

# Relationship of Positive and Negative Affect with Depression in Clinical and Normal Group



**\*Deepika Varma**

*Department of Psychology, India*

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**\*Corresponding author:** Deepika Varma, Research Scholar, Department of Psychology, NIMHANS, Bangalore, India.

## Abstract

The current research focuses on the relationship of positive and negative affect with depression in clinical and normal group. The sample for the present study comprised of 60 participant. Among them N=30 belongs to normal group and N=30 belongs to clinical group. The participants male and female were in the age range of 18-41 yrs in both the groups. In the present study the investigator used the Beck Depression Inventory -II (BDI-II) tool to measure the level of depression and positive and negative effect of the individuals.

## Introduction

### Nature and concept of depression

Depression is probably the most common psychological disorder and one that receive most attention. Depression is a form of what is known as mood or affective disorder because it is primarily concerned with change in mood. Some are of normal fluctuation and other meet the definition of clinical problem. Negative affectivity is a common component to depression and low positive affectivity is related to depression. They attribute negative outcomes to lasting i.e. internal causes such as their own traits or lack of ability, but attribute positive outcomes to temporary i.e. external causes such as good luck or special favors from others. As a result such persons perceive that they have little or no control over what happens to them. We often hear that someone whom we thought happy and well settled suddenly starts talking about ending his or her life. Such person exhibits a disturbance in mood. When we know that the talk of suicide was a result of failure in business deal the person would then be described as being emotionally disturbed.

Mood disorders are disorders of emotion of sufficient intensity and duration which require immediate psychological and medical attention. But depressive disorder should be distinguished from depressed mood. All of us become sad grieved and deprived at one time or other time in life. These feeling occur during cloudy weather due to death in the family, losing a job or honors, failure in relationship or major financial loss. However, there are temporary phases which represent

a short term response to stress and in due course of time, we usually overcome these feelings. This is normal depression that most of us feel occasionally. This is often transitory and time bound and often a period of genuine introspection. But when this feeling of sadness is large or we do not get pleasure from daily activities and feels continuously sad it would result in depression. Depression must be taken seriously because of high rates of suicide associated with it. Clinical depression is something we feel for a day or two before feeling better. In true depressive illness the symptoms last for two week if it is not treated it may last for five months or sometimes years

As many as 40% of older individuals who have chronic health problems or confined in hospital are depressed [1]. Moreover, people with a dementing disorder such as Alzheimer's may also be depressed. In addition 30% of patients with dementia of Alzheimer's type who are estimated to have a supreme posed major depressive disorder, many more have some symptoms of depression that interferes with lives [2]. Depression is much more than blues, clinical depression can affect every aspect of life such as work, home, family, friends etc. Depression may be a reaction to other illness such as cancer, heart attack. Finally depression may be caused by an illness itself such as stroke where neurological changes have occurred. One in four women and one in six males will suffer from depression at same point in their life. Men & women sometimes show depression differently.

Men are more likely to experience irritability, sleep problem, fatigue etc. whereas women tend to have overt sadness and

feeling of worthlessness and guilt when depressed. Depressed prone people often set rigid perfectionist goals for themselves that are impossible to attain. Their negative expectations are so strong that even if they experiences success in specific tasks they anticipate failure the next time. They screen out successful experiences that are not consistent with their negative self-concept. The thought content of depressed individuals centers on a sense of irreversible loss, which results in emotional states of sadness, disappointment and apathy. When a psychiatrist makes a diagnosis of a patient's depressive illness, he or she may use a number of terms such as bipolar, clinical, endogenous major depression, melancholic, seasonal, affective or unipolar disorder to describe.

Beck challenged the notion that depression result from anger inward. Instead, he focuses on the content of the depressive's negative thinking and biased interpretation of events [3]. In an earlier study that provided much of the backbone of his theory, Beck [3] even found cognitive errors in the dream content of depressive clients. Becks [3] write about the cognitive triad as a pattern that triggers depression. Beck Depression Inventory (BDI) was design as standardized device to assess the depth of depression. The items are based on observation of symptoms and basic belief of depressed people.

### Factors for Depression

The chance that any person may develop a particular disorder is related to risk factors in the environment, that person's biological vulnerabilities and the presence or absence or factors that promote resilience. Risk factors affecting depression include-heredity, age, gender, negative life events and lack of social support. Heredity-An important risk factor for mood disorder is heredity. According to Plomin et al. [4] studies of twins and families clearly suggest a genetic component in both major depression and biological disorders.

The importance of heredity in mood disorder is shown by the strong association between the closeness of the biological relationship and the like hood that if one of them has a mood disorder, the biological relative will also be diagnosed with such a disorder. For example there is a much greater risk of developing a measure developing a measure depression if one's identical twin has had this disorder than if one's parent, brother or sister has experienced it. The chances of developing the disorder are even less if a person has no close relative that has ever been given this diagnosis. Those having relatives with a bipolar diagnosis have almost three times as great a chance of developing as major depression as those who have no close relative with either a diagnosis of depression or bipolar depression. Families' studies have shown that the younger in age people are when their first major depression occurs, the more likely it is that their relatives will also experience periods of depression.

According to kender et al. [5], A study comparing monozygotic (MZ) and dizygotic (DZ) twin investigated the

effect of genetic similarity on such questions ; what are called the negative symptoms of depression(change in weight, appetite and sleep) and whether or not the depression recurred after the first diagnosis, both seemed more influenced by heredity than by events in the twin's lives because these symptoms occurred more often in both members of the MZ twin pairs than they did in the DZ pairs. In contrast, within the group experiencing recurrent episodes of depression, the actual number of episodes seemed to be related to stressful life experiences not shared by the other twin of the pair, rather than two heredity. Age-Another factor for depression is age. The risk for a first episode of any degree of depression is highest in women between the ages of 20 and 29. For men, the similar risk period is between the ages of 40 and 49. In addition to age, another factor is year of birth, or the birth cohort to which a person belongs.

Gender- one of the greatest risk factor for depression is simply being female. Women are more likely to consult physicians or mental health experts and to take a psychology view their problems than they are to see them only in terms of physical symptoms. one possible explanation is that while women is general receive more social support than do men, they are also expected to offer more support because support giving often involves them in the problems and stressors experienced by others, women may on average experience more stress than men. According to Paykel [6] during age period from 25-45, married women have a particularly highly rate of depression, while unmarried women in the age bracket have a much lower rate, more similar to the rate for men. This difference may reflect the greater stress for married women from both heavy child-care responsibilities and support provision for extended families, in addition to job stress. According to Beekman et al. [7], low income and economic need are additional stressor that affect women more often than men and may be related to the higher rate of depression.

Life Events- Environmental f actors such as life events, especially a pileup of stressful events in a short time period, may play a significant role in producing an episode of depression, especially in vulnerable people. According to Kender et al. [5] the association between the stressful life events and the onset of major depression decreases as the number of previous depression episodes Increases. Many stressful life events are associated with relationships in the person's social network. According to kender et al. [5], one studies of twins found that more than half of all personal stressful life events were rated as being in some way dependent on the person involved rather than on factors outside of the persons 'control.

Lack of social support-The negative of life events related to close personal relationships is made even stronger because it is usually accompanied by a decrease in social support. Social support, the belief that one is cared by others who are also available to provide help or emotional support when needed is an important protection from depression. Behaviors of others

that convey criticism or imply that people unworthy of love or friendship are more likely to be .Related to depression than is the mere absence of support (Harris 1992).

According to Prigerson et al. (1999), one close relationship that is generally considered to provide support is marriage. Both divorce and the poor quality of an ongoing marriage are associated with depression as well as with worsened mental and physical health in general.

### Positive and Negative Affect; Pana

Researchers have proposed the existence of two broad mood factors- Positive and negative affect [8,9]. Extensive evidence demonstrates that two broad mood factors –Positive affect & Negative affect are the dominant dimensions in self report mood [8,9]. Although their names might suggest that they are the opposite poles of the same dimension. Positive & negative affect are in fact highly distinctive dimensions' that can be meaningfully represented as orthogonal (uncontrolled) factors. Both mood factors can be measured either as a state or as a trait. Our focus will be on the trait, which Tellegen [9] has termed negative affectivity (NA) and positive affectivity (PA).

Negative affect is a general factor of subjective distress and subsumes a broad range of negative mood states, including fear, anxiety, hostility, scorn, and disgust. Mood states related to depression such as sadness and loneliness also have substantial loading on this factor. At the trait level, NA is a broad and pervasive predisposition to experience negative emotions that further influence on cognition, self concept and world view [8]. In contrast, PA is a dimension reflecting ones level of pleasurable engagement with the environment. High PA is composed of term reflecting ones enthusiasm , energy level, mental alertness interest ,joy and determination, whereas low PA is best defined by descriptors reflecting lethargy and fatigue . It is noteworthy that state of sadness and loneliness also have relatively strong loadings on the low end of this factors [8,9] trait PA is a corresponding predisposition conducive to positive emotional experiences; It reflects a generalized sense of well-being and competence, and of effective interpersonal engagement.

Watson et al. [8] found that several available PA and NA scales lacked psychometric soundness. Thus, Watson et al. developed a brief and easy way to measures of these emotions called positive affect and negative affect schedule (PANAS). The study of positive and negative affect has some important applied outcomes also for e.g., some researchers have suggested that the PANAS may be a useful instrument in applied and research situations where the differentiation of anxiety and depression is important [8]. Furthermore PA has been found to correlate strongly and positively with extraversion and NA with neuroticism [8]. Trait positive affect scores are related to social activities [8]. Concluding their views of previous research literature Pettit et al. (2001) assume that "positive affect may produce profitable outcome in multiple areas, ranging from the enhancement of

learning to the amelioration of psychological distress." In this context, the study examines the difference in level of PA and NA between the patients diagnosed with depression and normal subjects i.e. non depressed individuals.

### Depression and Pana

The cognitive model of depressed states that certain negative cognition can maintain state of depression. There is good evidence that in clinically depressed group mood affects the relative accessibility of positive and negative cognition. Thus negative cognitions appear to produce depression, and conversely depression increases the probability of just these cognitions which will cause further depression. Thus, this reciprocal relationship between depression and cognition may found the basis of vicious cycle which will perpetuates and intensify depression. Moreover, positive and negative mood state effects on memory and is an important dimension of cognitive vulnerability to depression.

The state of mind-model (SOM model) Schewartz & garamoni [10] provided a framework for assessing the balance between self reported positive and negative affects in a sample of 30 clinically depressed patients and 30 healthy control subjects. The SOM Model proposed that healthy functioning is characterized by optimal balance of positive (P) & negative (N) cognitions or affects. [P1 (P+N)] and that psychopathology is marked by deviation from the balance.

### Review of Literature

Emotions based theories of psychopathology proposed that depression is characterized by increased Negative affect and decreased Positive affect. This model has been supported by various studies.

- a. Tellegen [9] specially tested this model by factor analyzing measures of anxiety, depression; NA & PA. The results were generally consistent with the model. As expected, the NA & PA scales each defined a factor. The anxiety and depression scales has significant loadings on both factors; however, the anxiety scales loaded more strongly on the NA factor, where as the depression scale was a much better marker of low PA.
- b. Blumberg & Izard [11] used self report mood scales to predict scores on measures of depression and anxiety. Several of the negative emotion scales (most notably sadness and fear) contributed to the prediction of both measures, but the positive emotion scales (joy & interest) added significantly only to the prediction of depression. The mood data therefore suggest that PA may be an important factor in differentiating anxiety from depression [8,9]
- c. Hall in (1977) obtained diagnostic data and clinician's ratings of anxiety and depression on a sample of 108 male outpatients. She found ratings and diagnosis of anxiety to be significantly correlated with NA but not PA where as ratings

and diagnoses of depression were more highly related to (Low) PA than NA.

d. Bouman & Luteijn [12] examined three groups of patients (a) Major depressives, (b) Dysthymics, and (c) No depressives. scores on a number of mood and personality scales were factor analyzed, and two factors were extracted and interpreted as NA and PA .Consistent with the model outlined earlier, The major depressives has significantly lower PA scores than dysphonic patients, who were, in turn, lower on PA than the no depressive group. The later data don't permit any comparison between anxiety and depression.

e. David Watson, Lee Anna Clark & Grey Carey [8] provide the most comprehensive test of the model to data. They examined the relation of trait PA and NA scores to symptoms and diagnosis of depression and anxiety in a clinical patient population. They predicted that NA scores would be significantly correlated with anxiety and depression .whereas, PA scores would be associated only with later (depression).

f. Clark & Watson [8] predicts that individuals diagnosed with depression were expected to show significantly lower scores on positive affect than patients with anxiety disorders based on an expected narrowing of affective space under conditions of uncertainty .Those in the anxiety group were predicted to show significant inverse correlation between PA and NA. The depressed group was predicted to have a low, non significant correlation between PA and NA leading to a third prediction; that the inter correlation between PA and NA would be more strongly linked in persons suffering from an anxiety disorders in comparison to those with a depressive disorders.

g. Zautra et al. (1997), "participants with anxiety disorders appeared to exhibit a more simplified affect structure and suggested by the significant inverse correlation between PA & NA. The depressed participants displayed no such narrowing of affective range. In fact the depressed group exhibited a correlation that was suggestive of no relationship between positive and negative effect.

h. According to Jason Williams, Frenk Peeter's and Alex Zautra (2004), "Anxiety and depression differ both in level and in the relationship between PA and NA. Depressed participants also showed higher NA then their anxious counterparts, also the groups differed in affective relationship. On the bases of the fore research studies, the following research question was formulated.

## Research question

Does clinically depressed group and normal group (non depressed group) differ in the level of PA & NA?

## Objective

To examine the difference in the level of PA & NA between the patients diagnosed with depression and normal subjects i.e. non depressed individuals

## Hypothesis

- Individuals diagnosed with depression are expected to show lower scores in positive affect than non depressed individuals.
- There will be significant difference on negative (NA) between clinically depressed group & non depressed individuals
- In Clinically depressed groups the relationship between low positive affect and depression would be stronger as compared to non depressed group

## Methodology

### Participants

The sample for the present study comprised of 60 participant. Among them N=30 belongs to normal group and N=30 belongs to clinical group. The participants male and female were in the age range of 18-41 yrs in both the groups.

### Measures

In the present study the investigator used the following tool to measure the level of depression and positive and negative effect of the individuals.

### Beck Depression Inventory -II (BDI-II)

The level of depression of individuals were measured through questionnaire of Beck Depression Inventory-II developed by Beck et al 1961 this inventory contains 21 items to measure the behavioral manifestations of depression. The range of scores varies from 0-63.

### Scoring

As we know that in BDI-II, there were 21 categories, each category describe particular manifestation of depression and has a series of 4 self evaluative-statements which are assigned value of 0-3. The subject has to choose one statement from among group of 4 statement in each question that best describe how he/she have been feeling during the past few days. The statement on which subject put a tick mark is given a score according to series for e.g., if put a mark on statement 1 given 0, statement 2 given 1, statement 2 and 3 given 2 & 3 scores respectively, thus a high score on test indicates high depression where as a low score on test on test indicate normal ups and downs.

### Reliability

The BDI II discusses several kinds of reliability measures that were developed based on two samples, the first was a clinical sample of 500 out patients from various psychiatric institutions

in the USA. The second sample was comprised of 120 college students.

**Internal consistency**

An analysis of internal consistency yielded a cronbach's alpha of .92 for the outpatients and .93 for the students.

**Test-retest reliability**

The test-retest reliabilities were calculated and yielded an average correlation of .93.

**Validity**

Several validation studies assess the BDI-II similarity to other kind of depression - related scales. According to Arbisi's (2001) the correlation between BDI-II and BDI-IA was quite high i.e. .93 suggesting that these measures yield similar pattern of scores. BDI-II scores yielded correlation of .60 with Beck Anxiety Inventory and .68 with Beck Hopelessness scale (BHS).

**Positive and Negative Affect-Schedule (PANAS)**

PANAS was used to measure a broad range of affective states of adolescents. it was developed by Watson, Clark & Tellegen [8]. It is used to measure the two affects; Positive affect (PA) and negative affect (NA). It is a self report scale with twenty, 5-point Likert type item, ranging from very slightly or not at all to extreme.

**Scoring**

Scoring is simple, subjects were asked to rate each item on the extent to which it applies to them from 1=very slightly or not at all,2=a little, 3=moderately,4=quite a bit and 5= extremely, it has 20 specific affects (10 items separately for PA and 10 for NA).PA includes (1,3,5,9,10,12,14,16,17 and19) Active, alert, attentive, determined, enthusiastic, excited, inspired, interested ,proud, strong. NA includes (items 2,4,6,7,8,11,13,15,18 and 20) Afraid, scared, nervous, jittery, irritable, hostile, guilty, ashamed, upset, distress. Sum of these items separately PA and NA indicates high and low on emotional wellbeing respectively.

**Reliability**

The internal consistency of PANAS was determined by cronbach's alpha coefficient. The alpha reliabilities for both scales are high generally ranging from .83 to .90 for PA and from .85 to .90 for NA.

Validity Convergent construct validity was high ranging from .90 to .95 for PA and from.92 to .95 or NA.

**Procedure**

After taking the authority letter from Department of psychology, we took the permission from chairman of psychiatry department of JNMC. After that 30 clinically depressed patient both male and female were identified. Adopting the criteria of score taken from BDI-II 30 non-depressed participant (Normal subjects) were identified and were explained the purpose of the

present study. A good assured the subject's that their responses will be kept confidential and will be used only for research purpose. All the measures were administered to normal group and clinical depressed group. Participants were asked to fill out the questionnaire. Each questionnaire was followed with the gap of 10 min. Then after collecting data subjects were thanked.

**Statistical analysis**

In the present study, the data was analysis by using t-Test and Pearson's Product Moment correlation.

**Results**

**Table 1:** The Mean, SD, and t- value of PA in clinical (N=30) and Normal group (N=30).

Groups	N	Mean	SD	t-value	Level of significance
Clinical group	30	22.2	7.53	7.92	< .01
Normal group	30	35.43	5.84		

Table 1 shows that there is significant difference between clinical group and normal group on positive affect (t=7.92). Normal group scored significantly high mean scores on PA (Mean=35.43, Sd=5.84) than clinical group (Mean=22.20, Sd=7.53). Thus, hypothesis I is accepted.

**Table 2:** The Mean, SD, and t- value of NA in clinical (N=30) and Normal group (N=30).

Groups	N	Mean	SD	t-value	Level of significance
Clinical group	30	34.93	6.20	12.15	< .01
Normal group	30	17.3	5.76		

Table 2 It is clear from the above table that there is significant difference on negative affect between the mean scores of clinical group and normal group (t=12.15). Clinical group scored significantly high mean score (Mean= 34.93, Sd=6.20) than normal group (Mean=17.3, Sd=5.76). Thus, the hypothesis II is accepted.

Table 3 shows that positive and negative affect are significantly correlated with depression in normal as well as

clinical group. In clinical group there is high correlation with positive and negative affect (PA=.87, NA=.81) as compared to normal group (PA=.65, NA=.69) respectively. However in clinical group the relationship is stronger as compared to normal group. Thus, our hypothesis III is also accepted.

**Table 3:** Pearson's Product Moment correlation between positive and negative affect and depression in clinical (N=30) and non depressed group (N=30).

Groups	N	PA	NA	Level of significance
Clinical group	30	.87	.81	< .001
Normal group	30	.65	.69	

### Discussion and Conclusion

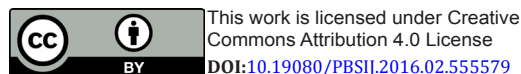
Results generally support our predictions and are consistent with previous research in this area. The results obtained have indicated that positive and negative effects are significantly correlated with clinical group as well as normal group. Results obtained from present study have also indicate that clinical group scored significantly higher mean score on NA & low mean scores on PA than normal group. As predicted by Clark the finding of the study is also according to the prediction made by Clark & Watson [8].

Another distinguished feature of the study is that normal participants scored larger on both NA & PA which gives the insight that low Positive score is the only specific feature of depressive group. The study thus strongly suggests that positive and negative affect and depression are related and that high negative and low positive affect may be risk factors for

depression. The findings of the study may be fruitful in clinical setting for predicting treatment outcome, assessment and diagnoses. Moreover improvement in depressive group can be made by reducing negative affect and increasing positive affect.

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