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Comparative Analysis of Psychometric Properties of Irrational Belief Scale of Anxiety Patients

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Abstract

The term irrational is basically used in psychotherapy. The concept of irrationality is especially focused in Rational Emotive Behavior Therapy (REBT) that is originated and developed by American Psychologist Albert Ellis. In this research it was first examined that how emotional intelligence plays a vital role in different anxiety disorders and how this emotional intelligence disturbs individual's life. There are few researches conducted on emotional intelligence in Pakistan. The sample comprised of 200 patient's males (n=105), females (n=95) with age range from 18 years older. The sample of study was collected by convenient sampling technique from different government hospitals of Islamabad, Rawalpindi and Wah Cantt. The patients were

diagnosed by the psychiatrist and researcher herself according to the diagnostic criteria given by the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (APA, 2000). Participants of both genders were included. Emotional intelligence was measured through trait emotional intelligence questionnaire short form (TEIQue-SF), irrational beliefs were measured through irrational belief scale (IBS) and anxiety was measured by Beck anxiety inventory (BAI). It was concluded that emotional intelligence has significant negative relationship with irrational beliefs and anxiety in patients with anxiety disorders. Irrational beliefs have non-significant positive relation with anxiety in patients with anxiety disorders.

Keywords: Psychometric Properties; Irrational Belief Scale; Anxiety Patients

Introduction

Emotions are important in every aspect of life. Thinking process and decision making is dependent on emotions. Through emotional intelligence people control, manage and regulate different emotions. Emotional intelligence governs thinking process (Afsahi et al., 2023; Grove et al., 2023). Thinking process can be rational and irrational. These rational and irrational thinking processes make life either miserable or enjoyable. All this depends on how a person thinks and behaves in different situations in accordance to his emotional intelligence. People in Pakistan show different types of emotions at times. It is common observation that people make decisions based on emotions. The positive healthy emotions are mostly driven by positive rational thinking by utilizing a better emotional intelligence and vice versa (Baytemir, 2019; Şoflău et al., 2023). It is also noticed that when people are highly emotional they face difficulty to take right decisions. This in turn develops stress and anxiety. Continuous stress and anxieties disturbs life and low emotional intelligence is the result.

The term irrational is basically used in psychotherapy. The concept of irrationality is especially focused in Rational Emotive Behavior Therapy (REBT) that is originated and developed by American Psychologist Albert Ellis (2001). Here irrationality is taken as the tendency that humans have to act, emote and think in ways that are inflexible, unrealistic, absolutist and most importantly socially self (Ellis, 2001). Ellis and Harper (1961) postulated that irrational belief is a prime cause of emotional maladjustment. Irrational beliefs are attitudes, beliefs and values that a person strongly holds and believes despite objective evidence, generally available and understands, to the contrary. Such beliefs can be developed and maintained by intrapersonal cognitive structures, sometimes based on particular occurrences (Vassou et al., 2023). The most standard methods of psychotherapy in current years are Albert Ellis' Rational Emotive Behavioral Therapy. REBT is built on the A-B- C-D-E paradigm of psychological disruption and therapy. In this model 'A' is particular triggering disturbing life event such as frustration, rejection and failure. 'B' mentions to irrational beliefs, whereas 'C' denotes to the behavioral and psychological consequences of irrational beliefs like maladaptive behavior and psychological disturbance. Inside this context, 'D' mention to the therapeutic procedure of disputing the irrational beliefs and 'E' refers to the effect, where changing and adapting rational beliefs and following decline in maladaptive psychological symptoms and behaviors (Bernard & DiGiuseppe, 1989; Baytemir, 2023).

Ellis has claimed that a person's core irrational belief system and his perceptions are critical causes of psychopathology. Ellis's initial, current works and also his publications on Rational Emotive Behavior Theory constantly highlight irrational beliefs as a major cause of emotional disorders. In Ellis perspective, there are ten irrational beliefs. These beliefs may affect mental health of persons and their extensive duration existence would cause anxiety thus lead to different types of emotional disorders for example mood disorder and anxiety disorder are more commonly observed in clinical

settings (Ellis & Harper, 1975). It is believed that treatment through cognitive behavioral techniques follow the concept that various psychiatric disorders such as anxiety disorders are developed by irrational beliefs. This theory is confirmed by many other researches that claimed that obsessions, compulsions, phobias and anxiety are related to irrational beliefs (Himle., Himle., & Thyer, 1989). Ellis described following irrational beliefs:

1. Demand for approval. It states to an absolute compulsion for person to be approved and loved by almost all other significant people in his social circle (Ellis, 1994, 1975, 1962). This state is irrational since it is an unattainable objective, and if an individual struggles for it, he becomes more doubtful, less self-directed and doomed. Even those people who really like that person, eventually will become irritated and turned off by his or her very demanding behaviors and qualities. An individual who is rational does not loss his or her own benefits and needs for admiration, but rather attempts to direct them with elegant vision and productivity (Alareqe, Mohammed, Harun, Samah, & Alameay, 2008).

2. High self-expectations. In this irrational belief individual thinks that one should be exhaustive, proficient, acceptable, and attaining in all promising salutations in order to reflect oneself worthy. This in turn is unfeasible, and struggling for impulsively leads a person into never-ending fear of failure. This made individual paralysis to try and struggle for anything. Furthermore, perfectionistic criteria disturb social affiliations and rapidly isolate friends, social circle and partners. The rational person endeavors to be fully active, to learn and enjoy life rather to do things for perfections and for best results (Alareqe et al., 2008).

3. Blame prone mess. A belief that some people are evil and wicked and that they should be brutally accused and punished for their badness and ruthlessness. Immoral and bad action will leads to the foolishness, illiteracy or emotional disturbance. No one is perfect and makes blunders.

A rational individual makes an error, he or she admits and tries to realize the reason of the behavior, and does not think and believe that let it will become a disaster. On other hand, law enforcement should check rules, ethics and behaviors to be succeeded (Alareqe et al., 2008).

4. Frustration reaction. It is terrible and catastrophic indication when things are not working as the way one's wants them to be. In other words it will destroy life if individual's wishes are not come true. It is the reason or disease of the spoiled-child. As if the person have bad day at work the awfulizing thinking style begins: 'Why this always happened? It's impossible to tolerate. The outcome is extreme frustration and anxiety. The rational individual do not exaggerate hard circumstances and tries to solve them, or tolerating them if they are unable to control or make them better. Unhappiness happens when somebody is hostile, refusing and irritating. Projecting sadness to events is a method of escaping reality. Usually sadness comes from wrong interpretation of events. Some people consider that they are unable to regulate emotions and feel helpless (Alareqe et al., 2008).

5. Emotionality irresponsibility. It's a belief that unhappiness is triggered by other people. Outside factors are involved to make a person feel worse that snatch the ability to control distress and conflicts. An individual tries to control people and situation because these affect how one's feel. It is an obligation on others' choice to control feelings and their lives. If bid to do so, the rational person will endeavor to recover the condition in best possible way. If individual cannot make things beneficial, then will try to accept the situation and reality. It is believed that other people should not be humiliated and their feeling should not be hurt. An individual who is very caring cannot be assertive and bear clashes silently (Alareqe et al., 2008).

6. Anxious over concern. Rational people take precautions to eliminate risks, fear and worries. A person practically prevents maladaptive thinking and behavior for better consequences.

Those people who do not consider maladaptive thinking ultimately turn in irrational beliefs. Exaggeration of upcoming future events leads to self-destructions and increase the probability of fear and anxiety. On other hand irrational thought keeps away logical understanding and make it difficult to tackle anxiety successfully. People find themselves worried in different frightened and disturbing events where escape is not possible and situation is out of control. An individual who is excessive worried and has negative thinking is not satisfied with life (Jones, 1969).

7. Problem avoidance. In this kind of irrational belief a person find it easy to avoid problems at present moment and delay the decision. When a person does not take proper decision at right time face many difficulties. An individual focuses on pleasure able things and avoid frustration. The person basically shows immature thinking towards problematic situation and do not consider future side effects. This kind of individual is unable to face challenges and cannot make long term useful commitments (Jones, 1969).

8. Dependency. Everyone needs collaboration and some dependence but this should be in limits. There are number of reason why one should not be over dependent on others. When a person is dependent it becomes necessary to surrender his self to gain affiliation. An individual has to leave his aims, desires and goals. A dependent person needs consistent guidance before taking any action and decision. This kind of person lost his self-confident and unable to move without other's support. A dependent person always need external support and cannot control his self and situations. If the external support is removed independent person faces severe disturbance and frustration to lead normal life (Jones, 1969).

9. Helplessness for change. In this irrational belief a person denies the responsibility of his behavior and attitudes. Even though there is a fact that as a consequence of some past events one may find it difficult to change and adjust in some ways. It is extremely irrational to believe

that change is not possible to take place. This belief creates more difficulties to handle problems efficiently as they rise. It makes a person to avoid self-improvements. This problem avoidant style of life leads towards emotional maladjustment and disturbance. This kind of individual refuses the problematic attitude and behaviors that is disturbing the life. A person find it difficult to adjust with bad past experiences. A belief is very strong that change is impossible. In the hard time a person in unable to improve self and avoid changing environment and cannot handle the problems (Jones, 1969).

10. Perfectionism. Everyone wants best and practical solutions of problem. It is irrational, unrealistic and illogical to expect most feasible solution every time. This world is uncertain and a wish for perfection in everything is irrational. Perfectionism is irrational beliefs which limits individual to achieve so many things. A perfectionist is never satisfied with his self, others, environment and life (Jones, 1969).

Anxiety is a natural response of body and a compulsory warning adaptation in humans. Anxiety can become a pathological symptoms when it is severe and uncontrollable, that does not requires any specific external stimulus, and manifests with a wide range of physical and affective symptoms as well as changes in behavior and cognition (Rowney, Hermida, & Malone, 2010). The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM IV-TR) described anxiety disorders are emotions that are categorized by feelings of tension, nervousness, worried thoughts and somatic changes like rapid heartbeat and increased blood pressure. People with anxiety disorders typically have repeated invasive concerns or thoughts. People escape certain conditions out of worry (Tamannaefar & Abdolmaleki, 2017). Individuals with anxiety disorders have physical symptoms such as rapid heartbeat, sweating, trembling or dizziness (APA, 2000). Anxiety can be defined as physiological and psychological state that disturbs physical, emotional,

cognitive, and behavioral features. It is an unpleasant feeling of terror and worry. The basic explanation of the word anxiety is 'to vex or trouble' whether it is present or absent in psychological stress. Anxiety can produce feelings of uneasiness, fear, worry and dread (Patel, 2013; Abdollahi et al., 2018). The purpose of the present research is to investigate that emotional intelligence and irrational beliefs have an important role in the existence of different types of anxiety disorders. There is little empirical research particularly on anxiety disorders in this regard. It is a common fact that through emotional intelligence people manage and regulate their emotions. In this research it was first examined that how emotional intelligence plays a vital role in different anxiety disorders and how this emotional intelligence disturbs individual's life. There are few researches conducted on emotional intelligence in Pakistan.

Review of Literature

Ohman (2002) defined anxiety is an extensive mood state that can happen without any distinguishable activating stimulus. Such as, it is identifiable from fear, which is an accurate emotional and cognitive reaction to a perceived danger. Moreover, fear is associated with particular behaviors to escape and avoid, whereas anxiety is associated with circumstances that perceived as uncontrollable, intense or unavoidable (Gümüşkaynak, 2019). Furthermore, anxiety can be defined as mood state that is future oriented in which one is prepared to cope and to attempt forthcoming adverse situations proposing that it is a difference between present and future threats which splits fear and anxiety (Barlow, 2002; Rastravesh & Mohammadi, 2020). Anxiety can be differentiated from fear in four areas: (1) period of emotional experience, (2) temporal focus, (3) particular threat, and (4) motivated direction. Fear can be defined as currently focused, motivated towards a particular risk, short lived and assisting escape from danger; whereas anxiety can be future focused, generally motivated towards a tedious threat, long lived and endorsing attention while approaching a probable threat (Sylvers, Jamie, & Scott, 2011).

Research by Lizeretti and Extremera (2011) explored the relationship between emotional intelligence and clinical symptoms of psychiatric patients. Study included a group of patients with generalized anxiety disorders and compared it to the control group. Results of research revealed that problems in emotional intelligence and emotional abilities are some factor that associates in the development of generalized anxiety disorders. Another study was conducted to investigate the relationship of symptoms of depression and anxiety with perceived express emotions in university students. The results indicate significant correlation between depression and anxiety symptoms and the level of perceived expressed emotion. Males have higher level of perceived expressed emotions as compared to females (Rashid, 2010; Bedel et al., 2020). A study investigated relationship among emotional intelligence, age, gender and academic achievement among university students (Nasir & Masrur, 2010). Relation between emotional intelligence and academic achievement was found among postgraduate's students in Pakistan (Kayani, Kayani, & Saleem, 2015).

Another research emotional intelligence was explored with reference to organizational performance particularly banking sector (Rahim & Malik, 2010). Relationship among emotional intelligence, job satisfaction and employees working in government sectors in Pakistan (Ashraf, Nawaz, Shaikh, & Bhatti, 2014). Another research was carried out to check the relationship among emotional intelligence, organizational commitment and transformational leadership in Pakistan (Khan et al., 2014). In Pakistan very few researchers explored irrational beliefs in psychiatric patients. The relationship between irrational beliefs and personality trait in adults was investigated among university students (Ghumman & Shoaib, 2013).

Methodology

To measure the psychometric properties of the irrational belief scale it was administered on (n=50) patients diagnosed with anxiety disorders. The age range of the anxiety's patients was 18 years and above. Alpha coefficient was found .79.

Instruments

Following instruments were used to collect data.

- Trait Emotional Intelligence Questionnaire Short Form (TEIQue-SF)
- Irrational Belief Scale (IBS)
- Beck Anxiety Inventory (BAI)
- Demographic sheet

Participants

The sample comprised of 200 patient's males (n=105), females (n=95) with age range from 18 - older. The sample of study was collected by convenient sampling technique from different government hospitals of Islamabad, Rawalpindi and Wah Cantt. The patients were diagnosed by the psychiatrist and researchers herself according to the diagnostic criteria given by the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (APA, 2000). Participants of both genders were included.

Procedure

In order to collect data on desire variables researcher has visited different hospitals and collaborated with authorities to take permission. Then before carried out the research, researcher has briefed the authorities of hospitals and patients about the purpose of study. For ethical considerations informed consent was collected from patients. Researcher has ensured them of complete confidentiality. Participants have been be briefed about the usefulness of the research.

Researcher briefed that all participants have ethical right to leave the research at any point. Brief instructions about questionnaires were given to participants and were asked to give correct and honest responses. The assurance was given that information obtained from them would be confidential and would only be used for research purposes. Data was collected individually. All the scales were administered individually. After the whole procedure of data collection, the data was statistically analyzed in order to test the hypotheses.

Data Analysis

The data was analyzed statistically through computer software, statistical package for social sciences (SPSS) Version 20. Firstly, the data set for pilot study was created, variables were assigned values and entered then the data of sample of 50 was recorded. Reliability of three scales TEIQue-SF, IBS and BAI was analyzed through Cronbach alpha reliability coefficient. Item total correlation was also measured. Pearson product moment correlation was applied to measure the relationship among variables. The main study included the sample of 200 patients. The Pearson product moment correlation among study variables was applied. To compare gender differences t-test was applied. Finally multiple linear regressions were applied to analyze the impact of emotional intelligence and irrational beliefs on patients with anxiety disorders.

Results and Discussion

This study aimed to investigate the significance of emotional intelligence and irrational beliefs in patients diagnosed with anxiety disorders. Firstly, Cronbach alpha coefficient for emotional intelligence questionnaire short form (TEIQue-SF), irrational belief scale (IBS) and beck anxiety inventory was calculated.

Table:1 Correlation matrix among emotional intelligence, irrational belief and anxiety in patients with anxiety disorders (N=50)

Irrational belief	Anxiety
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Emotional intelligence	-.43**	-.14
Irrational belief	-	.05

** $p < 0.01$

The above-mentioned Table describes that the correlation coefficient between emotional intelligence and irrational belief are found to be significant at $p < 0.01$ and emotional intelligence is negatively correlated with anxiety. Table also shows correlation between irrational beliefs and anxiety. The present study was conducted to explore the significant of emotional intelligence and irrational beliefs in patients diagnosed with anxiety disorders.

Table:2 Reliability and descriptive analysis of Trait Emotional Intelligence Questionnaire Short Form, Irrational Belief Scale & Beck Anxiety Inventory (N=200)

Variables	N	M	SD	Cronbach's a	Range		
					Potential	Actual	Skewness
TEIQue-SF	30	75.97	19.84	.88	30 – 210	41 – 169	1.78
IBS	20	81.02	7.87	.75	20 – 100	46 – 100	-.85
BAI	21	34.99	8.17	.81	0 – 63	8 – 53	-.65

Note. TEIQue-SF=Trait Emotional Intelligence Questionnaire Short Form, IBS=Irrational Belief Scale, BAI=Beck Anxiety Inventory.

The above derived data shows Cronbach alpha coefficient for emotional intelligence questionnaire short form (TEIQue-SF) is .88, irrational belief scale (IBS) is .75 and beck anxiety inventory (BAI) is .81. Table exhibit mean, standard deviation, actual and potential scores and level of skewness for Trait Emotional Intelligence Questionnaire Short Form (TEIQue-SF), Irrational Belief Scale (IBS) and Beck Anxiety Inventory (BAI). The table also shows all scales have significant reliability to measure emotional intelligence, irrational beliefs and anxiety in patients with anxiety disorders. Above mentioned table also shows symmetric skewness across patients with anxiety

disorders because the patients were referred by Psychiatrists and on medication. Patients were stable enough to talk with therapist and filled up the questionnaire.

Table:3 Correlation matrix among emotional intelligence, irrational belief & anxiety for patients with anxiety disorders (N=200)

	Irrational Belief	Anxiety
Emotional Intelligence	-.41**	-.17*
Irrational Belief	-	.12

Note. ** $p < 0.01$, * $p < 0.05$

Table 3 explains that the correlation coefficient between emotional intelligence and irrational belief ($r = -.41$) are found to be highly significant at ($p < 0.01$). Table shows significant negative relationship between emotional intelligence and irrational belief in patients with anxiety disorders. The above table shows that the correlation coefficient between emotional intelligence and anxiety is ($r = -.17$) at significant level of ($p < 0.05$). There is significant negative relationship between emotional intelligence and anxiety in patients with anxiety disorders. The table also describes that the correlation coefficient between anxiety and irrational belief. This table shows that there is positive relationship between anxiety and irrational belief in patients with anxiety disorders.

Table:4 Mean standard deviation and t-values for male and female on emotional intelligence, irrational belief and anxiety of patients with anxiety disorders (N = 200)

Variables	Male (n= 100)		Female (n = 100)		t	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Emotional intelligence	77.90	23.05	73.83	15.38	1.48	.02	-1.45	9.59	0.20
Irrational belief	80.46	8.14	81.65	7.09	1.08	.28	-3.37	.98	0.15
Anxiety	33.71	8.49	36.40	7.60	2.34	.14	-4.94	-.42	0.33

Note.CI=confidence interval; LL= Lower Limit; UL= Upper limit;** $p < 0.01$

Table 4 indicates that emotional intelligence of male patients with anxiety disorder is higher ($M=77.90$, $SD=23.05$) than female patient with anxiety disorders ($M=73.83$, $SD=15.38$), at significant level of ($p>.01$). Table 4 also indicates no difference on irrational beliefs existing in the male ($M=80.46$, $SD=8.14$) and female patients ($M=81.65$, $SD=7.09$) with anxiety disorders while there is little difference between males ($M=33.71$, $SD=8.49$) and females ($M=36.40$, $SD=7.60$) on anxiety. According to Ellis (1991) anxiety and difficulties of each person are the result of irrational beliefs. Human beings have the potential to escape anxiety and suffering by the assistance of positive thoughts and beliefs (Shafie & Naseri, 2001; De Landsheer & Walburg, 2022). Ellis (1991) the forefather of cognitive model, declares that emotional and psychological disorder are product of awkward and irrational beliefs of a person and if a person learns to increase his rational thoughts and reduce irrational beliefs, then his self may be unrestricted of mental, emotional and behavioral disorders (Kaokebisiyoki, Aminyazdi, Yousefi, & Modareh, 2010). Another study investigated the relationship between emotional intelligence (reality testing and social responsibility) and irrational beliefs with emigrant and aboriginal individuals in a sample of college students. The result indicated that emigrant student scores higher on emotional intelligence subscales as compared to aboriginal individuals. This research also showed that irrational beliefs score in aboriginal individual were further than emigrant individual scores (Memadahi, 2008; Pascal & Chivu, 2022). The study found the relationship between emotional intelligence, irrational beliefs and academic achievement. Different components of emotional intelligence including general mood, adaptability, stress management, interpersonal skills, intrapersonal skills with irrational beliefs and academic achievement of university students were studied (Michel-Kröhler, & Turner, 2022). The result of research indicated significant inverse relationship between emotional intelligence and irrational beliefs. Students who had higher emotional intelligence

scores showed fewer irrational beliefs scores (Danesh, Mohammadi, Saliminia, & Tankamani, 2013).

Conclusion

Emotional intelligence was measured through trait emotional intelligence questionnaire short form (TEIQue-SF), irrational beliefs were measured through irrational belief scale (IBS) and anxiety was measured by Beck anxiety inventory (BAI). It was concluded that emotional intelligence has significant negative relationship with irrational beliefs and anxiety in patients with anxiety disorders. Irrational beliefs have non-significant positive relation with anxiety in patients with anxiety disorders. However, males patients with anxiety disorders are more emotional intelligent as compared to females patients with anxiety disorders. It was also concluded that young patient with anxiety disorders are more irrational as compared to old patients with anxiety disorders. Results of the study reveal that anxiety patient with graduation are higher on emotional intelligence, anxiety patients with intermediate are higher on irrational beliefs and anxiety patients with under matric are higher on anxiety as compared to other educational level.

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