Chapter-6

DISCUSSION

The present study extends the theory that the effects of The Cognitive Behaviour Therapy were strongly moderated by the employment status of the participants which were clearly evinced in the three measures i.e. the pre-test, the post-test and the follow-up, under which the depression scores were taken for statistical treatments and comparisons.

The first objective of the study was to assess and compare the levels of depression of participants undergoing experimental and control group conditions. The value of t-test evinced that the participants allotted for experimental condition did not differ significantly as compared to the participants who were assigned randomly for the constitution of the control group condition as the t-value did not reach the desired level of statistical significance (Table 5.2 & Figure 5.1). In the other words, the two groups theoretically expected to belong to the same population. The results corroborated the hypothesis put forth for the purpose which avowed that the unemployed and employed participants would not differ significantly in the acquisition of their mean depression scores on the Pre-test measure (Hypothesis 1).

The second objective of the present study was to assess and compare the levels of depression in unemployed and employed participants on the pre-test measure. The data were pooled and divided into unemployed and employed categories to enable the SPSS to ascertain the mean, SDs and t-test values. The statistically non-significant value of t-test (Table 5.3 & Figure 5.2) indicates that the unemployed and the employed participants did not differ in their acquisition of the mean depression scores
on the pre-test measure. In the other words, they can be said to belong to the same population and subsequent variations in their depression scores can easily be attributed to the manipulation of the Cognitive Behaviour Therapy. The finding also confirms the hypothesis formulated in this regard which stated that the unemployed and employed participants would not differ significantly in the acquisition of their mean depression scores on the Pre-test measure of depression (Hypothesis 2). The above two paragraphs were devoted to place the findings of the first phase of the study which attempted to make an assessment of the trend of depression on pre-test measure.

In the second phase of the research endeavor, an attempt was made to spell out the effects of The Cognitive Behaviour Therapy on the participants. To meet this purpose, the mean depression scores of the participants comprising the experimental and the control groups on the post-test measure were compared with the help of t-test applying The Independent Sample method to evaluate the difference between the mean depression scores of the participants of the two aforesaid groups. The computation of the data substantiates the fact that the two groups differed significantly in their attainment of mean depression scores as the value exceeds the required level of statistical significance (Table 5.4 & Figure 5.3). It led to the conclusion that the cognitive behaviour therapy actually worked well with the reliable degree and helped to attenuate the intensity of depression of the participants of the experimental group condition. It satisfies the third objective of the study which aimed to uncover the nature, extent and dynamics of the remedial effectiveness of Cognitive Behaviour Therapy in the treatment of depression of participants and further authenticates the hypothesis which utter that participants comprising experimental
group would evoke lower mean depression score as compared to their control group counterparts on the post-test measure of depression (Hypothesis 3). The effectiveness of the cognitive behaviour therapy for various mental disorders has well been established in many outcome studies.

To test the effectiveness and endurance of the cognitive behavior therapy the mean depression scores of the participants of the experimental and the control group conditions on the follow-up measure were compared. The t-test conducted to test the difference between mean scores of these groups was found to be statistically significant (Table 5.5 & Figure 5.4), which signifies the effectiveness and endurance of the cognitive behavior therapy. This result fulfills the fourth objective set forth for the present study stating to inquire into the nature, extent, direction and dynamics of the remedial efficiency of Cognitive Behaviour Therapy in the treatment of depression of the participants of the experimental the control group conditions on the follow-up measure. It further confirmed the fourth hypothesis formulated for the present study that conjectured that the participants of the experimental group condition would significantly achieve higher mean depression score as to those who constitute the control group on the follow-up measure (Hypothesis 4). The results indicate that the participants working under experimental group condition benefitted more with the application of The Cognitive Behaviour Therapy as compared to the participants belonging to the control group condition. In the other words, the results permit to infer that the longevity and endurance of the effectiveness of the therapeutic intervention of The Cognitive Behaviour Therapy remained intact over time even after a long follow-up of the three months.
Albert Ellis (1962) documented the effectiveness of the cognitive behaviour therapy and concluded that it is not the events taking place in our lives that upset us, it is the beliefs that we hold cause us to become depressed, anxious, enraged etc. Aron Beck (1960) reiterated and proved the role of cognition as a mental process plays a significant role in maintaining depression that negative cognition does not permit patients to get rid of depression. Applying cognitive therapy; he further argued, lead patients to develop positive thinking to fight with depression.

Cognitive therapy for depressive disorder is a complex procedure which combines behavioural and cognitive techniques and emphasize on procedures for altering ways of thinking. Beck (1960) developed the first effective forms of cognitive behaviour therapy (CBT) turning it into an effective and main-stream technique of treatment for many emotional and behavioural problems. The psychotherapy refers to a broad gamut of treatment techniques by psychological means for alleviating emotional problems in which a skilled person consciously establishes a professional relationship with the patient and aims to remove, modify, or impede existing symptoms, disturbed pattern of behaviour and promote positive and productive personality growth and development (Wolberg, 1966). Cognitive therapy techniques were developed and eventually integrated with behavioural approaches to form cognitive – behaviour treatment for a variety of psychological disorders, primarily depression. Cognitive therapy was developed as an exodus from traditional therapeutic approaches to mental illness. Aaron Beck argued that negative emotionality and behaviors patterns are primarily a consequence of distorted thoughts and beliefs. Thus, Cognitive Behaviour Therapy involves a set of strategies from

An outcome research accomplished by Smith and Glass (1977) appraised and scrutinized 375 different studies of psychotherapy with the conclusion that average people receiving cognitive behavior therapy were better off than the people who had similar problems but got no such opportunity. A study suggested that 59% of the adolescent patients availing the cognitive behaviour therapy received successful treatments for depression (Demission et al., 1979). Such efforts have been made to ascertain effectiveness of the cognitive behavior therapy with its proved efficacy (Kuruvilla, 1980). A few psychiatrists with scores of psychologists practicing the cognitive behavior therapy in India, but reports of their outcomes lack publications in Indian Psychiatric Journals. Kuruvilla (1980) conducted an outcome research on 17 patients with major depressive disorder and concluded that CBT can be practiced effectively in Indian socio-cultural setting also. Out of these, 14 patients who finished the course, 11 showed discernible improvements with partial improvement in depressive symptoms of the rest three.

Aaron Beck’s designed cognitive behavior therapy primarily for the treatment of depression with moderately levels and reported it to be as effective as those of antidepressants (Rush et al., 1977; Blackburn 1981). Although a large number of studies have been reported using cognitive therapy, only a few of them make use of adequate control groups. Thus, cognitive behavior therapy inclined to be most effective in reducing depressive symptoms. Many other studies have revealed cognitive therapy to be more successful than antidepressant medication (Blackburn, Bishop, Glen, Whaley & Christie, 1981; Evans, et al., 1992; Kovacs, Rush, Beck &
Hollon, 1981; Rush, Beck, Kovacs & Hollon, 1977; Rush, Beck, Kovacs, Wiesenberger, & Hollon, 1982). Several studies using meta-analysis have shown the relative effectiveness of cognitive behavior therapy to depression and found it to be more helpful than pharmacotherapy (Robinson, Berman & Niemeyer, 1990). Some other studies have shown cognitive behavior therapy to be equally effective as antidepressant medication (Hollon et al., 1992) or combined cognitive along with drug treatment (Beck, Hollon, Young, Bedrosian & Budenz, 1985; Blackburn et al. 1981; Covi & Lipman, 1987; Evans et al., 1992; Hollon et al., 1992). Additional studies suggested that cognitive therapy enhanced the efficacy of antidepressants (Dunn, 1979; Teasdale, Fennell, Hibbert & Amies, 1984; Bowers, Bishop & Dow, 1989; Miller, Norman, Keitner, 1990).

Further, the extensive empirical support for the cognitive behavior therapy, has also received wide support. One such study was undertaken by the National Institute of Mental Health for the treatment of depression under the project of Collaborative Research Program (TDCRP) (Elkin, 1994; Elkin, Gibbons, Shea & Shaw, 1996). The study assessed the comparative efficacy of Cognitive Behaviour Therapy (CBT), Interpersonal Psychotherapy, pharmacotherapy using imipramine, and a pill-placebo in clinical management approach. With continued collection of findings, some conclusions have been made which reports it to as effective as pharmacotherapy or significantly superior to placebo treatment. Further, cognitive behavior therapy seemed to work better for those who were less depressed than for those who were more depressed and pharmacotherapy appeared to be particularly effective for the latter group.
The role of cognitive behavior therapy and its efficacy in the treatment of psychotic conditions, dysthymia, obsessive-compulsive disorder, personality disorders, hypochondriasis, post-traumatic stress disorder, and alcoholism have also been reported to be satisfactory (Kuruvilla, 2000). Recently, Beck, (2001) reviewed 14 meta-analyses on cognitive therapy that included 325 studies and 9,138 individuals and found it to be effective for several psychological disorders and beneficial who received treatment as contrasted to those who received a placebo or other control condition. In addition, the effectiveness of cognitive behavior therapy has been established in treating childhood depression, with moderate level of depressive symptoms and other forms of psychopathologies (Cuijpers, Van Straten & Warmerdam, 2007; David & Tolling, 2010; David & Tolling, 2010; Hopko, Lejuez, Ruggiero & Eifert, 2003; Paykel, 2007; Rohde; 2006; Wiles, 2009).

The fifth objective of the study was to inquire into the nature, extent and endurance of the remedial efficiency of Cognitive Behaviour Therapy in the treatment of depression of unemployed and employed participants of the experimental group condition on the pre-test, the post-test and the follow-up measures. The mean depression scores of unemployed and employed participants of the experimental group were statistically different as the t-value came to reach the desired level of significance (Table 5.6 & Figure 5.5). The result indicates that the participants comprising unemployed and employed groups differed significantly in their levels of depression on the Pre-test measure. The implication of this finding is that the unemployed participants reflected the reality they were facing in their life as a result of lack of employment opportunity. The findings confirmed the hypothesis 5 which stated that the unemployed and employed participants of the experimental group
would significantly differ in their levels of depression on the pre-test measure (Hypothesis 5).

To appreciate the extent of effectiveness of the Cognitive Behaviour Therapy on the unemployed and employed participants of the experimental group condition in consonance with the fifth objective which aimed to see the nature and extent of the remedial efficiency of Cognitive Behaviour Therapy in the treatment of depression of unemployed and employed participants of the experimental group condition on the post-test measure, the mean scores of the two groups were subjected to t-test analysis (Table 5.7 & Figure 5.6) to excavate the significance of difference between these mean depression scores which came to be statistically reliable which resulted into the authentication of the hypothesis expecting significant difference in the levels of depression of the unemployed and employed participants of the experimental group observed on the post-test measure (Hypothesis 6). The results indicate that the employed participants got more profited by The Cognitive Behaviour Therapy as compared to those who were unemployed. These results bear very important theoretical and practical implications as they demonstrate for the personality characteristics and cognitive structure on which the unemployed and the employed participants differed. Here a very important question arises as to how and why the employed get more benefitted than their unemployed counterparts. The reason behind the difference in benefits accrued in favour of employed participant as compared to their unemployed ones may be due to the differences in the former’s structure of self-esteem, self-concept, familial and social supports, financial soundness and differences in the set of etiological factors in relation to the later.
The last part of the fifth objective aimed to establish the nature and extent of relationship between the mean depression scores of the unemployed and employed participants of experimental group condition observed on the Follow-up measure resulted into a statistically significant t-value (Table 5.8 & Figure 5.7) which extends the notion that the employment status of the participants reliably determined the nature and extent of the effectiveness of the cognitive behavior therapy. The results led to the confirmation of the hypothesis which estimated that the unemployed and employed participants of the experimental group would significantly differ in their levels depression on the follow-up measure (Hypothesis 7). These results have also a great potency to fulfill the gap of knowledge in theory and practice the cognitive behavior therapy as well as to nurture the quest incorporated in this research project and beyond. This difference in the mean depression scores pointing towards endurance of the remedial effects of the cognitive behaviour therapy of unemployed and employed on the follow-up measure signifies the difference in their degree and levels of self-control, optimism, self-efficacy, self-discipline, nature of helplessness and the differences in other personal, marital, familial, and social factors as a result of which they benefited and endured the same they received from the therapeutic intervention.

The sixth objective of the present study centered around the concern of the relative evaluation of the efficacy of the cognitive behavior therapy on the participants of the experimental group observed on the pre-test, the post-test and the follow-up measures. To make the story more clear the mean depression scores of unemployed and employed participants working under the experimental group condition whose depression scores were taken on the three measures i.e. The Pre-test,
the Post-test and the Follow-up, were compared with help of Paired Sample Method of t-test. The comparison of the mean depression scores of the participants who were observed on the pre-test and the post-test measures resulted into a statistically significant t-value (Table 5.9 & Figure 5.8) which demonstrated that the participants observed for the Pre-test and the Post-test measures significantly differed in their mean depression scores in the experimental group condition. The results evinced that the cognitive behavior therapy effectively lessened the intensity and direction of the level of depression of the participants observed on the post-test as to the same participants who were observed on the pre-test measure.

The mean depression scores of the participants of the experimental group condition observed on the post-test and again on the follow-up measure were compared which resulted into a statistically non-significant t-value (Table 5.10 & Figure 5.9). The results led to infer that the effectiveness of the cognitive behavior therapy carried over and remain unaffected which was once materialized on the participants of the experimental group observed on the post-test measure to same participants when assessed on the follow-up measure even after a long gap extended up to a period of three months.

Further, the mean depression score of the participants of the experimental group condition observed on the pre-test and again on the follow-up measure were compared and t-value was found to be statistically significant at .01 level (Table 5.11 & Figure 5.10), which led to the conclusion that the cognitive behavior therapy was the only precursor which created such a large difference in the mean depression scores of the participants of the experimental group condition observed on the pre-test and the follow-up measure. The results of this and the previous two paragraphs led to
confirm the hypothesis which anticipated that the participants of the experimental group observed on the post-test and the follow-up measures would emit significantly higher mean depression scores as compared to the participants observed on the pre-test measure **(Hypothesis 8)**.

The seventh objective of the study was to find out the intricacies of the interactive roles the condition, the employment status and the measure of the participants in the acquisition of depression scores by the participants. To achieve this goal, the depression scores were subjected to a $2 \times 2 \times 3$ Analysis of Variance (ANOVA) repeated measures on the last factor to assess the overall pattern of main effects and interaction effects to composite a comprehensive picture. The F-value of factor A (the experimental and the control conditions) shown to achieve the level of statistical significance ($F = 1945.25$, $df = 1$, $p > .01$) which implies that the two levels of factor A i.e. experimental and the control group conditions, comprised different effects on the mean depression scores of the participants. Likewise, the F-value ($F = 29.14$, $df = 1$, $p = .01$) of Factor B which symbolized employment status of the participants also touched the accepted level of statistical significance and indicated that the employment status of the participants also had enough vitality to create such gradient of force to fabricate differential effects on the mean depression scores of the unemployed and employed participants. The trend was again recurred in the case of F-value ($F = 18.73$, $df = 1$, $p = .01$) demonstrating interaction effect of conditions (Experimental, Control) X employment status (Unemployed, Employed) and it entails that the change in the values of the factor A (Experimental, Control) was dependent and associated with the values of Factor B (Employment Status) (**Table 12 & Figure 5.11a, 5.11b**).
The F-value of Factor C (the pre-test, the post-test, the follow-up) achieved (F = 459.95, df = 2, p > .01) the required level of statistical significance and demonstrated that the three measures (The Pre-test, The Post-test, The Follow-up) had significantly and differentially affected the depression scores of the participants that unquestionably affirmed the conclusions of their effects and the reliable generalizations thereof. The F values (Table 12 & Figure 5.12a, 5.12b) of interactions of A X C (Condition X Measure) (F = 478.36, df = 2, p > .01) and B × C (Employment Status × Measure) (F = 4.07, df = 2, p > .05) also demonstrate (Table 12 & Figure 5.13a, 5.13b) the same trend of statistical significance of accepted levels. The F-value of interaction of Factors A × B × C (Condition × Employment Status × Measure) was not found to be statistically significant. The results pointed out that the depression scores of the participants were dependably determined by the impacts generated by the differing levels of the two factors and change in the levels of each factor gave rise to change in the values of depression scores only with the affects created by the other one. The computations of the ANOVA and ensuing values of main effects, the interaction effects and the simple interaction effects partially confirm the hypothesis framed which expected that the condition, the employment status and the measure would have significant interaction effects on the culmination of the depression scores of the participants (Hypothesis 9).

Thus, the findings of the present study extend the notion that the employment status of an individual has great importance in the genesis, development and maintenance of psychopathology especially depression. The employment status of an individual is a precursor to many personal, familial, social, physical and psychological problems. Unemployment lowers the self-esteem and self-efficacy of
the person. It has been reported that the social support has been widely used and found to predict general health and more specifically psychiatric symptoms (Kendler, 1997). As unemployed persons do not avail social support, the depression may easily be attributed to their plight. Depression is characterized by low self-esteem, passivity, negativism impairment in interpersonal and social relationships, ineffective attributional styles, dysfunctional cognition, and suicidal thoughts. All these attributes portray the exact picture of a person with lack of employment. They suffer dysfunctional cognition and lower socio-economic status which have been suggested to be involved in the emergence of mood disorders (Depue & Monroe, 1996). Poor parental relationships and marital conflicts act both cause and effects of unemployment and underemployment. The extent and course of depression are directly affected by the web of relationships an unemployed person is intertwined with. The lack of a confiding and intimate relationship leaves individuals vulnerable to depression (Brown & Prudo, 1981; Costello, 1982). Difficulties in social functioning of unemployed people are concomitant to depressive disorders (Hirschfield et al., 1983).

The negative cognition is chief characteristics of depression and the unemployed persons have plentiful amount of negativity in their cognitive structure. Beck (1967) explicitly attributed the development of cognitive triad i.e. negative beliefs of self, of one’s future and of environment acting as causal agent of depression. In their review of a large body of research, Tracy et al. (1992) concluded that individuals suffering from depression think more negatively than healthy individuals. Thus, when thinking about past, current and future circumstances
depressed patients emphasize the negative aspects and this process is likely to contribute to the perpetuation of their depressed mood.

The unemployed persons feel helpless in facing their challenges of life. As per Peterson and Seligman (1984), the helplessness makes a person vulnerable to depression which derives from a habitual style of explaining the causes of life events, known as attributional style. Depressed persons have a tendency to make internal, stable, and global causal attributions for negative events and attribute the positive outcomes to external, specific, and unstable causes. The unemployed persons also possess low self-esteem which is associated with depression (Pardoen et al., 1993).

The unemployed persons also face familial and marital conflicts. In a study of Crowther (1985), it was concluded that familial and marital conflicts contribute to a large extent in the genesis and development of depression. The familial and marital conflicts themselves are caused by faulty and dysfunctional patterns of communication (Kahn, Coyne & Margolin, 1985). As a consequence, marital therapy has been found to be effective in reducing the symptoms of depression. The study comprising relationships between marital disturbance and affective disorders have come to the conclusion that life events significantly a large contributory factor in depression (Jenaway & Paykel, 1997). The American Psychological Association (2009) has observed that there is a strong relationship between depression and unemployment. The unemployed persons are twice more likely to experience psychological problems such as depression, anxiety, psychosomatic symptoms, low subjective well-being and poor self-esteem as compared to their employed counterparts (Paul & Moser, 2009).
Key international organizations such as International Labour Office (2010) and The United Nations (2010) have also expressed concern to the problem of unemployment and its ill-effects on individual, family, society and over all well-being of human race and are anxious about declining social climate, increasing social unrest, growing rates of physical, emotional, social and political disorders as result of growing unemployment and income inequalities. The same has been also felt by academicians and researchers ((Belle & Bullock, 2011; Wilkinson & Pickett, 2010).

The present research also pointed out that along with unemployed, the employed participants also demonstrated moderate levels of depression indicating roles of another set of factors contributing in the acquisition of depression. The life of the employed person actually should not be understood to be free from challenges. They also face challenges but of somewhat different nature and dynamics. The causal factors associated with the depression of employed persons have also been studied and reported that work stress, organizational relationships, competition, job-dissatisfaction and financial aspects of the job create challenges before the employed and generate stress on the part of such persons. When accumulating such stresses cross threshold, employed also develop symptoms of various psychopathology. Long-term stress at work place or stressors from family leads an employed person also to mental health problems. Additionally, inequality and discrimination disturb working relationship of employee and employer. During this situation, generally employee suffers and show symptoms of depression.

From the above findings of the present research, it can easily be concluded that unemployment generally makes a person fail to congregate the demands of personal, familial and social expectations resulting into a negative cognition and dependence on
others. This state of affairs adversely affects their behavior, well-being and mental as well as physical health. In addition, it makes defenseless to maladaptive behavior patterns which, in turn, are also damaging to self, family and society.

To sum up the findings of the present research, it can be concluded that although the genesis, prevalence, development and etiology of the psychopathology of depression is a combination of dynamic and multiple factors interwoven in a very complex manner and any such conclusive remarks need sufficient precaution and versatility, the abiding role of employment status of an individual in the etiology of depression is reliably predicted here. The findings of the study also advocate the impeccable roles of the cognitive behaviour therapy in effectively extending remedial help in the alleviation of the havoc of depression.

The present study also suffered with some limitations. The first limitation of the study is that the findings were based only on the study of the persons suffering from the depression only. The second limitation relates itself with the limited sample size confined to the National Capital Territory of Delhi. The third is concerned with the lack of other psychotherapeutic intervention techniques which are also proven method to combat depression. The comprised sample did not include rural persons and included only few female participants with the addition of which the result could have been made more acceptable and generalizable constituting its fourth limitation. The present study also could not involve children, old aged and people with varied physical disabilities which resulted in its fifth shortcoming.

The present study has come up with some genuine suggestions for future researches interested to carry out scientific inquiries in the field of mental health and well-being. The future researches should include more representative sample
including rural persons with both the sexes including sufficiently large range of population. The second important suggestion is that the coming researches in future should focus to include other mental disorders which are prevalent along with depression playing mayhem in Indian society. The future efforts should focus to include other socio-cultural factors which also contribute in the psychopathology of depression. The studies with such important concerns lack in Indian setting so I heartily request government agencies to finance research projects entailing such a discernible issue consequent with retardation of the growth of the nation and causing irrecoverable damage to our society. Lastly, the cross-cultural study of depression in relation to employment status is needed as the Western and Indian socio-cultural settings significantly differ in their family bonding and other socio-cultural dynamics. Such efforts will help to uncover and evaluate the role of the socio-cultural factors in modulating the expression and intensity of depression.

World Health Organization (2011) has expressed serious concern recognizing the deadliest association of depression with unemployment and advised to and calls for the academicians, researchers, Nations of the world, and the public at large to chart out the measures to prevent and root out psychopathology during periods of economic crisis especially unemployment. As the association of unemployment with psychopathology, especially depression and suicide, has been established and well documented in many researches, it calls for immediate and concerted research efforts to chart out help programmes. The present researcher also advocates for such measures which may be helpful and effective in combating the menace of depression.