.96	2.52	4.20	2.41	4.38**
Self control	7.36	3.44	4.53	2.65	5.64**
Suspiciousness	4.68	1.88	3.88	1.54	2.87**
Tension	11.17	3.51	7.05	3.08	7.65**
Trait	21.03	6.13	14.36	5.37	7.09**
State	22.44	6.65	15.43	5.31	7.13**
Co-morbid depression	27.61	15.73	5.53	4.22	11.75**

**p< .01

     In all the dimensions of state-trait anxiety, the mean scores of the anxiety patients are significantly higher than that of the matched group. High score on tension dimension indicates that they tend to be very tense, excitable, frustrated, driven, restless, fretful and impatient. High score on guilt proneness dimension indicates that they are depressed, apprehensive, troubled, and moody, a worrier, full of foreboding and brooding. High guilt proneness score is common in clinical anxiety patients of all types as reported by previous studies (Bull &Strongman, 1971). The clinical group scored high on the dimension maturity (less maturity) indicating that they are easily affected by feelings and tends to be low in frustration tolerance, and are changeable and plastic. The anxiety patients evade necessary reality demands, and are neurotically fatigued. They tend to be fretful, emotional and annoyed, active in dissatisfaction, having neurotic symptoms like phobias, sleep disturbances, and psychosomatic complaints. The anxiety patients also scored high on suspiciousness indicating that they tend to be suspicious, mistrusting, doubtful and hard to fool. They are often involved in their own ego, are self opinionated, and interested in internal mental life. The anxiety patients scored high on self control (low self control) indicating that they will not be bothered with will control and regard for social demands. They are careless of protocol and follows own urges. They may feel maladjusted and may also show affective maladjustment (Bull & Strongman, 1971).

     The clinical group got higher trait and state anxiety scores than the matched control group indicating that trait anxiety is ingrained in an anxiety patient's personality, and individuals with high trait anxiety tend to view the world as dangerous and threatening. The present results are supported by the results obtained by Spielberger (1968). According to Spielberger (1968), anxious individuals tend to worry more than most people and feel inappropriately threatened by several things in the environment. People with trait anxiety do not often feel "normal" and are rarely without some type of anxious feelings. In anxiety patients the state anxiety score is higher and the patient is unable to manage the anxiety state. Hence, the present findings are in agreement with earlier findings in this regard.

     The mean score in co-morbid depression (Table 2) obtained by the clinical group is significantly higher (about 5 times) than that of the matched group. Many studies have supported the presence of co-morbid depression in anxiety disorders (Breslau, Schultz, & Peterson, 1995; Kessler, 1995; 2005). Justin and Richard (2004) have reported that patients with anxiety disorders were, on the average, moderately depressed and obtained higher depression scores than the control participants. Kessler (1995) reported that co-morbid depression occurs in up to 90 percent of the patients with anxiety disorders. Patients with co-morbid disorders do

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not respond well to therapy, have a more protracted course of illness, and experience less positive treatment outcomes (Gorman, 1996).

Table 3

Correlation of co-morbid depression and the different dimensions of state-trait anxiety (N=75)

Variable	Gp	Ma	Sc	Su	Tn	Trait	State	Total
Co-morbid depression	.55**	.39**	.46**	.11	.55**	.36**	.66**	.62**

**p< 0.01

(Note: Gp=Guilt proneness, Ma=Maturity, Sc=Self control, Su=Suspiciousness, Tn=Tension)

Table 3 shows the coefficients of correlation obtained between co-morbid depression and the different dimensions of state-trait anxiety in anxiety patients. The obtained results show that there are moderate to high positive correlations between co-morbid depression and all the dimensions of state-trait anxiety except suspiciousness, indicating that as co-morbid depression increases state-trait anxiety also increases in the anxiety patients or vice versa. Approximately 85 percent of the patients with depression also experience significant symptoms of anxiety. Similarly, co-morbid depression occurs in up to 90 percent of patients with anxiety disorders (Kessler, 1995). State anxiety has been defined as an unpleasant emotional response while coping with threatening or dangerous situations (Spielberger, 1983), which includes cognitive appraisal of threat as a precursor for its appearance (Lazarus, 1991). There are many studies suggesting the occurrence of co-morbid depression in anxiety disorder. The present results also support the relationship between state-trait anxiety and co-morbid depression.

Conclusion

The present study, focusing on state-trait anxiety and co-morbid depression among anxiety patients has contributed significantly to the existing body of research on anxiety disorders. The finding that there are no significant differences among the different subtypes of anxiety disorders in the main variables examined suggest that they constitute a more or less homogeneous group. This finding has significant theoretical and practical implications. As has been consistently found in previous researches, the present results also revealed that depression is a highly prevalent co-morbid problem in anxiety disorders. This aspect has to be given proper attention by clinicians and others who deal with anxiety patients, since it involves potential risks. The finding that different dimensions of state-trait anxiety is having high correlations with co-morbid depression in anxiety patients point towards the need for assessing the personality traits of individuals for detection of proneness to anxiety disorders as well as early identification of such problems. These findings also point towards the possibility for developing appropriate intervention strategies for individuals having state-trait anxiety.

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