Chapter 6
DISCUSSION

The primary aim of the present investigation was to study the efficacy of Cognitive Behavior Group Therapy (CBGT) in modifying State Anxiety, Depression, Psychological Well-Being and Self-Esteem of the war-handicapped in Iran.

The following tests were used to measure State Anxiety, Depression, Psychological Well Being, and Self-Esteem:

1. State-Trait Anxiety Inventory (STAI) (Spielberger et al., 1970).
3. Ryff’s Psychological Well-Being Scale (Ryff, 1989).
4. Rosenberg’s Self-Esteem Scale (Rosenberg, 1965).

The total sample comprised of 116 war-handicapped males in the age range from 40-60 years old. Purposive sampling technique was used.

Subjects, then, were randomly divided into two groups of Intervention1 and Intervention 2, each including 96 participants in 8 groups of 12 people, and 48 participants in 4 groups of 12 people, respectively. The treatment included Cognitive Behavior Group Therapy (CBGT) and Jacobson’s Progressive Muscle Relaxation technique (JPMR). The treatments’ durations were respectively 12 sessions of therapy, each taking two hours twice per week, which were conducted in the Mental Health Center for the War-handicapped, Tehran, Iran. After 12 sessions of therapy, twice per week, 76 participants from the Intervention 1 group and 40 from the Intervention 2 group (76+40=116) successfully completed the therapy. The rest dropped out. The Intervention 1 group underwent Cognitive Behavior Group Therapy (CBGT), whereas the Intervention 2 group received Jacobson’s Progressive Muscle Relaxation technique (JPMR).

A. Hypothesis 1: It was expected that Cognitive Behavior Group Therapy would be more effective in reducing state anxiety among the war-handicapped than the Jacobson’s Progressive Muscle Relaxation technique.
The t-ratio on State Anxiety comparing Pre-test and Post-test of Intervention 1 group revealed significant differences \( t=11.30, p<0.01 \) and Post-test of Intervention 1 group and Intervention 2 group revealed significant differences \( t=8.28, p<0.01 \). Analysis of Covariance (ANCOVA) for Post-test revealed significant differences between the Pre-treatment and Post-treatment \( F(1,113) = 70.43, p<0.001 \). Results indicate that Cognitive Behavior Group Therapy (CBGT) was effective in reducing anxiety. These findings are similar to the ones reported by the following.

Guarino et al., (2001) designed 2X2 factorial trial to evaluate the hypothesis that both cognitive behavioral therapy (CBT) and aerobic exercise would significantly improve physical function in participants with Gulf War Veterans’ Illnesses (GWVI), and that adding CBT to aerobic exercise would provide further incremental benefit. One thousand three hundred fifty-six veterans were randomized to one of four treatment arms: CBT plus aerobic exercise plus usual and customary care, aerobic exercise plus usual and customary care, CBT plus usual and customary care, or usual and customary care alone. The study duration was 2.5 years with 1.5 years of intake and 1 year of follow-up. The primary outcome measure was the proportion of veterans’ improved more than seven units on the physical component summary (PCS) scale of the Short Form Health Survey for Veterans (SF-36V) measured 12 months after randomization. This generic quality of life measure was chosen because there is no disease-specific measure for GWVI and the symptoms of GWVI span a wide range of physical manifestations that were related to the domains covered by the PCS scale. Sample size was determined to detect all six pairwise comparisons between the four treatment arms with 90% power and a Bonferroni adjustment for an overall type I error of 0.05 or 0.05/6 5 0.0083. CSP #470 was initiated in May 1999 in 18 VA and two Department of Defense medical centers. To date this represents the largest randomized trial designed to evaluate treatments for individuals with unexplained physical symptoms. Aerobic exercise and CBT had shown continued growth in benefits for many months after the completion of treatment.

Schnurr et al., (2001) studied the design of Department of Veterans Affairs Cooperative Study No. 420: group treatment of posttraumatic stress disorder. VA Cooperative Study 420 was a randomized clinical trial of group psychotherapy for treating PTSD among veterans who received VA care. Participants (n 5 360) at ten sites
were randomly assigned to receive one of the two treatments: active treatment that embedded exposure therapy in a group context or comparison treatment that avoided trauma focus and instead addressed current interpersonal problems. Treatment was delivered weekly to groups of six participants for 30 weeks, followed by five monthly booster sessions. Follow-up assessments were conducted at the end of treatment (7 months) and the end of boosters (12 months) for all participants. Long-term follow-up data were collected for a subset of participants at 18 and 24 months. The primary outcome is PTSD severity; other symptoms, functional status, quality of life, physical health, and service utilization also were assessed. Trauma focus group therapy (TFGT) was shown to be effective, it may be useful for treating PTSD in other chronic populations.

Gillespie et al., (2002) studied Community based cognitive therapy in the treatment of posttraumatic stress disorder following the Omagh bomb. A consecutive series of 91 patients with PTSD resulting from a car bomb which exploded in the centre of Omagh, Northern Ireland in August 1998 were treated with cognitive therapy, along lines advocated by Ehlers and Clark (2000). There were no major exclusion criteria and 53% of patients had an additional axis I disorder (comorbidity). A brief training in specialist procedures for PTSD was provided. Patients received an average of eight treatment sessions. Significant and substantial improvements in PTSD were observed. Degree of improvement was comparable to that in previously reported research trials. Comorbidity was not associated with poorer outcome, perhaps because comorbid patients were given more sessions of treatment (average 10 vs 5 sessions). Patients who were physically injured improved less than those who were not physically injured. Overall, the results indicate that the positive findings obtained in research settings generalize well to a frontline, non-selective service.

Eid (2003) examined individual and contextual factors associated with posttraumatic stress symptoms in military personnel (N=122) at 2–3 weeks, 4 and 12 months following two fatal training accidents. PTSD symptoms were reduced after both units had received early psychosocial intervention and continued to perform their operational duties. Examination of individual cases showed a stable low or declining trend in 77% participants, while 23% revealed a stable high or increasing trend in PTSD.
symptoms over time. PTSD symptoms at 2–3 weeks were associated with trauma exposure, social role in the organization, and avoidance focused coping. Trauma exposure, social role in the organization, and intrusion symptoms at 2–3 weeks, explained 36% of the variance in PTSD-symptoms at 4 months. Previous accidents, emotion focused coping, and avoidance symptoms at 2–3 weeks and 4 months explained 40% of the variance in PTSD-symptoms at 12 months. The results pointed out the importance of early assessment of posttraumatic stress symptoms, appraisal and coping responses in professional units exposed to fatal accidents in their line of duty.

Eng et al., (2005) identified domains of life satisfaction in social anxiety disorder and differential changes in these domains following cognitive-behavioral group therapy (CBGT). An exploratory principal axis factor analysis of the items of the Quality of Life Inventory in clients with a principal diagnosis of social anxiety disorder (N = 138) yielded four domains of life satisfaction: (1) Achievement, (2) Social Functioning, (3) Personal Growth, and (4) Surroundings. Prior to treatment, clients reported dissatisfaction in the Achievement and Social Functioning domains. Further, levels of satisfaction in these domains were significantly related to severity of social anxiety and depressive symptoms. Finally, analyses of a subsample of clients completing 12-weeks of cognitive-behavioral group therapy revealed significant improvements in the Achievement and Social Functioning factors.

Schnurr et al., (2005) described issues in the design of an ongoing multisite randomized clinical trial of psychotherapy for treating posttraumatic stress disorder (PTSD) in female veterans and active duty personnel. Research aimed at testing treatments for PTSD in women who have served in the military is especially important due to the high prevalence of PTSD in this population. Veteran Affairs Cooperative Study 494 was designed to enroll 384 participants across 12 sites. Participants are randomly assigned to receive 10 weekly sessions of individual psychotherapy: Prolonged Exposure, a specific cognitive–behavioral therapy protocol for PTSD, or present-centered therapy, a comparison treatment that addressed current interpersonal problems but avoided a trauma focus. PTSD was the primary outcome. Additional outcomes were comorbid problems such as depression and anxiety; psychosocial function and quality of life; physical health status; satisfaction with treatment; and service utilization. Follow-up
assessments were conducted at the end of treatment and then 3 and 6 months after treatment. Results showed significant effect of cognitive behavior therapy on anxiety and related problems.

Hinton et al., (2006) examined Cognitive-Behavior Therapy for Vietnamese Refugees with PTSD and comorbid panic attacks. In a multiple-baseline, across-subjects design (N=3), all patients demonstrated treatment-related improvement of headache- and orthostasis associated panic attacks; and in the repeated-measures, within-subjects design, all patients greatly improved across treatment on measures of psychopathology.

Koszycki et al., (2007) analyzed randomized trial of a meditation-based stress reduction program (MBSR) and cognitive behavior therapy (CBT) in generalized social anxiety disorder. They conducted a randomized trial to evaluate how well MBSR compared to a first-line psychological intervention for social anxiety disorder (SAD). Fifty-three patients with DSM-IV generalized SAD were randomized to an 8-week course of MBSR or 12 weekly sessions of cognitive–behavioral group therapy (CBGT). Although patients in both treatment groups improved, patients receiving CBGT had significantly lower scores on clinician- and patient-rated measures of social anxiety. Response and remission rates were also significantly greater with CBGT. Both interventions were comparable in improving mood, functionality and quality of life. The results confirm that CBGT is the treatment of choice of generalized SAD and suggest that MBSR may have some benefit in the treatment of generalized SAD.

Norton (2008) examined the efficacy of a 12-week transdiagnostic group cognitive-behavioral therapy for anxiety disorders and compare outcome across diagnoses. Participants were 52 individuals presenting for services at the University of Houston Anxiety Disorder Clinic. Mixed effect regression modeling of data from participants with anxiety disorders (predominantly panic disorder and social phobia) participating in an open outcome trial indicated that participants tended to improve over treatment, with no differential outcome for any primary or comorbid disorders. The results of this study add to the growing evidence base for transdiagnostic anxiety treatment models and provide preliminary support for the assumption that individuals with different anxiety diagnoses can be treated equally within the same treatment protocol.
Rezvan et al., (2008) examined the effectiveness of cognitive behavior therapy with the combination of cognitive behavior therapy and interpersonal therapy on decreasing the excessiveness of pathological worry and increasing happiness of the individuals with generalized anxiety disorder. The sample consisted of 36 female undergraduate students who referred themselves to the Isfahan University Counseling Center and met the criteria for GAD. They were randomly assigned into three groups; namely, two experimental groups and one control group. One of the experimental groups underwent cognitive behavior therapy and the other one received the integration of cognitive behavior therapy and interpersonal therapy. The control group received no intervention. Results showed that the integration of cognitive behavior therapy and interpersonal therapy can be applied as an effective intervention for decreasing generalized anxiety disorder.

Salo et al., (2008) examined the role of individual and group treatment and self and other representations in predicting posttraumatic symptoms and growth among 115 Palestinian former political prisoners. Twenty participated in individual therapy and 19 in group therapy; 76 belonged to the control group. The results showed that posttraumatic symptoms decreased only in the individual therapy, whereas no decrease was found in group therapy or control groups across 1 year. Somatic symptoms decreased generally, whereas no general or treatment-related change was found in posttraumatic growth.

Beck et al., (2009) examined group cognitive behavior therapy for chronic posttraumatic stress disorder. Individuals with posttraumatic stress disorder (PTSD) related to a serious motor vehicle accident were randomly assigned to either group cognitive behavioral treatment (GCBT) or a minimum contact comparison group (MCC). Compared to the MCC participants (n=16), individuals who completed GCBT (n=17) showed significant reductions in PTSD symptoms, whether assessed using clinical interview or a self-report measure. Among treatment completers, 88.3% of GCBT participants did not satisfy criteria for PTSD at posttreatment assessment, relative to 31.3% of the MCC participants. Examination of anxiety, depression, and pain measures did not show a unique advantage of GCBT. Treatment-related gains were maintained over a 3-month follow-up interval. Patients reported satisfaction with GCBT, and attrition from this treatment was comparable with individually administered CBTs.
Cully et al., (2009) described the development of an innovative, modular-based cognitive behavioral intervention (Adjusting to Chronic Conditions Using Education Support and Skills [ACCESS]) that integrates treatment for symptoms of anxiety and depression with medical disease self-management in patients with heart failure and chronic obstructive pulmonary disease. Participants were male veterans recruited for an ongoing open clinical trial of the ACCESS intervention. Data from 3 patients who participated in open clinical trial reported improvement in both anxiety and depression and maintained gains at 3-month follow-up.

Marchand et al., (2009) examined the effectiveness of three modalities (brief, group, and standard) of cognitive-behavioral therapy (CBT) for panic disorder with agoraphobia. A total of 100 participants meeting DSM-IV criteria were randomly assigned to each treatment condition: a 14-session standard CBT (n = 33), a 14-session group CBT (n = 35) and a 7-session brief CBT (n = 32). Participants received a self-study manual and were assigned weekly readings and exercises. The results indicate that regardless of the treatment condition, CBT for moderate to severe PDA was beneficial in medium and long term. To this effect, all three-treatment conditions significantly reduced the intensity of symptoms, increased participants’ quality of life, offered high effect sizes, superior maintenance of gains over time, and lower rates of relapse, compared to the wait-list control.

McEvoy and Perini (2009) studied cognitive behavioral group therapy for social phobia with or without attention training. The main aim of the study was to determine whether or not supplementing cognitive behavioral group therapy (CBGT) with attention training (ATT) could potentiate greater changes in social anxiety, depression, attentional control, metacognitive beliefs, and anticipatory and post-event processing in a clinical sample with social phobia. A total of 81 individuals with social phobia as their primary diagnosis (37% women) and with a mean age of 30.68 years (S.D. = 9.37, range: 18–59) participated in the study. Patients (N = 81) were allocated to CBGT with ATT or relaxation training (RT). ATT did not potentiate greater change on any outcome variable, with both groups achieving significant improvements on all measures. Exploratory correlational analyses (pre-treatment and changes scores) showed that some metacognitive beliefs were associated with attentional control, anticipatory processing,
and symptoms of social anxiety and depression. However, attentional control was more consistently associated with anticipatory processing, post-event processing, and symptoms of social anxiety and depression, than with metacognitive beliefs.

Oei and Boschen (2009) studied the clinical effectiveness of a cognitive behavioral group treatment program for anxiety disorders. The study described the treatment of a sample of hospital outpatients treated using group CBT for anxiety disorders between 1995 and 2002. Patients completed a group CBT program between 1995 and 2002 in the CBT Unit at a private hospital in Brisbane, Australia. The sample was a total of 396 patients were referred to the program by their treating psychiatrists for treatment of an anxiety disorder. Ages ranged from 15 to 72 with a mean age of 42.60 years (SD = 12.32). Results revealed that cognitive and behavioral treatments for anxiety disorders were effective when administered in a group therapy format, with groups containing a diverse range of anxiety problems. In addition to reducing anxiety symptoms, treatment also led to an improvement in other related variables such as anxiety-related cognition, satisfaction with life, and quality of life.

Raffin et al., (2009) identified the presence of factors associated with treatment outcome in patients under group cognitive-behavioral therapy (GCBT) for obsessive-compulsive disorder (OCD). Participants were 181 patients with OCD that attended a 12-session weekly GCBT program. In the bivariate analysis, the following variables showed statistical significance (p < 0.20) to enter the regression model: being woman (p = 0.074), greater insight (p = 0.017) and better quality of life (QOL) in all domains before treatment (p = 0.053), overall severity of disease according to the CGI (p = 0.007), number of associated comorbidities (p = 0.063), social phobia (p = 0.044), and dysthymia (p = 0.072). In the final regression model, these variables were associated with response to GCBT: female gender (p = 0.021); World Health Organization Quality of Life Assessment-Abbreviated Version (WHOQOL-BREF) psychological domain (p = 0.011); insight (p = 0.042); and global improvement score of the Clinical global impressions (CGI) severity-scale before therapy (p = 0.045).

Håland et al., (2010) tested the effectiveness of exposure and response prevention (ERP) based 12 weeks group therapy for OCD patients in a community-based, general Norwegian outpatient clinic. The sample consisted of 54 patients diagnosed with...
OCD. The Yale-Brown Obsessive-Compulsive Scale (Y-BOCS), the Beck Depression Inventory (BDI) and the Spielberger State Anxiety Inventory (STAI-S) were administered before treatment, after treatment and at 3- and 12-month follow-ups. Analyses with mixed models for repeated measurements showed that group behavioral therapy offered to OCD patients significantly improved ratings of obsessive-compulsive symptoms, depression and anxiety. These improvements were maintained at 3- and 12-month follow-ups and an additional reduction in obsessive-compulsive symptoms was observed from post-treatment to 3-month follow-up. The results also revealed that the patients had a lower chance for an increased outcome category (e.g. from unchanged to improved or recovered) with high scores on STAI-S at the given observation times (post-treatment, 3- and 12-months follow-ups). Depressive symptoms (BDI) at post-treatment and follow-ups had no significant influences on the three categories of outcome for OCD.

Hope et al., (2010) studied automatic thoughts and cognitive restructuring in Cognitive Behavioral Group Therapy for social anxiety disorder. 55 participants (male and female, Mean age= 39.37 (8.90) and 40.40 (11.13) respectively) in two larger psychopathology studies in which they received free treatment in exchange for research participation. Participants received Heimberg, 1991 (unpublished manuscript) CBGT which consists of twelve weekly 2 to 2½ h sessions with five to seven clients and two therapists, and found that the most common thoughts related to poor social performance, negative labels by others, and the anticipation of negative outcomes in feared situations. Principle components analyses indicated the automatic thoughts reflected three underlying themes: Experiencing Anxiety, Negative Self-Evaluation, and Fear of Negative Evaluation.

Liliacreutz et al., (2010) investigated the effectiveness of cognitive behavior group therapy (CBT) in treating pregnant women’s blood- and injection phobia. Thirty pregnant women with blood- and injection phobia according to DSM-IV took part in an open treatment intervention. A two-session cognitive behavior group therapy was conducted. As controls, 46 pregnant women with untreated blood- and injection phobia and 70 healthy pregnant women were used. Repeated measures ANOVA were performed. The scores for the CBT treatment group on the “Injection Phobia Scale-Anxiety” were reduced both after each treatment session and postpartum (p<0.001).
Anxiety and depressive symptoms were also reduced (p<0.001). Results showed that Cognitive-behavior group therapy for pregnant women with blood- and injection phobia is effective and stable up to at least 3 months postpartum. Results seemed also to reduce anxiety and depressive symptoms during pregnancy.  

**Rufer et al., (2010)** studied the changes in quality of life following cognitive-behavioral group therapy for panic disorder. The sample consisted of 55 consecutively recruited outpatients suffering from PD who underwent CBGT. QoL was assessed by the Medical Outcomes Study 36-item Short-Form Health Survey (SF-36) at baseline, post-treatment and six months follow-up. SF-36 baseline scores were compared with normative data obtained from a large German population sample. The fully manualized CBGT protocol consisted of five weekly sessions of 150 minutes each (including a 15 minutes break), which, in terms of total treatment time, corresponds to fifteen 50 minutes sessions over a period of five weeks was used. Results showed that Agoraphobia, disability, and worries about health were significantly associated with decreased QoL, whereas frequency, severity and duration of panic attacks were not. Treatment responders showed significantly better QoL than non-responders. PD symptom reduction following CBGT was associated with considerable improvement in emotional and physical aspects of QoL. 

**Belloch et al., (2011)** examined group versus individual cognitive treatment for Obsessive-Compulsive Disorder. In this study, 44 OCD patients were assigned to individual (n=18) or group (n=24) CT. Sixteen completed the individual CT, and 22 completed the group CT. The effects of the two CT conditions on depression and worry tendencies were comparable. Individual treatment was more effective than group treatment in decreasing scores on dysfunctional beliefs (responsibility, overestimation of threat, and intolerance to uncertainty) and the use of suppression as a thought control strategy. The post-treatment changes were maintained one year later. The correlations between symptom improvement (OCD severity change) and belief changes were moderate: in the individual treatment the greatest associations were with beliefs about thoughts (importance and control), whereas in the group treatment the greatest associations were with beliefs related to anxiety in general (threat overestimation and intolerance to uncertainty).
Jonsson et al., (2011) investigated dysfunctional beliefs in the form of inflated responsibility (IR) and thought action fusion (TAF) as predictive and mediating variables in individual (n = 33) and group (n = 37) cognitive behavioral therapy (CBT) for obsessive compulsive disorder (OCD). IR and TAF declined significantly during CBT, and the decline was positively associated with change in OCD symptoms. However, when controlling for change in depressive symptoms, only change in IR remained significantly associated with OCD symptom change. The moral subtype of TAF predicted poorer treatment outcome, but only in group CBT. Both treatments produced a similar amount of change in the dysfunctional beliefs. The results provide some, preliminary evidence that IR, but not TAF, may be specifically involved in the change mechanisms of both individual and group CBT for OCD.

Price and Anderson (2011) examined the impact of cognitive behavioral therapy on post event processing among those with social anxiety disorder. They used multilevel modeling to determine if PEP decreased as a result of treatment and if PEP limits treatment response for two types of cognitive behavioral treatments, a group-based cognitive behavioral intervention and individually based virtual reality exposure. These hypotheses were evaluated using 91 participants diagnosed with social anxiety disorder. The sample was predominately female (61%, n = 55) with an average age of M= 39.08, SD = 11.24. The findings suggested that PEP decreased as a result of treatment, and that social anxiety symptoms for individuals reporting greater levels of PEP improved at a slower rate than those with lower levels of PEP. Further research is needed to understand why PEP attenuates response to treatment.

B. Hypothesis 2. It was expected that Cognitive Behavior Group Therapy would be more effective in reducing depression among the war-handicapped than the Jacobson’s Progressive Muscle Relaxation technique.

The t-ratio on Depression comparing Pre-test and Post-test of Intervention 1 group revealed significant differences (t=18.92, p<0.01) and Post-test of Intervention 1 group and Intervention 2 group revealed significant differences (t=6.80, p<0.01). Analysis of covariance (ANCOVA) for Post-test revealed significant differences between the Pre-treatment and Post-treatment {F (1,113) = 180.28, p<0.001}. Results indicate that
Cognitive Behavior Group Therapy (CBGT) was effective in reducing depression. These findings are similar to ones reported by the following.

**Kwon and Oei (2003)** examined the causal relationships among changes in automatic thoughts, dysfunctional attitudes, and depressive symptoms in a 12-week group cognitive behavior therapy (GCBT) program for depression. In all, 35 depressed patients attending the GCBT program were monitored with the Automatic Thoughts Questionnaire, Dysfunctional Attitudes Scale, and Beck Depression Inventory at the pre-treatment, 4th and 8th sessions, and post-treatment. The results were as follows: (1) GCBT reduces negative cognitions; (2) changes in automatic thoughts and dysfunctional attitudes lead to change in depressive symptoms; and (3) automatic thoughts play a mediating role between dysfunctional attitudes and depression.

**Hyun et al., (2005)** examined the effects of cognitive-behavioral group therapy (CBT) on the self-esteem, depression, and self-efficacy of runaway adolescents residing in a shelter in Seoul, South Korea. The study used a control group pretest–posttest design. The experimental group and the control group consisted of 14 and 13 male subjects, respectively, with subjects having been randomly assigned to these groups. The experimental group participated in a CBT that consisted of eight sessions over an 8-week period; the control group did not participate in the program. To examine the effects of the CBT on dependent variables, the Wilcoxon signed rank test was used. The scores on depression decreased significantly and those on self-efficacy increased significantly after the intervention in the experimental group. There was no significant change on self-esteem. In the control group, the scores on depression, self-esteem, and self-efficacy did not change significantly after the intervention period. The CBT developed in this study consisted of structured and specific content that could be usefully applied to runaway adolescents residing in a shelter.

**Laperriere et al., (2005)** investigated the long-term (one year) effects of a 10-week group cognitive behavioral stress management/expressive supportive therapy (CBSM+) intervention on disadvantaged minority women living with AIDS. The CBSM+ intervention consisted of 10-weekly group session of stress management, cognitive behavioral skill training, relaxation techniques and expressive-supportive therapeutic strategies. The primary study outcome was self-reported depression scores as
measured by the BDI. Results showed that the CBSM+ Group intervention significantly decreased depression scores on the BDI for women following the intervention and maintained the decreased level at one-year follow-up.

**Peden et al., (2005)** examined the effects of a cognitive-behavioral group intervention in reducing depressive symptoms, negative thinking, and chronic stressors in low-income single mothers at risk for clinical depression. One hundred thirty-six women were randomly assigned to either an experimental or no-treatment control group. The experimental group participated in a 6-hour cognitive-behavioral group intervention targeting identification and reduction of negative thinking. Data were collected on depressive symptoms, negative thinking, and chronic stressors at 1, 6, and 12 months post-intervention. The women in the intervention group experienced a greater reduction in depressive symptoms, negative thinking, and the perception of chronic stressors. These positive effects continued over a 12-month period.

**Chen et al., (2006)** evaluated the impact of cognitive–behavioral group therapy on the depression and self-esteem of clinically depressed patients. The study involved 26 experimental group patients who received 12 weeks of cognitive–behavioral group therapy and 25 comparison subjects. Two weeks before the study, immediately upon therapy completion, and 1 month later, all the participants underwent pretest, posttest, and follow-up, respectively. The experimental group patients experienced greater cognitive improvements (i.e., depression relief, self-esteem increase) as compared with the comparison group subjects. One month after therapy completion, the depressive symptoms and self-esteem of the experimental group patients remained slightly but significantly better than those of the comparison group subjects.

**Stice et al., (2006)** compared a brief group cognitive–behavioral (CBT) depression prevention program to a waitlist control condition and four placebo or alternative interventions. High-risk adolescents with elevated depressive symptoms (N = 225, M age = 18, 70% female) were randomized to CBT, supportive–expressive group intervention, bibliotherapy, expressive writing, journaling, or waitlist conditions and completed assessments at baseline, termination, and 1- and 6-month follow-up. All five active interventions showed significantly greater reductions in depressive symptoms at termination than waitlist controls; effects for CBT and bibliotherapy persisted into
follow-up. CBT, supportive-expressive, and bibliotherapy participants also showed significantly greater decreases in depressive symptoms than expressive writing and journaling participants at certain follow-up points. Findings suggest there may be multiple ways to reduce depressive symptoms in high-risk adolescents, although expectancies, demand characteristics, and attention may have contributed to the observed effects.

Taube-Schiff et al., (2007) examined group cohesion ratings made by individuals at the midpoint and endpoint of CBT groups for social phobia. There were a total of 34 outpatient individuals in this study. The average age of participants was 36 years (range 19–64 years; 19 female, 15 male). Symptom measures were also completed at the beginning and end of treatment. Results found that cohesion ratings significantly increased over the course of the group and were associated with improvement over time in social anxiety symptoms, as well as improvement on measures of general anxiety, depression, and functional impairment.

Faramarzi et al., (2008) compared the effectiveness of cognitive behavioral therapy with fluoxetine in the resolution or decreasing of depression and anxiety in infertile women. A randomized controlled clinical trial, 89 mild to moderate depressed infertile women (Beck scores 10–47) were recruited into three groups; cognitive behavior therapy (CBT), antidepressant therapy, and a control group. Twenty-nine participants in the CBT method received relaxation training, restructuring, and eliminating of negative automatic thoughts and dysfunctional attitudes to depression for 10 sessions. Thirty participants in the pharmacotherapy group took 20 mg fluoxetine daily for 90 days. Thirty control subjects did not receive any intervention. All participants completed the Beck Depression Inventory and Cattell Anxiety Inventory at the beginning and end of the study. Results showed that the resolution of depression in the three groups was: fluoxetine group 50%, CBT 79.3%, and control 10%. The mean of the Beck scores at the beginning and end of the study was respectively: fluoxetine 23.2±8.6 versus 14.3±8.5 (p<0.001), CBT 20.1±7.9 versus 7.7±4.8 (p<0.001), and control 19.8±8.5 versus 19.7±8.4 (p=0.9). Although both fluoxetine and CBT decreased significantly the mean of BDI scores more than that of the control group, the decrease in the CBT group was significantly more than fluoxetine group. The CBT method decreased significantly the
mean of the Cattell scores more than the fluoxetine and control groups, but the decrease in the anxiety mean scores of that fluoxetine group was no more than that of control group.

Oei and Dingle (2008) evaluated the effectiveness of group cognitive behavior therapy (GCBT) as an intervention for unipolar depressive disorders. PsychINFO and PubMed databases were selected to generate the 34 papers used for this review. Results showed that effect sizes for GCBT over the control conditions range from small (0.1) to large (2.87) with the mean effect size of 1.10. The preposttreatment effect sizes for GCBT range from 0.30 to 3.72 with a mean of 1.30. Convergent evidence was demonstrated across different outcome measures of GCBT. Findings indicated that GCBT yielded outcomes better than no-treatment controls and was comparable with other treatments (including both bona fide and non-bona fide comparison treatments). It was concluded that GCBT was effective for the treatment of Unipolar depression and thus can be used with confidence. There is now an urgent need to develop and evaluate a coherent GCBT theory, in particular the roles of group processes in GCBT, before further major advancement in this area can be made.

Cully et al., (2009) described the development of an innovative, modular-based cognitive behavioral intervention (Adjusting to Chronic Conditions Using Education Support and Skills [ACCESS]) that integrates treatment for symptoms of anxiety and depression with medical disease self-management in patients with heart failure and chronic obstructive pulmonary disease. Participants were male veterans recruited for an ongoing open clinical trial of the ACCESS intervention. Data from 3 patients who participated in open clinical trial reported improvement in both anxiety and depression and maintained gains at 3-month follow-up.

McEvoy et al., (2009) examined changes in post-event processing (PEP), metacognitions, and symptoms of social anxiety and depression following cognitive behavioral group therapy for social phobia. Participants (N = 61) were individuals with social phobia (34.4% women) who completed a course of cognitive behavioral group therapy (CBGT) at a community-based anxiety disorders clinic. Mean age was 30.92 years (SD = 9.50). Results showed that Social anxiety, depression symptoms and PEP all
significantly reduced following treatment. Reductions in PEP were associated with reductions in symptoms of social anxiety, but not depression.

Dingle et al., (2010) investigated the mechanisms of change in negative thinking and urinary monoamines in depressed patients during acute treatment with group cognitive behavior therapy and antidepressant medication. Sample comprised of 43 depressed hospital patients attending an eight-session group cognitive behavior therapy program. Most participants (91%) were taking antidepressant medication throughout the therapy period according to their treating Psychiatrists' prescriptions. The sample was divided into outcome categories (19 Responders and 24 Non-responders) on the basis of a clinically reliable change index applied to the Beck Depression Inventory scores at the end of the therapy. Results of repeated measures analysis of variance [ANOVA] analyses of variance indicated that all measures of negative thinking improved significantly during therapy, and significantly more so in the Responders as expected. The treatment had a significant impact on urinary adrenaline and metadrenaline excretion however, these changes occurred in both Responders and Non-responders. Acute treatment did not significantly influence the six other monoamine metabolites.

Godfrin and van Heeringen (2010) investigated the effects of mindfulness-based cognitive therapy (MBCT) on the relapse in depression and the time to first relapse since study participation, as well as on several mood states and the quality of life of the patients. 106 recovered depressed patients with a history of at least 3 depressive episodes continued either with their treatment as usual (TAU) or received MBCT in addition to TAU. The efficacy of MBCT was assessed over a study period of 56 weeks. At the end of the study period relapse/recurrence was significantly reduced and the time until first relapse increased in the MBCT plus TAU condition in comparison with TAU alone. The MBCT plus TAU group also showed a significant reduction in both short and longer-term depressive mood and better mood states and quality of the life. For patients with a history of at least three depressive episodes who are not acutely depressed, MBCT, added to TAU, may play an important role in the domain of relapse prevention in depression.

Håland et al., (2010) tested the effectiveness of exposure and response prevention (ERP) based 12 weeks group therapy for OCD patients in a community-based, general Norwegian outpatient clinic. The sample consisted of 54 patients diagnosed with
OCD. The Yale-Brown Obsessive-Compulsive Scale (Y-BOCS), the Beck Depression Inventory (BDI) and the Spielberger State Anxiety Inventory (STAI-S) were administered before treatment, after treatment and at 3- and 12-month follow-ups. Analyses with mixed models for repeated measurements showed that group behavioral therapy offered to OCD patients significantly improved ratings of obsessive-compulsive symptoms, depression and anxiety. These improvements were maintained at 3- and 12-month follow-ups and an additional reduction in obsessive-compulsive symptoms was observed from post-treatment to 3-month follow-up. The results also revealed that the patients had a lower chance for an increased outcome category (e.g. from unchanged to improved or recovered) with high scores on STAI-S at the given observation times (post-treatment, 3- and 12-months follow-ups). Depressive symptoms (BDI) at post-treatment and follow-ups had no significant influences on the three categories of outcome for OCD.

Matsunaga et al., (2010) examined whether adding group cognitive behavioral therapy (group-CBT) to medication would improve both the depressive symptoms and the social functioning of patient with mild TRD, and whether any improvements would be maintained over one year. Forty-three patients with TRD were treated with 12 weekly sessions of group-CBT. Patients were assessed with the Global Assessment of Functioning scale (GAF), the 36-item Short-Form Health Survey (SF-36), the Hamilton Rating Scale for Depression (HRSD), the Dysfunctional Attitudes Scale (DAS), and the Automatic Thought Questionnaire-Revised (ATQ-R) at baseline, at the termination of treatment, and at the 12-month follow-up. Results: Thirty-eight patients completed treatment; five dropped out. For the patients who completed treatment, post-treatment scores on the GAF and SF-36 were significantly higher than baseline scores. Scores on the HRSD, DAS, and ATQ-R were significantly lower after the treatment. Thus patients improved on all measurements of psychosocial functioning and mood symptoms. Twenty patients participated in the 12-month follow-up. Their improvements for psychosocial functioning, depressive symptoms, and dysfunctional cognitions were sustained at 12 months following the completion of group-CBT. These findings suggested a positive effect that the addition of cognitive behavioral group therapy to medication on depressive symptoms and social functioning of mildly depressed patients, showing treatment resistance.
Salakari et al., (2010) studied effects of cognitive-behaviorally-oriented group rehabilitation during a 6-month follow-up. Participating in the rehabilitation were 29 adults, of whom 25 were reached 3 and 6 months later. Participants from the pretreatment period served as their own controls. Results showed that participants having improvement in ADHD symptoms during treatment (n = 11) maintained most of the benefit during follow-up. They also had a decrease in other psychiatric symptoms, but this did not fully persist through the follow-up. Of all participants, 72% found their overall situation improved as compared to the pretreatment situation.

Shattell et al., (2010) reported feasibility issues with the implementation of an intervention study for depression in Latina women from Mexico living in an emerging immigrant community in the United States. Based on the precede-proceed model, the study explores implementation issues such as the intervention and retention, logistical issues such as transportation and child-care and possible measurement issues such as reliability and validity of the Center for Epidemiologic Studies–Depression Scale, Spanish version. Sample included 6 participants between 26 and 38 years of age (M = 30). The length of their residence in the United States ranged between 3 and 10 years (M = 5.6 years). Results showed intervention helped participants understand factors that contribute to depression, general characteristics of depression, methods for decreasing the impact of depression, and coping strategies to minimize future occurrences of depression.

Belloch et al., (2011) examined group versus individual cognitive treatment for Obsessive-Compulsive Disorder. In this study, 44 OCD patients were assigned to individual (n=18) or group (n=24) CT. Sixteen completed the individual CT, and 22 completed the group CT. The effects of the two CT conditions on depression and worry tendencies were comparable. Individual treatment was more effective than group treatment in decreasing scores on dysfunctional beliefs (responsibility, overestimation of threat, and intolerance to uncertainty) and the use of suppression as a thought control strategy. The post-treatment changes were maintained one year later. The correlations between symptom improvement (OCD severity change) and belief changes were moderate: in the individual treatment the greatest associations were with beliefs about thoughts (importance and control), whereas in the group treatment the greatest
associations were with beliefs related to anxiety in general (threat overestimation and intolerance to uncertainty).

Britton et al., (2011) used Self-Determination Theory (SDT) to explain how Motivational Interviewing (MI) may complement CBT to reduce suicide-related behavior, provided a case example of using MI with a suicidal patient before CBT-based treatment, and explore future directions for research. MI showed increased treatment engagement and outcome when it is added to other treatments, and it can be used to address motivation to live and participate in treatment.

Da Costa et al., (2011) evaluated the effectiveness of 14 sessions of cognitive behavioral group therapy, combined with pharmacotherapy, on the treatment of patients with bipolar disorder. Forty-one patients with bipolar I and II disorder participated in the study and were randomly allocated to one of two treatment groups; thirty-seven patients remained in the study until its completion. Patients showed statistically similar population characteristics. The association of cognitive behavioral group therapy and pharmacological treatment proved to be effective. Patients who had undergone cognitive behavioral group therapy presented fewer symptoms of mania, depression and anxiety, as well as fewer and shorter mood change episodes.

Dwyer et al., (2011) investigated participant autonomy in cognitive behavioral group therapy. Two studies (N = 109 anxious and depressed patients; N = 94 depressed patients) investigated the role of autonomy as described in self-determination theory as a mechanism of therapeutic change in cognitive behavioral group therapy. The sample included 109 and 94 participants (65% female) collected across 24 therapy groups conducted over two years (there were 3-9 respondents within each group). The sample had a mean age of 41.67 years (SD = 12.45). Across both studies, results showed that higher need satisfaction for autonomy is related to improved outcomes, and that this relationship is mediated by improvement in cognitions. These findings support the tenets of self-determination theory in that patients who perceived their autonomy needs are satisfied while participating in cognitive behavioral group therapy experienced a greater reduction in negative thinking which was in turn related to more positive therapy outcomes.
Faulconbridge et al., (2011) tested the short-term efficacy of a treatment that combined behavioral weight management and cognitive behavioral therapy (CBT) for obese adults with depression. Sample was 12 obese females diagnosed with major depressive disorder received weekly group behavioral weight management, combined with CBT for depression, for 16 weeks. Weight, symptoms of depression, and cardiovascular disease (CVD) risk factors were measured at baseline and week 16. Results showed that participants lost 11.4% of initial weight and achieved significant improvements in symptoms of depression and CVD risk factors.

Kaviani et al., (2011) conducted a randomized, controlled study in a non-clinical population to investigate the impact of mindfulness-based cognitive therapy (MBCT) on depression, anxiety, automatic thoughts, and dysfunctional attitudes, normally induced by exam as a real stressful setting. The participants were randomly assigned either to receive 8 weekly 2.5-hour MBCT or remain in a waiting list control group. A series of two-way ANOVA with repeated measures were performed to detect if the application of MBCT would result in a systematic reduction in the dependent variables over five assessment points: pre-test, session 4, session 8, first follow-up (1 month) and second follow-up (6 months). The results indicated that MBCT was effective at helping participants to deal with their anxiety and depressive feelings before, during and after stressful circumstances. In addition, the reductions in negative automatic thoughts and dysfunctional attitudes in those who received MBCT were significant.

Macrodimitris et al., (2011) examined effectiveness of Cognitive behavior group therapy (CBGT) on patients with epilepsy. Eighteen patients with epilepsy, referred by neurologists to address depression and/or anxiety symptoms, completed the 10-week group, and found that the study’s results demonstrated improvements in depression, anxiety, negative automatic thoughts, and cognitive therapy knowledge and skills.

Manicavasgar et al., (2011) examined the comparative effectiveness of Mindfulness-Based Cognitive Therapy (MBCT) and Cognitive Behavior Therapy (CBT) as treatments for non-melancholic depression. Participants who met criteria for a current episode of major depressive disorder were randomly assigned to either an 8-week MBCT (n=19) or CBT (n=26) group therapy condition. They were assessed at pre-treatment, 8-week post-group and 6- and 12-month follow-ups. Results showed that there were
significant improvements in pre- to post-group depression and anxiety scores in both treatment conditions and no significant differences between the two treatment conditions. However, significant differences were found when participants in the two treatment conditions were dichotomized into those with a history of four or more episodes of depression vs. those with less than four. In the CBT condition, participants with four or more previous episodes of depression demonstrated greater improvements in depression than those with less than four previous episodes. No such differences were found in the MBCT treatment condition. No significant differences in depression or anxiety were found between the two treatment conditions at 6- and 12-month follow-ups.

Mukhtar et al., (2011) investigated the effectiveness of Group Cognitive Behavioral Therapy (GCBT) in reducing the negative cognitions that are related to depression in a group of Malay patients. One hundred and thirteen patients, diagnosed with depression, were randomly allocated to either a Treatment As Usual (TAU) group (n = 55), or a TAU plus GCBT group (n = 58). All participants completed two questionnaires that measured maladaptive cognitions at pre-treatment, midway through treatment, post-treatment (week 4), and at follow-ups after three (week 16) and six months (week 28). Results showed that the TAU + GCBT patients improved significantly more, and at a faster rate, than the TAU group; which showed minimal improvement. The effect size (Cohen’s d) of the treatment group was 0.93 and 96.55% of the treatment group achieved a clinically significant change. The findings suggested that GCBT, when used in addition to the TAU, is effective in reducing negative thoughts and maladaptive attitudes of Malaysian patients suffering from depression.

Smeets (2011) investigated the predictors of treatment outcome of cognitive behavior group therapy (STEPS) for adolescent girls after a single rape experience. Sixty-two girls between the age of 13 and 18 participated in the STEPS treatment. One girl dropped out. A significant reduction of trauma-related symptoms was found from pretreatment to post-treatment, with one exception (YSR Externalizing problems). A higher baseline score predicted a relatively higher post-treatment score for the depression, anxiety and posttraumatic stress symptoms, as well as the internalizing and externalizing problems and the total of emotional and behavioral problems. Having divorced parents predicted a less successful treatment outcome for depression, posttraumatic stress
symptoms according to the DSM-IV and arousal symptoms. A longer period between trauma and treatment entry predicted a relatively lower level of externalizing problems at post-treatment. A previous positive experience with sex was not related to treatment outcome.

C. Hypothesis 3. It was expected that Cognitive Behavior Group Therapy would prove more effective in enhancing Psychological Well-Being among the war-handicapped than the Jacobson’s Progressive Muscle Relaxation technique.

The t-ratio on Psychological Well-Being comparing Pre-test and Post-test of Intervention 1 group revealed significant differences ($t=16.50$, $p<0.01$) and Post-test of Intervention 1 group and Intervention 2 group revealed significant differences ($t=6.88$, $p<0.01$). Analysis of covariance (ANCOVA) for Post-test revealed significant differences between the Pre-treatment and Post-treatment ($F(1,113) = 50.81$, $p<0.001$). Results indicate that Cognitive Behavior Group Therapy (CBGT) was an effective technique in improving Well-Being. These findings are similar to ones reported by the following.

Hoyer et al., (2001) tested the effectiveness of Psychodynamic and Cognitive-Behavioral in Changes in cognitive conflicts, along with those of symptom severity and well-being. Four times during treatment, groups of patients receiving psychodynamic therapy ($n = 45$ patients) or CBT ($n = 49$ patients) were measured and compared. Results showed significant conflict decrease in both groups with a tendency towards faster reduction under CBT. There was also significant change in symptom severity and well-being in both groups with no difference regarding reduction gradient. Moreover, patients in the psychodynamic treatment group exhibited lower symptom scores at treatment begin which may be a consequence of clinical group assignment.

Fava and Ruini (2003) described the main characteristics and technical features of a novel psychotherapeutic strategy, well-being therapy. Wellbeing therapy is based on Ryff’s multidimensional model of psychological well-being, encompassing six dimensions: autonomy, personal growth, environmental mastery, purpose in life, positive relations and self-acceptance. The goal of this therapy is improving the patients’ levels of psychological well-being according to these dimensions, using cognitive-behavioral techniques. Ten patients with recurrent depression who relapsed while taking
antidepressant drugs were randomly assigned to dose increase or to a sequential combination of cognitive-behavior and well-being therapy (Fava, Ruini, Rafanelli, & Grandi, 2002). Four out of five patients responded to a larger dose, but all relapsed again on that dose by 1-year follow-up. Four out of the 4 patients responded to psychotherapy and only one relapsed. The data suggested that application of well-being therapy may counteract loss of clinical effect during long-term antidepressant treatment.

Noice et al., (2004) investigated the benefits of a short-term intervention for older adults that targeted cognitive functioning and quality of life issues important for independent living. One hundred twenty-four community dwelling participants (aged 60 to 86) took part in one of three study conditions: theater arts (primary intervention), visual arts (non-content-specific comparison group), and no-treatment controls. After 4 weeks of instruction, those given theater training made significantly greater gains than did no-treatment controls on both cognitive and psychological well-being measures. A comparison of theater and visual arts training showed fewer benefits in fewer areas for visual arts.

Osborn et al., (2006) investigated the effects of cognitive behavioral therapy (CBT) and patient education (PE) on commonly reported problems (depression, anxiety, pain, physical functioning, and quality of life (QOL)) in adult cancer survivors with the help of Meta Analysis. Meta analyses of randomized controlled trials of CBT and PE were conducted. MEDLINE, PSYCHINFO and the Cochrane Database were searched from 1993-2004. The effects of individual versus group interventions and short (<8 months) versus long (>8 months) term follow up are also reported. The sample size was 1,492 adult cancer survivors with an age range of 18-84. 790 were randomly assigned to intervention groups and 702 to control groups. CBT varied in duration from 4 weekly one-hour sessions to 55 weekly two-hour sessions. PE ranged from a single 20-minute session to 6 weekly one-hour sessions. Follow up ranged from 1 week to 14 months. Results revealed that CBT was effective for depression, anxiety and QOL. QOL was improved at both short and long term follow up. PE was not related to improved outcomes.

Schenström et al., (2006) explored feasibility and outcomes of a newly developed mindfulness-based cognitive attitude training program for health care
personnel. The program was designed as an intervention to reduce the negative effects of stress on health care personnel, on both a personal and professional level, as well as to encourage personal well-being and improved management of the caregiver-patient relationship. The study group (n = 52) consisted of individuals from various categories of caregivers within a primary care setting. The study included pre- and post-intervention assessments and a 3-month follow-up assessment of levels of mindfulness (Mindfulness Attention Awareness Scale), quality of life (the WHO-5 Well-Being Questionnaire), and perceived stress (two VAS scales). As a group, course participants demonstrated significant positive changes reflected in all assessment scales after completing the course. These positive changes persisted at a 3-month follow-up assessment. The study results indicate the feasibility of this program and a need for continued research with a more powerful study design, possibly supplemented with a qualitative survey.

Biswa (2007) synchronized and consolidated research efforts, discussing the role of cognitive behavioral stress management, exercise, spiritual practices, hypnosis, relaxation and guided imagery, social support for the psycho-immuno enhancement in lives of people living with HIV and AIDS. Publications on the psycho-social interventions, bio-behavioral interventions, and clinical interventions for HIV positive individuals were identified by systematic review of online databases of Science Direct, PubMed, Zetoc, Ebscot (Psychinfo, PsychArticles). In addition, major HIV journals like AIDS care, AIDS Patient Care & STDs, Acquired Immuno-deficiency Syndrome and related psychological periodicals were consulted. Results revealed that in the developed countries where living with HIV and AIDS seems like living with any other chronic illness in the era of Highly Active Anti-Retroviral Therapy (HAART), the mental health needs, the psycho-social well-being and health promotion can be effectively addressed with the help of bio-behavioral interventions; on the other hand, in resource-poor countries where not most of the people living with HIV/AIDS (PLWHA) can afford HAART, bio-behavioral interventions can be a boon to enhance and sustain the immuno-competence to give protection against opportunistic infections and higher life expectancy in people living with HIV and AIDS.

Seligman et al., (2007) studied Group prevention of depression and anxiety symptoms. Two hundred forty students were randomized into either an eight-week
workshop that met in groups of 10, once per week for 2 hours or into an assessment-only control group. They planned to track participants for 3 years after the workshop and here they report the 6 month preventive effects on depression and anxiety. The workshop group had significantly fewer depressive symptoms and anxiety symptoms than the control group, but there was no significant difference between the conditions on depression or anxiety episodes at 6 month follow up. The workshop group had significantly better well being than the control group, and the workshop group had significantly greater improvement in optimistic explanatory style than the control group. Improved explanatory style was a significant mediator of the prevention effects from pre-to post-workshop for depressive and anxiety symptoms, as well as for improved well being.

Wojtyna et al., (2007) indicated the influence of cognitive-behavior therapy (CBT) on self-esteem and quality of life (QoL) in women suffering from breast cancer. The study comprised 67 women after mastectomy and undergoing chemotherapy or chemo- and radiotherapy. CBT (Simonton’s Program) was adopted for the experimental group (n=35). The control group (n=32) consisted of women awaiting psychotherapy. The studies were of a linear character, including measurements before and after psychotherapy. Results showed an improvement in general QoL, general health status assessment and self-esteem were observed in the period following the therapy among CBT patients in comparison with the control group. Higher self-esteem in the CBT group was related to the fact that the subjects were able to maintain the ideal self at a fixed level while constantly increasing the real self during the therapy. The analysis of the results in relation to the functional dimensions indicated improvement in the field of cognitive and emotional features, which resulted from participation in the therapy. The CBT patients reported lower intensification of somatic symptoms, which, however, was not tantamount to changes in the self-esteem of physical features.

Bond et al., (2010) investigate the impact of a 6-month Web-based intervention on the psychosocial well-being of older adults with diabetes. This study was a randomized controlled trial (N = 62) comparing the effects of a 6-month Web-based intervention plus usual care with usual care alone among adults aged 60 years or older with diabetes. The outcomes included quality of life, depression, social support, and self-
efficacy. The intervention group showed significant improvement when compared with the control group on measures of depression, quality of life, social support, and self-efficacy when controlling for all baseline outcome variables (age, gender, and number of years with diabetes).

**Hodgekins and Fowler (2010)** investigated the impact of a recovery-focused intervention on Hope and positive self-concept, as well as their role as mediators of functional outcome. Seventy-seven participants in recovery from psychosis were recruited into a randomized controlled trial of social recovery-focused cognitive-behavioral therapy (SRCBT). The primary outcome was hours spent weekly in structured activity. Hopelessness and beliefs about self and others were also assessed. SRCBT had a significant effect on improving positive beliefs about self and others. A trend was noted suggesting a main effect of SRCBT on reducing hopelessness among individuals with non-affective psychosis. Increases in positive beliefs about self were found to mediate improvements in activity in the SRCBT group.

**Rufer et al., (2010)** studied the changes in quality of life following cognitive-behavioral group therapy for panic disorder. The sample consisted of 55 consecutively recruited outpatients suffering from panic disorder (PD) who underwent CBGT. Quality of life (QoL) was assessed by the Medical Outcomes Study 36-item Short-Form Health Survey (SF-36) at baseline, post-treatment and six months follow-up. SF-36 baseline scores were compared with normative data obtained from a large German population sample. The fully manualized CBGT protocol consisted of five weekly sessions of 150 minutes each (including a 15 minutes break), which, in terms of total treatment time, corresponds to fifteen 50 minutes sessions over a period of five weeks was used. Results showed that Agoraphobia, disability, and worries about health were significantly associated with decreased QoL, whereas frequency, severity and duration of panic attacks were not. Treatment responders showed significantly better QoL than non-responders. PD symptom reduction following CBGT was associated with considerable improvement in emotional and physical aspects of QoL.

**Tomba et al., (2010)** examined the differential effects of strategies for promotion of psychological well-being (Well-Being Therapy, WBT) and removal of distress (Anxiety Management, AM) in a non-clinical school setting. 162 students attending
middle schools in Northern Italy were randomly assigned to: (a) a protocol derived from WBT; (b) an anxiety-management protocol (AM). The students were assessed immediately before and after the interventions, and after 6 months using: Psychological Well-Being Scales (PWB), Symptom Questionnaire (SQ) and the Revised Children’s Manifest Anxiety Scale (RCMAS). In school children, well-being and symptom focused interventions produced slightly different effects on psychological dimensions. WBT, by facilitating progression toward positive and optimal functioning, may integrate symptom-centered strategies.

Ando et al., (2011) investigated the potential of Reminiscence Cognitive Behavior Therapy (RCBT) for improvement of spiritual well-being and self-esteem in patients. Five patients received the therapy over three sessions. The patients received RCBT consisting of reminiscence therapy and cognitive behavior therapy. They completed the FACIT-Sp, Rosenberg’s Self-Esteem scale, numeric rating scales for Suffering (from 0 to 6) and Depression (from 0 to 6). The FACIT-Sp scores increased from 19.2 ± 4.6 to 26 ± 1.6 (Z = -1.8, p = 0.078, n = 5), the Self-Esteem scores significantly increased from 40.0 ± 2.5 to 45.2 ± 2.4 (Z = -2.0, p = 0.042), the Suffering scores decreased from 3.6 ± 2.0 to 2.0 (Z = -1.5, p = 0.13), and the Depression scores decreased from 2.8 ± 2.2 to 1.8 ± 0.8 (Z = -0.9, p = 0.357). These results suggest that RCBT can improve the spiritual well-being and self-esteem of cancer patients.

Dwyer et al., (2011) investigated the role of autonomy as described in self-determination theory as a mechanism of therapeutic change in cognitive behavioral group therapy by studying two studies (N = 109 anxious and depressed patients; N = 94 depressed patients). Across both studies, results showed that higher need satisfaction for autonomy is related to improved outcomes, and that this relationship is mediated by improvement in cognitions. These findings support the tenets of self-determination theory in that patients who perceived their autonomy needs are satisfied while participating in cognitive behavioral group therapy experienced a greater reduction in negative thinking which was in turn related to more positive therapy outcomes.

Scholten et al., (2011) examined the effectiveness of a cognitive behavioral based group intervention (called ‘Op Koers’) for children with chronic illness (CI) and of a parallel intervention for their parents. Participants were children (8 to 18 years of age)
with a chronic illness, and their parents, recruited from seven participating hospitals in the Netherlands. Participants were randomly allocated to two intervention groups (the child intervention group and the child intervention combined with a parent program) and a wait-list control group. Primary outcomes were child psychosocial functioning, wellbeing and child disease related coping skills. Secondary outcomes were child quality of life, child general coping skills, child self-perception, parental stress, quality of parent-child interaction, and parental perceived vulnerability. Outcomes are evaluated at baseline, after 6 weeks of treatment, and at a 6 and 12-month follow-up period.

**Vella and Budd (2011)** evaluated the effectiveness of a week-long residential retreat intervention incorporating photographic art therapy in concert with psychoanalytically oriented group therapy and mind-body practices in reducing psychological distress and improving quality of life (QoL) and spiritual well-being for breast cancer patients. 28 female breast cancer patients completed self report assessments of psychological distress, QoL, and spiritual well-being on the first day of the retreat, the last day of the retreat, and a 6 week follow up assessment. Results revealed that the retreat experience to predict significant and sustained reductions in depression, anxiety, and somatic stress, coupled with sustained improvements in QoL and spiritual well-being.

**D. Hypothesis 4.** It was expected that Cognitive Behavior Group Therapy would enhance self-esteem among the war-handicapped much more than the Jacobson’s Progressive Muscle Relaxation technique.

The t-ratio on Self-esteem comparing Pre-test and Post-test of Intervention 1 group revealed significant differences (t=11.63, p<0.01) and Post-test of Intervention 1 group and Intervention 2 group revealed significant differences (t=9.24, p<0.01). Analysis of covariance (ANCOVA) for Post-test revealed significant differences between Pre-treatment and Post-treatment \( F (1,113) = 93.68, p<0.001 \). Results indicate that Cognitive Behavior Group Therapy (CBGT) was an effective technique in improving Self-Esteem. These findings are similar to ones reported by the following.

**Wachelka and Katz (1999)** examined the effectiveness of a cognitive-behavioral treatment for reducing test anxiety and improving academic self-esteem in a cohort
(N=27) of high school and college students with learning disabilities (LD). They were enrolled in classes for students with learning problems. Before the study began, they complained of test anxiety and showed an elevated score on the Test Anxiety Inventory (TAI). Eleven students (85%) completed the 8-week long treatment, which consisted of progressive muscle relaxation, guided imagery, self-instruction training, as well as training in study and test-taking skills. Results showed significant improvement in the treated group which was not evident in an untreated control group (N=16). Compared to the control group, the treated group showed significant reductions in test anxiety on the TAI, as well as improvement in study skills and academic self-esteem as measured by the Survey of Study Habits and Attitudes, and the school scale of the Cooper-smith Self-Esteem Inventory.

**Hooke and Page (2002)** predicted outcomes following group Cognitive Behavior Therapy (CBT) for patients with affective and neurotic disorders. A group of 348 patients at a private psychiatric clinic, treated in a group CBT program, completed the Depression, Anxiety, and Stress Scale (DASS) before and after treatment. Prior to treatment, data from the Locus of Control of Behavior (LCB), a Global Assessment of Function (GAF), the Health of the Nation Outcome Scales (HoNOS), and the Rosenberg Self Esteem Scale (RSE) were also collected. Results indicated that posttreatment stress scores of all patients were predicted by pretreatment stress and self-esteem. Among patients with neurotic disorders, posttreatment anxiety was predicted by initial anxiety and self-esteem whereas among patients with affective disorders, posttreatment anxiety scores were predicted by initial anxiety and GAF. For patients with neurotic disorders, self-esteem did not predict variance in posttreatment depression in addition to that explained by pretreatment depression. In contrast, for patients with affective disorders, pretreatment depression and Locus of Control predicted posttreatment depression.

**Hall and Tarrier (2003)** evaluated the efficacy of a simple cognitive behavioral intervention to improve self esteem in psychotic patients who scored poorly on a self-esteem measure. The study was a randomized control trial with a convenience sample of chronic psychotic inpatients. The cognitive behavioral self-esteem intervention, as an adjunct to treatment as usual (TAU), was compared to TAU alone in patients with psychosis. The results indicated that this cognitive behavioral treatment for self-esteem
used as an adjunct treatment in psychosis, resulted in clinical benefits in terms of increased self-esteem, decreased psychotic symptomatology and improved social functioning. These benefits were largely maintained at 3-month follow-up.

**Morrel et al., (2003)** examined the relative efficacy of cognitive-behavioral group therapy (CBT) and supportive group therapy (ST) for partner-violent men at a community agency. Eighty-six men were assigned and exposed to ST or CBT. Outcome analyses, based on participant reports at pre- and posttreatment, collateral partner reports at pre, post, and 6-month follow-up, and criminal justice data gathered 2 to 3 years after treatment, revealed no significant differences between ST and CBT on the primary outcomes of partner aggression and arrests. Across conditions, clients showed significant decreases in physical assault, psychological aggression, and injuries, significant increases in self-esteem and self-efficacy for abstaining from partner aggression, and significant movement on stage-of-change scales. ST clients had significantly greater increases than CBT clients on two secondary outcome variables: negotiation tactics and self-efficacy for abstaining from verbal aggression.

According to **Fennell (2004)** In CBT for low self-esteem, methods (e.g. the Daily Activity Schedule, diary keeping) can be used to bring aspects of the self that are normally ignored or discounted into awareness, and to help patients to notice on a moment-by-moment basis how they maintain outdated perspectives by shutting contrary information out.

**Noice et al., (2004)** investigated the benefits of a short-term intervention for older adults that targeted cognitive functioning and quality of life issues important for independent living. One hundred twenty-four community dwelling participants (aged 60 to 86) took part in one of three study conditions: theater arts (primary intervention), visual arts (non-content-specific comparison group), and no-treatment controls. After 4 weeks of instruction, those given theater training made significantly greater gains than did no-treatment controls on both cognitive and psychological well-being measures. A comparison of theater and visual arts training showed fewer benefits in fewer areas for visual arts.

**Hall and Tarrier (2005)** described a novel cognitive-behavioral intervention aimed to increase self-esteem, in a lady with a diagnosis of bipolar illness. The
intervention involved modification of the strength of positive beliefs about the self through the focus of attention on specific behavioral examples of the patient’s positive attributes. The intervention was described in detail and results over the longer term are reported. There were significant improvements on measures of self-esteem, which was in the normal range at posttreatment and follow-up. General psychotic psychopathology improved by 20% and there was an improvement in social functioning over one standard deviation. Results at 3- and 12-month follow-ups indicated that improvements were largely maintained although there was some reduction in the magnitude of improvement.

Hyun et al., (2005) examined the effects of cognitive–behavioral group therapy (CBT) on the self-esteem, depression, and self-efficacy of runaway adolescents residing in a shelter in Seoul, South Korea. The study used a control group pretest–posttest design. The experimental group and the control group consisted of 14 and 13 male subjects, respectively, with subjects having been randomly assigned to these groups. The experimental group participated in a CBT that consisted of eight sessions over an 8-week period; the control group did not participate in the program. To examine the effects of the CBT on dependent variables, the Wilcoxon signed rank test was used. The scores on depression decreased significantly and those on self-efficacy increased significantly after the intervention in the experimental group. There was no significant change on self-esteem. In the control group, the scores on depression, self-esteem, and self-efficacy did not change significantly after the intervention period. The CBT developed in this study consisted of structured and specific content that could be usefully applied to runaway adolescents residing in a shelter.

Shiina et al., (2005) examined the therapeutic efficacy of combined group cognitive behavioral therapy (CGCBT) and explored the characteristics of the patients who failed to complete it. Twenty five participants were enrolled in the study. The clinical symptoms were assessed before and after treatment, using rating scales including the Eating Disorder Inventory-2, the Bulimic Investigatory Test, Edinburgh, the Toronto Alexithymia Scale, the Rosenberg Self-Esteem Scale, and Global Assessment of Functioning. Sixteen participants (64%) completed the CGCBT program. Completion of the CGCBT resulted in significant improvements in reducing binge-eating behavior and improving social functioning. Eight patients (32%) significantly improved using the
Clinical Global Impression Change (CGI-C). Stepwise logistic regression analysis of the results indicated that a lower age ($P=0.04$) and psychiatric comorbidity ($P=0.06$) were predictors of dropout from the CGCBT program.

Barrowclough et al., (2006) evaluated the effectiveness of group cognitive-behavioral therapy for schizophrenia. 113 people with persistent positive symptoms of schizophrenia were assigned to receive group cognitive-behavioral therapy or treatment as usual. The primary outcome was positive symptom improvement on the Positive and Negative Syndrome Scales. Secondary outcome measures included symptoms, functioning, relapses, hopelessness and self-esteem. Results indicated that there were no significant differences between the cognitive-behavioral therapy and treatment as usual on measures of symptoms or functioning or relapse, but group cognitive-behavioral therapy treatment resulted in reductions in feelings of hopelessness and in low self-esteem.

Chen et al., (2006) evaluated the impact of cognitive-behavioral group therapy on the depression and self-esteem of clinically depressed patients. The study involved 26 experimental group patients who received 12 weeks of cognitive-behavioral group therapy and 25 comparison subjects. Two weeks before the study, immediately upon therapy completion, and 1 month later, all the participants underwent pretest, posttest, and follow-up, respectively. The experimental group patients experienced greater cognitive improvements (i.e., depression relief, self-esteem increase) as compared with the comparison group subjects. One month after therapy completion, the depressive symptoms and self-esteem of the experimental group patients remained slightly but significantly better than those of the comparison group subjects.

Ghaderi (2006) examined Does higher level of individualization increase treatment efficacy? Fifty patients with bulimia nervosa were randomized into either manual-based (focused) or more individualized (broader) cognitive behavioral therapy guided by logical functional analysis. Eating disorders Examination and a series of self-report questionnaires were used for assessment at pre-, and post-treatment as well as at follow-up. Both conditions improved significantly at post-treatment, and the results were maintained at the 6 months follow-up. Both groups improved concerning self-esteem, perceived social support from friends, and depression. The improvements were
maintained at follow-up. Ten patients (20%) did not respond to the treatment. Notably, a majority of non-responders (80%) were in the manual-based condition. Non-responders showed extreme dominance of rule-governed behavior, and lack of contact with actual contingencies compared to responders.

Rosselló and Jiménez-Chafey (2006) examined effectiveness of a group Cognitive-Behavioral Therapy (CBT) model in treating depression in Puerto Rican adolescents, to treat depressive symptoms and improve glycemic control in adolescents with diabetes. Eleven adolescents aged 13-16 participated in a 12 session group CBT intervention. Indicators of outcome effects (depressive and anxious symptomatology, self-esteem, hopelessness, diabetes self-efficacy, self-care and glycemic control) were assessed pre and post therapy using self-report instruments and a measure of glycosilated hemoglobin. Depressive symptomatology, self-concept and diabetes self-efficacy significantly improved after the intervention, and reductions in anxious symptoms and hopelessness were also observed.

Oestrich et al., (2007) examined the feasibility and clinical utility of a cognitive behavioral intervention for low self-esteem within a population of dual diagnosis inpatients. A small sample of dual diagnosis inpatients (N = 23) were screened during a one month wait list period to ensure stability in presentation of low self-esteem, psychopathology and substance abuse before commencing a brief eight-session intervention for low self-esteem. Results showed participants displayed significant increases in levels of self-esteem and corresponding significant decreases in depressive symptoms and psychopathology associated with schizophrenia. These improvements were maintained at 3-month follow-up.

Taylor and Montgomery (2007) evaluated the efficacy of cognitive-behavioral therapy (CBT) in improving self-esteem among depressed adolescents aged 13–18 years. A search identified 265 references, 33 articles were acquired, of which two papers met the inclusion criteria. A total of 82 participants from two trials were included in the meta-analysis. The data suggested CBT may be an effective treatment for increasing global and academic self-esteem when compared to wait-list controls.

Wojtyna et al., (2007) indicated the influence of cognitive-behavior therapy (CBT) on self-esteem and quality of life (QoL) in women suffering from breast cancer.
The study comprised 67 women after mastectomy and undergoing chemotherapy or chemo- and radiotherapy. CBT (Simonton’s Program) was adopted for the experimental group (n=35). The control group (n=32) consisted of women awaiting psychotherapy. The studies were of a linear character, including measurements before and after psychotherapy. Results showed an improvement in general QoL, general health status assessment and self-esteem were observed in the period following the therapy among CBT patients in comparison with the control group. Higher self-esteem in the CBT group was related to the fact that the subjects were able to maintain the ideal self at a fixed level while constantly increasing the real self during the therapy. The analysis of the results in relation to the functional dimensions indicated improvement in the field of cognitive and emotional features, which resulted from participation in the therapy. The CBT patients reported lower intensification of somatic symptoms, which, however, was not tantamount to changes in the self-esteem of physical features.

Grumm et al., (2008) explored the utility of a pain IAT for the assessment of dysfunctional cognitive beliefs in chronic pain patients before and after a cognitive behavior therapy. A patient group suffering from chronic pain (N = 25) treated with a 4-week cognitive behavioral psychotherapy is compared with an untreated healthy control group (N = 27) at two points in time. In addition, both groups completed a self-esteem questionnaire (Rosenberg-scale) and self-esteem IAT. In the clinical group a questionnaire assessing self-reported pain cognitions was administered. The pain IAT was able to differentiate between chronic pain patients and healthy controls before the treatment. Most important, pain-related implicit associations could be shown to change over the course of treatment in the clinical group of chronic pain patients. The pain-patients and the no-pain control group differed markedly on the indirect measure of self-esteem as well as on the explicit self-esteem measure.

Mi-Yeul (2008) evaluated the contribution of cognitive behavioral group therapy to the improvement of self-esteem, depression, gender role attitude and tendency for violence of those who have experienced family violence. Participants were 12 offenders who were ordered to be counselled according to “the Special exemption law for punishing domestic violences”. The group therapy was applied once a week for 8 weeks. Results revealed that the scores of self-esteem and gender role attitude were statistically
Cognitive behavioral group therapy was effective in improving self-esteem and gender role attitude in offenders of family violence.

Fannon et al., (2009) examined the self or the voice? Relative contributions of self-esteem and voice appraisal in persistent auditory hallucinations. Beliefs about persistent auditory hallucinations were investigated in 82 patients using the Beliefs about Voices Questionnaire — revised in a cross-sectional design. Self-esteem and depression were assessed using standardized measures. Results revealed that Depression and low self-esteem were prominent as were beliefs about the omnipotence and malevolence of auditory hallucinations. Beliefs about the uncontrollability and dominance of auditory hallucinations and low self-esteem were significantly correlated with depression. Low self-esteem did not mediate the effect of beliefs about auditory hallucinations- both acted independently to contribute to depression in this sample of patients with schizophrenia and persistent auditory hallucinations.

McManus et al., (2009) described the assessment, formulation, and treatment of a patient with low self-esteem, depression, and anxiety symptoms. At the end of treatment (12 sessions over 6 months), and at 1-year follow-up, the treatment showed large effect sizes on measures of depression, anxiety, and self-esteem. The patient no longer met diagnostic criteria for any psychiatric disorder, and showed reliable and clinically significant change on all measures.

Penn et al., (2009) investigated the effectiveness of group CBT for auditory hallucinations compared to an enhanced supportive therapy (ST). Sixty five participants with schizophrenia spectrum disorders and persistent hallucinations were randomly assigned to group CBT or enhanced group ST. Primary outcomes focused on beliefs about voices and global auditory hallucinations severity. Secondary outcomes included psychotic symptoms, self-esteem, social functioning, insight, depression, and hospitalization. Controlling for baseline levels, these outcomes were evaluated across post-treatment, 3 month and 12 month follow-ups. Participants who received enhanced ST were less likely to both resist voices and to rate them as less malevolent through 12-month follow-up relative to participants who received CBT. Group CBT was associated with lower general and total symptom scores on the PANSS through 12-month-follow-up.
relative to participants who received enhanced ST. Outcomes improved through 12-month follow-up in both therapy groups, with enhanced ST having more specific impact on auditory hallucinations, and CBT impacting general psychotic symptoms.

Lim et al., (2010) examined the effectiveness of a cognitive-behavioral program for nursing student’s career attitude maturity, decision making style, and self-esteem in Korea. The subjects were 40 nursing students from one college located in Gyeonggi Province; following the informed consent procedure, twenty participants were randomly assigned to an experimental group, and 20 were assigned to a control group. The cognitive-behavioral therapy consisted of 8-sessions and was implemented for 60 min during an 8 week period. After treatment with cognitive-behavioral therapy, the experimental group significantly increased in the mean score for career attitude maturity, self-esteem compared to the control group, especially for confidence and independence. Cognitive-behavioral therapy had a positive effect for increasing the career attitude maturity and self-esteem for nursing students in Korea.

Safer et al., (2010) compared Dialectical Behavior Therapy for Binge Eating Disorder DBTBED to an active comparison group therapy (ACGT). Men and women (n=101) meeting DSM-IV BED research criteria were randomly assigned to 20 group sessions of DBT-BED (n=50) or ACGT (n=51). DBT-BED had a significantly lower dropout rate (4%) than ACGT (33.3%). Linear Mixed Models revealed that posttreatment binge abstinence and reductions in binge frequency were achieved more quickly for DBT-BED than for ACGT (posttreatment abstinence rate=64% for DBT-BED vs. 36% for ACGT) though differences did not persist over the 3-, 6-, and 12-month follow-up assessments (e.g., 12-month follow-up abstinence rate=64% for DBT-BED vs. 56% for ACGT). Secondary outcome measures revealed no sustained impact on emotion regulation. Although both DBT-BED and ACGT reduced binge eating, DBT-BED showed significantly fewer dropouts and greater initial efficacy (e.g., at posttreatment) than ACGT and the self-esteem and self-efficacy level increased.

Wilson et al., (2010) tested whether patients with binge eating disorder (BED) require specialty therapy beyond Behavioral weight loss treatment (BWL) and whether Interpersonal psychotherapy (IPT) is more effective than either BWL or guided self-help based on cognitive behavior therapy (CBTgsh) in patients with a high negative affect.
during a 2-year follow-up. Participants were 205 women and men with a body mass index between 27 and 45 who met DSM-IV criteria for binge eating disorder (BED). Twenty sessions of IPT or BWL or 10 sessions of CBTgsh during 6 months were administered. Results revealed that at 2-year follow-up, both IPT and CBTgsh resulted in greater remission from binge eating than BWL (P<.05); odds ratios: BWL vs CBTgsh, 2.3; BWL vs IPT, 2.6; and CBTgsh vs IPT, 1.2). Self-esteem (P<.05) and global Eating Disorder Examination (P<.05) scores were moderators of treatment outcome. The odds ratios for low and high global Eating Disorder Examination scores were 2.8 for BWL, 2.9 for CBTgsh, and 0.73 for IPT; for self-esteem, they were 2.4 for BWL, 1.9 for CBTgsh, and 0.9 for IPT. They concluded that Interpersonal psychotherapy and CBTgsh are significantly more effective than BWL in eliminating binge eating after 2 years. Guided self-help based on cognitive behavior therapy is a first-line treatment option for most patients with BED, with IPT (or full cognitive behavior therapy) used for patients with low self-esteem and high eating disorder psychopathology.

Ando et al., (2011) investigated the potential of Reminiscence Cognitive Behavior Therapy (RCBT) for improvement of spiritual well-being and self-esteem in patients. Five patients received the therapy over three sessions. The patients received RCBT consisting of reminiscence therapy and cognitive behavior therapy. They completed the FACIT-Sp, Rosenberg’s Self-Esteem scale, numeric rating scales for Suffering (from 0 to 6) and Depression (from 0 to 6). These results suggest that RCBT can improve the spiritual well-being and self-esteem of cancer patients.

The results of the present study are in consonance with the models and outcomes of different studies on varied groups.