Indian Journal of Psychological Science, V-5, No. 2 (12-19) ISSN-0976 9218

Relationship between Anxiety and depression: The Moderating role of Emotional Intelligence

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Abstract

Anxiety and depression frequently coexist in the same individual, either concurrently or at different times. A close relationship between anxiety and depression has been acknowledged since ancient times, and numerous studies show that the presence of an anxiety disorder is the single strongest risk factor for development of depression. Emotional Intelligence (EI) is emerged as the ability to control the emotions of one. It carries out accurate reasoning about emotions and to use emotions and emotional knowledge to enhance thought. The present study is designed to examine the relationship among the study variables, and to examine the moderating effect of emotional intelligence on anxiety and depression relationship. Sample for the study consisted of 200 participants drawn from Kurukshetra University, Kurukshetra. The participants were assessed with Emotional Intelligence Scale, Beck Anxiety Inventory and Depression Scale. Results showed that emotional intelligence has significantly negative relationship with anxiety and depression. Anxiety is found to have positive relationship with depression. Hierarchical regression analysis revealed that emotional intelligence yielded significant moderating effect on the relationship of anxiety and depression.

Key words: *Depression, anxiety, moderating, hierarchical, regression*

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Introduction

Two decades ago, emotional intelligence was defined as a new type of ability to carry out accurate reasoning about emotions and to use emotions and emotional knowledge to enhance thought (Salovey & Mayer, 1990). In recent years the term emotional intelligence remarkably expanding especially in its application in education, personal life, work and business, (Mohtasham & Siamak, 2009). It is the ability to identify, assess, and control the emotions of oneself, of others, and of groups. The term Emotional intelligence first appeared in 1985, in Wayne Payne's doctoral thesis. Goleman (1995) popularized this term and developed related concepts in his influential book “Emotional Intelligence”. Since the publication of this, the concept of emotional intelligence has witnessed incomparable interest. Programs seeking to increase emotional intelligence have been implemented in numerous settings. But what exactly *is* emotional intelligence? As is the case with all constructs (i.e. intelligence or personality), several schools of thought exist which aim to most accurately describe and measure the notion of emotional intelligence. At the most general level, it refers to the ability to recognize and regulate emotions in ourselves and others (Goleman, 2001). Another prominent researcher in the area of emotional intelligence, Bar-On, originated the term "emotional quotient". Regardless of the discrepancies between definitions of emotional intelligence, it is clear that what is being referred to be distinct from standard intelligence.

Emotional intelligence is strongly related to healthy psychological functioning.

Both anxiety and depression are debilitating conditions that greatly impair our psychological, social and emotional well-being. Depression and anxiety frequently coexist in the same individual, either concurrently or at different times, and many studies show that the presence of an anxiety disorder is the single strongest risk factor for development of depression (Hranov, 2007). Anxiety and depression are associated with disturbances in central serotonin, dopamine, noradrenaline, and g-aminobutyric acid (GABA) neurotransmitter circuits (Rickels, 1996). Sustained central arousal, as seen in anxiety states, may deplete forebrain neurotransmitters over time, precipitating the emotional and somatic symptoms of depression (Eison, 1990). In a study, Goleman (1995) found that poor emotional intelligence skills lead to increased depression. People who have a history of clinical depression had lower levels of brain activity in the left frontal lobe and more activity in the right than did people who had never been depressed.

A number of studies (Atkinson & Hornby, 2002; Femandez-Berrocal, Alcaide, Extremera, & Pizarro, 2006) suggest that clinically depressed children regulate emotions differently than non-depressed children. Research into the nature and characteristics of depression in adults (Kovacs & Beck, 1977; Hodges & Siegel, 1985; Mash & Wolfe, 1999) has provided an important framework for much of the recent investigations into childhood depression. Depressed people are found to be more socially inept; to have fewer friends; to be less liked; and to have more trouble in forming relationships with other children. They seem unable to label their feelings accurately, showing instead a sullen irritability, impatience and anger, especially toward their parents.

The relationship between emotional intelligence and the psychological variables like as depression, anxiety, and overall physical and mental health has been found well documented in adult samples (Fenandez-Berrocal et al., 2006). Individuals who pay greater attention to their own emotions, score lower on emotional clarity, and report an inability to regulate their own emotional states show poor emotional adjustment on a number of measures such as anxiety and depression (Salovey, 2001; Femandez- Berrocal, Salovey, Vera, Extremera, & Ramos, 2005).

Abdollahi, Hosseini & Motalebi, (2013) reported that emotional intelligence has negative relationship with depression and emotional intelligence emerged as a valuable predictor of depression among adolescents. World Health Organization (2012) estimated that depression would become the leading mental-health problem by 2020, if urgent preventive action does not take. Depression could contribute to physical and mental disorders, such as cardiovascular disease, atherosclerosis, suicide, anxiety, and depression (Becker-Weidman, Jacobs, Reinecke, Silva, & March, 2010; Seldenrijk, Vogelzangs et al., 2010).

Studies have examined the relationship between emotional intelligence and both depression and anxiety. The better emotional regulation should have direct implications to prevent depressive states since emotional intelligence is associated with higher psychological well-being and happiness (Austin, Saklofske, Huang, & McKenney , 2005; Furnham & Petrides, 2003). Fisher, Sass, Heller, et al. (2010) investigated the relationship between EI and both arousal and apprehensive anxieties as well as depression within an emotion-word Stroop task. The results demonstrated that attention to emotion and apprehensive anxiety are associated with enhanced automatic processing of information, and that emotional clarity and apprehensive anxiety are associated with increased time to categorize the negative stimuli. These results

suggest that emotional regulation dimension's of emotional intelligence is the core feature of the association between emotional intelligence and depression, and that emotional perception could be considered as a vulnerability factor for depression.

Research revealed that emotional intelligence is helpful to manage anxious and depressed behaviuor. Slaski and Cartwright (2002) found that people who scored higher in emotional intelligence scale suffered less subjective stress, experienced better health and well-being, and demonstrated better management performance. In many studies, emotional intelligence showed negative relationship with anxiety (Khaledian, Amjadian & Pardegi, 2013; Ciarrochi, Chan & Bajgar, 2001). Anxiety disorders are also common among children and adolescents, both in the United States and around the world. The prevalence of anxiety based disorders among youth ranges from 8.6% to 15.7%. In United States, 31.2% of adult population suffers from an anxiety based mental disorder at sometime in their lives (Kessler, Berglund, Dembler, Jin, et al. 2005).

People have problems in experiencing positive feelings and pleasure, often reports state of sadness or fear, which are suffered from depression. Depression is a debilitating condition characterized by feelings of extreme sadness. It seems that people are unable to manipulate their emotions because of their low level of emotional intelligence. Depressed people show low sensitivity to changing emotional contexts (Batool & Khalid, 2009). Moreover, it places significant strain on interpersonal relationships and presents an economic cost to society. Review related to the study variables pointed that many factors may contribute to depressive and anxious behaviour including daily stressors, personality attributes and chemical changes in the body. Poor coping skills may be a significant predictor of anxiety and depression. Ciarrochi, Deane, and Anderson (2002) reported that people that can manage others' emotions seem to respond less intensively to stressful situations and exhibit less depression. In contrast, people higher on emotional perception reported greater depression. Thus, the finding implying that some facets of emotional intelligence (i.e., emotion perception) could be considered as a vulnerability factor for depression. The present study is an attempt in understanding the relationship between the study variables, with the specific aims: i) to examine the relationship among anxiety, depression and emotional intelligence, and ii) to ascertain the moderating effect of emotional intelligence on the relationship of anxiety and depression. It was hypothesized that emotional intelligence is likely to be associated negatively with anxiety and depression and it would exert significant moderation effect on the relationship of anxiety and depression.

Method

Sample:

The sample consisted of 200 participants selected from Kurukshetra University, Kurukshetra studying in undergraduate and postgraduate classes. The age range of participants varies from 19 to 26 years. The sample comprised of all streams i.e. Arts, Science and Commerce. The majority of the participants were from middle class families and having both parents. The participants were having good health and did not suffer from any serious or chronic ailment. Only those participants were included in sample that had given consent to participate.

Measures:

Emotional Intelligence scale: Emotional Intelligence scale was developed by Dulewicz and Higgs (1999). It consists of 69

item and was designed to assess seven dimensions of emotional intelligence i.e., self awareness, emotional resilience, motivation, interpersonal sensitivity, influence and persuasion, decisiveness, and conscientiousness and integrity Participants were asked to respond to each item of the scale on a 5-point Likert scale ranging from "1" (Never) to "5" (Always). The scale have alph coefficient ranging from .56 to .77 for different subscales. As for validity concern the author reported that the scale has high and significant correlation with 16 PF, Belbin's Ream Roles and Myers-Briggs Type Inventory.

Beck Anxiety Inventory: The Beck Anxiety Inventory (BAI) was developed by Beck and Steer (1993) and used to measure the severity of anxiety symptoms. It is a 21-item questionnaire and each of the 21 items (anxiety symptoms) is represented by four statements reflecting increasing levels of anxiety. Using a 4-point scale ranging from 0 (not at all) to 3 (severely; I could barely stand it), participants rate the severity of each of the symptoms by indicating how much they have been bothered by the symptoms during the preceding week, including the test day. Severity scores for each question are summed, deriving a score ranging from 0-63. Test-retest reliability ranges from .62 (1 week) to .75 (7 weeks) (Creamer, Foran, & Bell, 1995). In addition, Creamer et al. (1995) found moderate concurrent validity with the State Trait Anxiety Inventory (state .64, trait .68), and determined that the BAI adequately discriminates between anxiety and depression.

Depression Scale: The Center for Epidemiologic Studies - Depression Scale (CES-D) by Radloff (1977) was used to determine the depression levels of the participants. It is a 20-item self-report scale, designed to measure depressive symptoms in the general population. Participants were asked to choose one of the given responses to each of the questions. The higher score on the scale indicate the presence of greater level of depressive symptoms. The scale measure four separate dimensions i. e. Depressive affect, somatic symptoms, positive affect, and interpersonal relations. The CES-D has very good internal consistency with alpha of .85 for the general population and .90 for psychiatric population.

Procedure

The participants were contacted personally in their respective educational department for data collection. After getting willingness of participants a congenial rapport was established to make them comfortable. They were provided the basic instructions for each test to make them understand how to perform. They were assured about the confidentiality of the data, so that they could complete the tests without any hesitation. The tests were administered in small groups having ten to fifteen participants in each group. During administration of the tests only the investigator and the participants were present in the room. These tests were administered following the instructions specified in the respective test manual. The general testing conditions were satisfactory and the procedure was uniform all through. All the tests were scored as per the procedure described in respective test manual.

Results and Discussion

A careful inspection of the correlations matrix (Table 1) reveals that anxiety correlates positively with depression ($r = .21$, $p < .01$). The correlation between these measures suggests that participants scoring high on the measure of anxiety tend to score high on depression. Thus, the participants high on anxiety are more prone to have depression.

Anxiety correlates negatively with the measures of emotional intelligence i.e. Emotional resilience ($r = -.26$, $p < .01$),

Motivation (r = -.21, p < .01), Influence & persuation (r = -.25, p < .01), Decisiveness (r = -.22, p < .01), Conscientiousness & integrity (r = -.21, p < .01) and Total EIQ Score (r = -.27, p < .01). The negative relationships between the measures shows that subject high on emotional intelligence tend to have less anxiety feelings. In turn, participants having low emotional intelligence level are prone to engage in anxious behaviour. It may be because of their poor coping skills. Emotional intelligence may protect people from stress and anxiety and lead to better adaptation. The finding is consistent to earlier observations; e.g. Abdollahi et al. (2013).

Table – 1 Correlation of Emotional Intelligence Measures with Anxiety and Depression

Variable	DEP	SA	ER	MV	IS	IP	D	CI	EIT
ANX	.21**	-.12	-.26**	-.21**	-.08	-.25**	-.22**	-.21**	-.27**
DEP	-	-.23**	-.15*	-.14*	-.28**	-.17*	-.09	-.19**	-.26**

*Significant at .05 p. level. ** Significant at .01 p. level

Note: Anxiety (ANX), Depression (DEP), Self-awareness (SA), Emotional resilience (ER), Motivation (MV), Interpersonal sensitivity (IS), Influence & persuation (IP), Decisiveness (D), Conscientiousness & integrity (CI) and Total EIQ Score (EIT).

Depression correlates negatively with the measures of emotional intelligence i.e. Self-awareness (r = -.23, p < .01), Emotional resilience (r = -.15, p < .05), Motivation (r = -.14, p < .05), Interpersonal sensitivity (r = -.28, p < .01), Influence & persuation (r = -.17, p < .05), Conscientiousness & integrity (r = -.19, p < .01) and Total EIQ Score (r = -.26, p < .01). The negative correlation between the measures shows that subject high on emotional intelligence tend to low on depression. The significant negative relationship between the measures suggest that individual aware of one's own feelings, having ability to perform consistently in a range of situations, having energy to achieve results, having ability to solve problems, ability to persuade others, and ability to display clear commitment are less prone to depression.

In order to meet the objective Moderated Hierarchical Multiple Regression was used to examine the moderating effect of emotional intelligence on depression. For analyzing the moderator effect the product of scores on independent and moderator variables are calculated. For the purpose of moderating effect, hierarchical regression is run by entering the independent and moderator variables in block – 1. Second block is entered with independent and moderator variables along with the product term of both (Aguinis, 2004). The results of regression analysis are presented in Table – 2.

Table – 2 Summary of Moderated Hierarchical Regression Analysis, Dependent Variable: Depression.

Block	R	R^2	Adjusted R^2	df	F	Sig.
1	.389	.151	.142	2/197	17.53	.001
2	.410	.168	.156	3/196	13.23	.001

Block 1= Anxiety, EI, Block 2 = Anxiety, EI, Anxiety*EI

Results indicated that anxiety and emotional intelligence jointly contributed for 15% (R^2 = .151) of the variance in depression. The explained contribution is significant with probability of error being less than .001 (F = 17.53, df = 2 & 197). The inclusion of moderator in block -2 of the hierarchy increased the multiple R to .41 from .389, explaining almost 17% variance in depression. The contribution is significant with probability of error being less than .001 (F = 13.23, df = 3 & 196). The increment in variance shows the moderation effect of EI on depression. The results suggests that cultivation of emotional intelligence competencies could helpful in managing day to day activities which lead to depression in life. The finding is in tune with the earlier research of Parkash (2010).

As the results of study revealed that emotional intelligence has negative relationship with anxiety and depression. The relationship suggests that individuals having higher ability to discriminate clearly among feelings and able to regulate emotional states showed less anxiety and depression. However, it is also possible that those individuals who report higher levels of depression are ill-equipped to regulate affect, because negative affect may impair cognitive and emotional abilities. In the present study, both anxiety and depression is found to have positive relationship. Depression and anxiety together are common and affect up to a quarter of patients attending general practice. Though there are effective treatments for specific disorders, but a paucity of data, particularly in Indian population, about treatment for anxiety and depression comorbidity. More than a third of patients with a mental disorder do not seek treatment, and almost half are offered treatments that may not be beneficial (Tiller, 2012). This suggests the need for further public awareness and professional education that can enhance clinical practice, promoting better mental health outcomes. Further, moderated hierarchical multiple regression analysis showed that emotional intelligence has moderated effect on anxiety and depression relationship. The cultivation of emotional intelligence competencies could helpful in managing day to day activities which lead to anxiety and depression in life.

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