SUMMARY

Comorbidity has been the central concern of psychiatry since 1990s. Previous research reviews (Clark et al., 1995; Mineka et al., 1998; Widiger & Sankis, 2000) have emphasized that comorbidity is a highly general phenomenon and clarified that no diagnostic grouping appears to be entirely “safe” from extensive comorbidity. Feinstein defined comorbidity as “any additional co-existing ailment”. Lilienfeld et al. (1994) indicated that the concept took root in the psychiatric and psychological literature starting around the late 1980s to early 1990s. In the epidemiological data on comorbidity, the main interest of the field is that a person who meets criteria for a specific mental disorder is much more likely to also meet criteria for other mental disorders than one would expect simply by chance. It shows that mental disorder constructs, as applied to groups of people, are correlated. The term comorbidity legitimately encompasses this correlational phenomenon—it allows people to have more than one diagnosis. The term also encompasses the simple fact that a person who meets criteria for a specific disorder could meet criteria for another disorder even if no correlation exists between the two disorders, e. i. cooccurrence phenomenon. Thus term comorbidity could legitimately refer to either correlational or cooccurrence phenomenon. Research on relationships between anxiety and depression has proceeded at a rapid pace since the 1980s. The term comorbidity probably should be reserved to designate co-occurring disorders (or at least syndromes), but investigation of anxiety-depression comorbidity begins with the observation that key symptoms that define these theoretically distinct syndromes or disorders often co-occur. These symptoms can be divided into those that are unique to each type of disorder (e.g. panic attacks versus feelings of worthlessness) and those that are shared (e.g. difficulty concentrating). However, few of these symptoms clearly differentiate patients with one type of disorder versus the other (Clark, 1989). A similar picture is obtained at the syndromal level. These co-occurrences manifest themselves in several ways and have different clinical courses.

Depression and anxiety are characterized by both common and distinctive features. Clark and Watson (1991c) proposed that a “tripartite model” offered a more accurate characterization of anxious and depressive phenomena. In this model, symptoms of depression and anxiety can be grouped into three basic subtypes. First, many symptoms are strong indicators of a general distress or Negative Affect factor. This nonspecific group includes both anxious and depressed
mood, as well as other symptoms that are prevalent in both types of disorder. However, each syndrome is characterized by its own cluster of symptoms; somatic tension and hyperarousal are relatively specific to anxiety, whereas manifestations of anhedonia and the absence of Positive Affect are relatively specific to depression. In other words, according to the tripartite model, depression is specifically characterized by low positive affect (PA), anxiety is specifically characterized by physiological hyperarousal (PH), and negative affect (NA) is a nonspecific factor that relates to both depression and anxiety.

NA represent displeasurable engagement with the environment and a sense of high subjective distress, it is a broad general factor of emotional distress that includes mood such as fear, sadness, anger, and guilt (Watson & Clark, 1984; Watson & Tellegen, 1985). PA refers to a predisposition to experience a wide range of positive emotions. PA reflects an individual’s pleasurable engagement with the environment and the extent to which that person feels enthusiastic, active, and alert (Watson, Clark, & Carey, 1988a). Clark and Watson (1991c) considered low PA to be characteristic of depressive disorder and unrelated to anxiety. Physiological Hyperarousal (PH) was originally conceptualized as a higher-order temperamental trait specifically underlying anxiety. PH is characterized by a predisposition to experience sympathetic nervous system reactivity, including elevated heart rate, respiration, and muscular tension.

A large number of previous clinical and nonclinical studies have provided evidences supporting tripartite model, (Lonigan et al., 1994; Watson et al., 1995; Joiner, Catanzaro & Laurent, 1996; Brown et al. 1998; Joiner et al., 1998; Reidy & Keogh, 1997). Recent studies with clinically-based samples of adults have shown impressive support for Tripartite Model. For example, a study conducted on older adult psychiatric outpatients revealed that a 3 three factor model provided an adequate fit (cook et al., 2004). Nonclinical-based samples of adults have also shown best fit for the tripartite model; for instance, Philipp et al. (2008) determined the generalizability of the tripartite model using a highly diverse sample of undergraduate students. The results of the study suggested that the model fits generally for each group, but the study did not find cross-group equivalence in the relationships between constructs that indicates the implication of tripartite model cross-culturally. Teachman et al. (2007) evaluated negative affect in a cross-sectional community sample of adults. As expected, the tripartite model fit best for all
age groups. Further, multigroup analyses indicated age invariance for the tripartite model, suggesting the model can be effectively applied with older populations. Epidemiological studies with community-based sample of youth have also shown consistency with the key prediction of tripartite model of anxiety and depression (Cannon & Weems, 2006; Gaylord-Harden, 2011; Lambert et al., 2002). Some studies have also provided inconsistent results in the verification of the tripartite model. However, inconsistent results in the verification of the tripartite model have been found in both clinical and non clinical samples. Burns et al. (1998) reported that tripartite did not proved good fit for any of the group because the nonspecific symptoms of depression and anxiety could not be adequately represented by a single General Distress factor. Similarly, Meeks et al. (2003) examined the structural relationship of anxiety and depression in two samples of older adults, a large probability sample (N = 1429) and a smaller convenience sample (N = 210). Across all analyses, a correlated, two-factor, psychometric model was the most parsimonious. The tripartite model could be fit to the data, but added no explanatory power; in some cases, a one-factor model also fit. Using a clinical sample of young Australian, Buckby et al. (2008) reported that a 2-factor model demonstrated superior model fit and parsimony compared to 1- or 3-factor models. These broad factors represented depression and anxiety and were highly correlated (r = .88). Recently, Stevanovic and Lakic (2011) using a preliminary data from Serbia reported the results that supported the prediction of tripartite model partially only. It indicates that the tripartite model does not adequately explain the relationship between anxiety and depression in all clinical populations.

So the problem of the study may be stated as:

“AN EXAMINATION OF THE TRIPARTITE MODEL OF COMORBIDITY BETWEEN ANXIETY AND DEPRESSION IN ADULTS”

MAIN OBJECTIVES OF THE STUDY:

1. To study the relationship between measures of mood, affect, anxiety, and depression among anxiety and depression patients.

2. To examine underlying factor structure among above said scales on Indian clinical sample.
3. To examine the tripartite model of anxiety and depression on Indian adult sample.

4. To verify Tripartite model of anxiety and depression proposed by Watson and Clark on Indian clinical sample.

5. To examine the co-morbidity between anxiety and depression among anxiety and depression patients.

HYPOTHESES:

1. There exists negative relationship between measures of mood and Positive Affects.

2. There is likelihood of positive relationship between moods and Negative Affects.

3. Negative affectivity correlates positively with measures of anxiety and depression.

4. There exists co-morbidity among symptoms of anxiety and depression among Indian adult sample.

5. The Indian data will verify the tripartite model of anxiety and depression

6. The factor structure underlying present study will replicate the factor structure provided by Watson and Clark (1991).

With the view to examine the factor structure of tripartite model of anxiety and depression among adult Indian population, the data was collected on clinical and nonclinical sample. The clinical sample included 166 depressive patients and 155 anxiety patients along with non clinical sample of 200 adults. The clinical sample was collected from Postgraduate Institute of Medical Sciences (PGIMS), Rohtak (n = 100), Loknayak Jai Parkash Hospital (LNJP), Kurukshetra (n = 171), and Bathla Psychiatric Hospital, Karnal (n = 50). Nonclinical sample was collected from university students, housewives, and individual working at different places. The age of the selected sample range from 20 to 55 with a mean age of 36. All the participants included in study completed the four testes i. e. Mood and Anxiety Symptoms Questionnaire (MASQ), Positive and Negative Affect Schedule (PANAS-X), Beck Depression Inventory-II (BDI-II), and Hamilton Anxiety Rating Scale (HAM-A) along with the Socio-demographic performa. Scoring of these questionnaires provided scores on 21 variables, i. e. 4 for Mood and
anxiety symptom questionnaire, 13 for Positive and Negative Affect Schedule-Expanded Form, 2 for Hamilton anxiety rating scale, and 2 for Beck Depression Inventory. All the scores were subjected to Descriptive Statistics, Demographical Analysis, Correlational Analysis, Principal Component Analysis, Discriminant Functional Analysis and Confirmatory Factor Analysis.

The obtained results were discussed in the light of earlier research and theoretical formulation pertaining comorbidity of anxiety and depression and tripartite model of anxiety and depression.

RESULTS:
Correlational analysis revealed almost similar pattern of correlation were found in three different sample i.e Anxiety patients group, Depressive patients group and Normal adults group.

In anxiety patients’ sample, all the subscales of Mood and Anxiety Symptoms Questionnaires are positively correlated. These are as General Distress Anxiety, Anxious Arousal, General Distress Depression and Anhedonic Depression. The correlation observed between the Anxious Arousal (AA) and Anhedonic Depression (AD) is relatively low (r = .27) than that seen between General Distress Anxiety (GDA) and General Distress Depression (GDD) suggesting that there is less overlap between the specific scales.

All the Positive Affect subscales of Positive and Negative Affectivity Scale (PANAS-X) are found to be positively correlated with positive affect subscales of PANAS-X and are found negatively correlated with positive affect subscale.

General Negative Emotion is correlated positively with GDA (r = .61), AA (r = .47), GDD (r = .67), and AD (r = .49) which indicates that all the specific and non-specific symptoms of depression and anxiety involve negative emotions. Further, General Positive Emotion is negatively correlated with all MASQ subscales that range from r = -.29 to -.59. It demonstrates that if the symptoms of positive affect-Joy, happiness etc. increase depressive symptoms decrease correspondingly.

Negative Affect subscales of PANAS-X, i.e. Hostility, Fear, Guilt, Sadness are found to be positively correlated with the MASQ subscales i. e. GDA, AA, GDD and AD with their correlation ranging from r = .33 to r = .61. Other affects such as Shyness, Fatigue, Serenity, and Surprise are also positively correlated with GDA, AA, GDD and AD subscales of MASQ. The
correlation ranges from .16 to .50. Positive Affect subscales of PANAS-X, i.e. Joviality, Self-Assurance, and Attentiveness are found to be negatively correlated with the MASQ subscales i.e. GDA, AA, GDD and AD. Their correlation ranges from -.26 to -.64.

Both the subscales of anxiety (i.e. Hamilton cognitive and Hamilton Somatic) are found to be positively correlated with subscales Mood and Anxiety Symptoms Questionnaire. Hamilton Cognitive Subscale is positively correlated with GDA (r = .38), AA (r = .44), GDD (r = .48), and AD (r = .45) which show the comorbidity between the symptoms of anxiety and depression. Similarly, Hamilton somatic subscale is also correlated positively with MASQ subscales i.e. GDA (r = .73), AA (r = .76), GDD (r = .49) and AD (r = .29) respectively.

Subscale of Anxiety, Hamilton Cognitive Subscale, is found to be positively correlated with General Negative Emotion (r = .55), Fear (r = .49), Hostility (r = .37), Guilt (r = .43), Sadness (r = .37), Surprise (r = .33), and are negatively correlated with negatively correlated with General Positive Emotion (r = -.48), Joviality (r = -.34), Self-Assurance (r = -.47), Attentiveness (r = -.47). Similarly, Hamilton Somatic is positively correlated with General Negative Emotion (r = .44), Fear (r = .40), Hostility (r = .34), Guilt (r = .30), Sadness (r = .48), Fatigue (r = .36), Surprise (r = .35), and are negatively correlated with negatively correlated with General Positive Emotion (r = -.30), Shyness (r = .18), Self-assurance, Attentiveness and Basic Positive Affect.

Depression subscales (BDI Cognitive Affective, and BDI Somatic) are found to be positively correlated with all the MASQ subscales. With their correlation ranging from (r = .34) to (r = .79). These correlations suggest that there is overlap in the symptoms specific to depression and anxiety and cognitive and somatic domains of depression. BDI Cognitive Affective is found to be positively correlated with General Negative Emotion (r = .66), Fear (r = .49), Hostility (r = .59), Guilt (r = .66), Sadness (r = .51), Fatigue (r = .28), Surprise (r = .41), Shyness (r = .18) and are negatively correlated with General Positive Emotion (r = -.54), Joviality (r = -.50), Self-Assurance (r = -.45), Attentiveness (r = -.54), and Serenity (r = -.19). Similarly, BDI Somatic correlates positively with General Negative Emotion (r = .46), Fear (r = .43), Hostility (r = .32),
Guilt ($r = .37$), Sadness ($r = .47$), Fatigue ($r = .33$), Surprise ($r = .41$), and are negatively correlated with negatively correlated with General Positive Emotion ($r = -.49$), Joviality ($r = -.46$), Self-Assurance ($r = -.36$), Attentiveness ($r = -.48$), and Serenity ($r = -.19$). It shows that anxiety patients who are high on cognitive and somatic symptoms of depression, they are also high on negative emotion, fear, guilt, surprise, and fatigue, and low on joviality, relaxation, self-assurance and attentiveness.

Hamilton Cognitive and Hamilton Somatic are positively correlated with Depression Subscales (i.e. BDI Cognitive Affective and BDI Somatic). Hamilton Cognitive is positively correlated with BDI Cognitive Affective subscale ($r = .63$), BDI Somatic subscale ($r = .65$). Similarly, Hamilton Somatic yielded positive correlation with BDI Cognitive Affective subscale ($r = .40$), BDI Somatic subscale ($r = .48$). These positive correlations imply a lack of discrimination between the two focal psychological constructs, anxiety and depression and these relationships simply confirm comorbidity of anxiety and depression.

Correlational Analysis with Depressive patients also revealed the same pattern as with anxiety patients. In Depressive patients’ sample, all the subscales of Mood and Anxiety Symptoms Questionnaires are positively correlated. The correlation seen between the Anxious Arousal (AA) and Anhedonic Depression (AD) is relatively low ($r = .35$) than those between General Distress Anxiety (GDA) and General Distress Depression (GDD) it indicates that there is less overlap between the specific scales.

All the Positive Affect subscales of Positive and Negative Affectivity Scale (PANAS-X) were found to be negatively correlated with PANAS-X’s negative affect subscales in this very sample of depression also. General Negative Emotion is correlated positively with GDA ($r = .54$), AA ($r = .50$), GDD ($r = .42$), and AD ($r = .32$) which indicates that all the specific and non-specific symptoms of depression and anxiety involve negative emotions and General Positive Emotion is negatively correlated with AA ($r = -.20$), GDD ($r = -.39$), and AD ($r = -.57$).

Negative Affect subscales of PANAS-X, i.e. Hostility, Fear, Guilt, Sadness are found to be positively correlated with the MASQ subscales i.e. GDA, AA, GDD and AD with their correlation ranging from $r = .23$ to $r = .57$. Other affects such as Shyness, Fatigue, Serenity, and Surprise are also positively correlated with GDA, AA, GDD and AD subscales of MASQ. The
correlation ranges from .17 to .40. Positive Affect subscales of PANAS-X, i.e. Joviality, Self-Assurance, and Attentiveness are found to be negatively correlated with the MASQ subscales. Their correlation ranges from -.18 to -.56.

Both the subscales of anxiety (i.e. Hamilton cognitive and Hamilton Somatic) are found to be positively correlated with Mood and Anxiety Symptoms subscales. Hamilton Cognitive subscale is positively correlated with GDA \( (r = .52) \), AA \( (r = .50) \), GDD \( (r = .48) \), and AD \( (r = .46) \) which points towards the comorbidity between the symptoms of anxiety and depression in depressive patients. Similarly, Hamilton somatic subscale also shows positive correlation with MASQ subscales i.e. GDA \( (r = .57) \), AA \( (r = .68) \), GDD \( (r = .43) \) and AD \( (r = .31) \) respectively.

Hamilton Cognitive shows positive correlation with General Negative Emotion \( (r = .49) \), Fear \( (r = .41) \), Hostility \( (r = .42) \), Guilt \( (r = .47) \), Sadness \( (r = .48) \), Surprise \( (r = .40) \), and is negatively correlated with General Positive Emotion \( (r = -.28) \), Joviality \( (r = -.29) \), Self-Assurance \( (r = -.42) \), Attentiveness \( (r = -.41) \). In the same way, Hamilton Somatic is positively correlated with General Negative Emotion \( (r = .26) \), Fear \( (r = .25) \), Hostility \( (r = .17) \), Guilt \( (r = .16) \), Sadness \( (r = .19) \), Fatigue \( (r = .32) \), Surprise \( (r = .18) \), and is negatively correlated with negatively correlated with General Positive Emotion \( (r = -.22) \), Joviality \( (r = -.26) \), Self-Assurance \( (r = -.28) \), Attentiveness \( (r = -.26) \), Serenity \( (r = -.25) \). It reveals that depressive patients with high levels of anxious symptoms also show high level of fear, sadness etc., and they show low level of positive emotions i.e. joviality, self-assurance etc.

Depression subscales (BDI Cognitive Affective, and BDI Somatic) yield positive correlation with subscales of MASQ. Their correlation ranges from .44 to .69. These correlations suggest that there is an overlap in the symptoms specific to depression and anxiety and cognitive and somatic domains of depression. BDI Cognitive Affective is found to be positively correlated with General Negative Emotion \( (r = .57) \), Fear \( (r = .46) \), Hostility \( (r = .50) \), Guilt \( (r = .60) \), Sadness \( (r = .59) \), Surprise \( (r = .38) \), Shyness \( (r = .18) \) and is negatively correlated with General Positive Emotion \( (r = -.36) \), Joviality \( (r = -.39) \), Self-Assurance \( (r = -.45) \), Attentiveness \( (r = -.40) \). Likewise, BDI Somatic is positively correlated with General Negative Emotion \( (r = .28) \), Fear \( (r = .21) \), Hostility \( (r = .28) \), Guilt \( (r = .34) \), Sadness \( (r = .37) \), Fatigue \( (r = .21) \), Surprise \( (r = .41) \), and is negatively correlated with General Positive Emotion \( (r = -.49) \), Joviality \( (r = -.46) \), Self-Assurance \( (r = -.36) \), Attentiveness \( (r = -.48) \), and Serenity \( (r = -.19) \). It shows that depressive
patients who are high on cognitive and somatic symptoms of depression, they are also high on negative emotion, fear, guilt, surprise, and fatigue, and low on joviality, relaxation, self-assurance and attentiveness.

Anxiety subscales, Hamilton Cognitive and Hamilton Somatic, are positively correlated with Depression Subscales (BDI Cognitive Affective and BDI Somatic). Hamilton Cognitive is positively correlated with BDI Cognitive Affective subscale \( r = .63 \), BDI Somatic subscale \( r = .65 \). In the same way, Hamilton Somatic is positively correlated with BDI Cognitive Affective subscale \( r = .40 \), BDI Somatic subscale \( r = .48 \). These positive correlations involve a lack of discrimination between the anxiety and depression. These relationships simply confirm co-morbidity of anxiety and depression.

Correlational analysis of normal adults also reveals the same pattern as with anxiety and depressive patient groups. The subscales of Mood and Anxiety Symptoms Questionnaires are found to be positively correlated with one another. The correlation observed between the Anxious Arousal (AA) and Anhedonic Depression (AD) is relatively low \( r = .33 \) than that seen between General Distress Anxiety (GDA) and General Distress Depression (GDD) that suggests less overlap between the specific scales of anxiety and depression.

All the Positive Affect subscales of Positive and Negative Affectivity Scale (PANAS-X) are found to be positively correlated with PANAS-X’s positive affect subscales in nonclinical sample. General Negative Emotion is correlated positively with GDA \( r = .67 \), AA \( r = .64 \), GDD \( r = .69 \), and AD \( r = .42 \) which indicates that all the specific and non-specific symptoms of depression and anxiety involve negative emotions and General Positive Emotion is negatively correlated with depressive symptoms related subscale of MASQ i.e. GDD \( r = -.22 \), and AD \( r = -.61 \). Negative Affect subscales of PANAS-X, i.e. Hostility, Fear, Guilt, Sadness are found to be positively correlated with GDA, AA, GDD and AD with their correlation ranging from \( r = .28 \) to \( r = .66 \). Other affects such as Shyness, Fatigue, Serenity, and Surprise are also positively correlated with GDA, AA, GDD and AD subscales of MASQ. The correlation ranges from .15 to .57.

Positive Affect subscales of PANAS-X, i.e. Joviality, Self-Assurance, and Attentiveness are found to be negatively correlated with the MASQ subscales i.e. GDA, AA, GDD and AD. Their
correlation ranges from -.17 to -.55. Both the subscales of anxiety (i.e. Hamilton cognitive and Hamilton Somatic) are found to be positively correlated with subscales Mood and Anxiety Symptoms Questionnaire. Hamilton Cognitive Subscale is positively correlated with all the MASQ subscales, i.e. GDA (r = .44), AA (r = .40), GDD (r = .47), and AD (r = .29) which show the co-morbidity between the symptoms of anxiety and depression. Similarly, Hamilton somatic subscale is also correlated positively with MASQ subscales i.e. GDA (r = .29), AA (r = .44), GDD (r = .32) and AD (r = .20) respectively.

Hamilton Cognitive subscale is found to be positively correlated with General Negative Emotion (r = .45), Fear (r = .44), Hostility (r = .24), Guilt (r = .39), Sadness (r = .41), Shyness (r = .32), Fatigue (r = .36), Surprise (r = .34) and is negatively correlated with negatively correlated with Self-Assurance (r = -.20). Likewise, Hamilton Somatic is positively correlated with General Negative Emotion (r = .33), Fear (r = .35), Hostility (r = .16), Guilt (r = .32), Sadness (r = .24), Shyness (r = .23), Fatigue (r = .39), Surprise (r = .32), and is negatively correlated with negatively correlated with General Positive Emotion (r = -.16), Self-Assurance (r = -.25).

Depression subscales (BDI Cognitive Affective, and BDI Somatic) are found to be positively correlated with all the MASQ subscales. Their correlation ranges from r = .29 to r = .62. These correlations suggest overlap in the symptoms specific to depression and anxiety and cognitive and somatic domains of depression. BDI Cognitive Affective is found to be positively correlated with General Negative Emotion (r = .58), Fear (r = .55), Hostility (r = .21), Guilt (r = .53), Sadness (r = .52), Shyness (r = .33), Fatigue (r = .39), Surprise (r = .41) and is negatively correlated with General Positive Emotion (r = -.22), Joviality (r = -.14), Self-Assurance (r = -.24). Similarly, BDI Somatic is positively correlated with General Negative Emotion (r = .36), Fear (r = .34), Hostility (r = .16), Guilt (r = .32), Sadness (r = .37), Shyness (r = .20), Fatigue (r = .36), Surprise (r = .30), and is negatively correlated with General Positive Emotion (r = -.17), Attentiveness (r = -.18). It shows that those who are high on cognitive and somatic symptoms of depression, they are also high on negative emotion, fear, guilt, surprise, and fatigue, and low on joviality, relaxation, self-assurance and attentiveness.

Anxiety subscales, Hamilton Cognitive and Hamilton Somatic are positively correlated with Depression Subscales. Hamilton Cognitive is positively correlated with BDI Cognitive Affective subscale (r = .53), and BDI Somatic subscale (r = .48). Similarly, Hamilton Somatic is positively
correlated with BDI Cognitive Affective subscale ($r = .42$), and BDI Somatic subscale ($r = .43$). These positive correlations suggest low discrimination between anxiety and depression. These relationships simply verify comorbidity of anxiety and depression.

Structural equation model estimates were calculated using the model fitting program AMOS 5 with maximum likelihood estimation in order to evaluate covariance among the observed variables. Multiple fit indices were used to provide a more conservative and reliable evaluation of the model. These included the Chi-square goodness of fit test and three adjunct fit indexes: Goodness of Fit Index (GFI; J¨oreskog & S¨orbom, 1996), (Raykov & Marcoulides, 2000), the Comparative Fit Index (CFI; Bentler, 1990), TLI (Tucker-Lewis Index) and the Root Mean Square Error of Approximation (RMSEA; Steiger, 1990), which evaluates the model relative to degrees of freedom. Along with Chi-square, GFI, CFI, TLI and RMSEA should also be considered for the evaluation of model fit. Conventionally, the Chi-square ($\chi^2$) should be non-significant.

- The fit indexes for the tripartite model in anxiety patients sample indicates that $X^2$ goodness-of-fit index equals to 1064.421, df being 186, it is significant at .001 probability level ($p < .001$). The model did not show adequate fit. All other fit indexes also did not met the suggested standards, for instances, GFI = .58, CFI = .62 and TLI = .57 contributing in the same line i. e. they have not supported the prediction of the tripartite model. At the same time, root mean square error of approximation (RMSEA) = .18 points to the existence of some residual factor in endogenous variables, which might be explained by some other measures outside the model. Overall inspection of the results shows that the tripartite model is not supported in anxiety patients.

- The fit indexes for the tripartite model in depressive patients sample indicates that $X^2$ goodness-of-fit index equals to 1029.405, df being 186, it is significant at .001 probability level ($p < .001$). The model did not show adequate fit. All other fit indexes also did not met the suggested benchmarks, for instances, GFI = .59, CFI = .61 and TLI = .56 which contributes in the same direction i. e. they have not supported the assumption of the tripartite model. Root mean square error of approximation (RMSEA) = .17 also indicates to the existence of some residual factor in observed variables. Thus the model does not replicate in depressive patients.
The fit indexes obtained for the tripartite model among normal adults sample indicates that \( X^2 \) goodness-of-fit index equals to 1103.93, df being 186, it is significant at .001 probability level \((p < .001)\). The model has not shown adequate fit. And other fit indexes also did not fulfil the criteria, for instances, GFI = .62, CFI = .64 and TLI = .60, and have not supported the prediction of the tripartite model. Simultaneously, root mean square error of approximation (RMSEA) = .16 demonstrates the existence of some residual factors. Lastly, the model was not also supported in normal sample. Overall, results did not support tripartite model on Indian population.

As the model does not find fit when the confirmatory factor analysis in all the three groups in the sample, exploratory factor analysis is applied to find out the underlying factor structure in the data. The factor structure of anxiety and depression was explored in anxiety patients, depression patients and normal adults by applying exploratory factor analysis respectively. The 21 X 21 inter-correlation matrices of anxiety, depression, and normal adults’ samples were subjected to Principle Component Analysis with Varimax rotation following Hotelling’s criteria. The Principal Component Analysis revealed 5 factors for anxiety group with eigen values more than one.

- Factor–I with eigen value of 8.90 explains 42.38 percent of total variance loads positively on Anhedonic Depression, General Distress Depression, BDI Cognitive Affective, BDI Somatic, Hamilton Cognitive Subscale and it is negatively loaded on General Positive Emotion, Attentiveness, Joviality, Self-Assurance. This factor is named as “Low Positive Affect”. This factor shows high conformity with the factor structure explained by Clark and Watson (1991).

- Factor–II explains 11.09% of total variance. This factor loads positively on Hamilton Somatic, Anxious Arousal, BDI somatic, Sadness, Hamilton Cognitive, Fear, General Negative Emotion, General Distress Anxiety and Fatigue. High loadings on Anxious Arousal, General Distress Anxiety and Hamilton Somatic make this factor of “Physiological Hyperarousal.”

- Factor III explains 6.91% of total variance. It is named as ‘Negative Affect’ as factor loads significantly on both anxiety and depression variables, i.e. Guilt, Hostility, BDI
Cognitive Affective, General Distress depression, Sadness, General Negative Emotion, Anhedonic Depression, General Distress Anxiety, Surprise and Hamilton Cognitive.

- Factor-IV which explains 6.25% of the total variance loads positively on Fear, Shyness, General Negative Emotion, and Surprise. It loads negatively on Self-Assurance. Its high loading on fear, surprise and general negative emotion variables make this a factor of “Fearfulness”.

- Factor-V shares 5.29% of total variance, which loads only on two factors Serenity and Fatigue. It is named as Factor of Serenity and Fatigue. It demonstrates that persons who report themselves as calm, relaxed also show high sign of fatigability.

Likewise, Principal component analysis also revealed five factors among depressive patients group.

- Factor–I with eigen value 7.90 explains 37.63 percent of total variance loads positively on Anhedonic Depression, General Distress Depression, BDI Somatic, BDI Cognitive Affective Ham Cognitive and it is negatively correlated with General Positive Emotion, Attentiveness, Joviality, Self-Assurance. This factor is named as “Low Positive Affect”.

- Factor–II has eigen value 2.60, and explains 12.37 % of total variance. It is named as “Negative Affect” as factor loads significantly on both anxiety and depression variables along with negative affect scales, i.e. Guilt, Hostility, Sadness BDI Cognitive Affective, General Distress depression, Ham Cognitive, General Negative Emotion, Anhedonic Depression, General Distress Anxiety, BDI somatic, and Surprise.

- Factor III explains 7.88 % of total variance and loads positively on Fear, Shyness, General Negative Emotion, and Surprise. It loads negatively on Self-Assurance. This factor appears as factor of anxiety and due to high loading on fear variable is named as “Fearfulness”.

- Factor-IV explains 6.04% of the total variance. This factor loads positively on Hamilton Somatic, Anxious Arousal, General Distress Anxiety BDI somatic, and Hamilton Cognitive. It loads negatively on Serenity. This factor is named as Physiological Hyperarousal.
• Factor-V shares 5.37% of total variance and loads highly on Fatigue. It also loads substantially on shyness, General Distress Depression and Hamilton Somatic is named as factor of Physiological fatigue.

Factor Analysis extracted four factors in sample of adults’ sample.

• Factor–I explains 37.23 percent of total variance. It loads positively on General Negative Emotion, Fear, General Distress Anxiety, Surprise, Hostility, General Distress Depression, Anxious Arousal, Guilt, Sadness, Shyness, BDI Cognitive Affective, Anhedonic Depression, Ham Cognitive, Attentiveness, and Fatigue. It is named as “Negative Affect”.

• Factor–II explains 15.84% of total variance. It is named as “Low Positive Affect” as factor loads positively on General Positive Emotion, Self-Assurance, Joviality, Attentiveness and Serenity. It loads negatively on Anhedonic Depression and General Distress Depression.

• Factor-III explains 6.92% of the total variance. This factor loads positively on Hamilton Somatic, Anxious Arousal, BDI somatic, Hamilton Cognitive, BDI Cognitive. Anxious Arousal, Fatigue and Guilt. This factor is named as “Anxious Somatic Complaints”.

• Factor-IV shares 5.20% of total variance and loads highly on Serenity. It also loads substantially on Sadness and loads negatively on Attentiveness which makes it factor of Serenity with sadness.