CREATIVE PROBLEM SOLVING THERAPY FOR DEPRESSION:

A CLINICAL RCT STUDY OF CREATIVE PROBLEM SOLVING THERAPY IN COMPARISON WITH COGNITIVE BEHAVIOURAL THERAPY FOR ADOLESCENT DEPRESSION IN THE SCHOOL CONTEXT

SOUDABEH ERSHADI MANESH

Counselling and Psychotherapy

School of Education, Communication and Language Sciences

Newcastle University

October 2013

Dedication

This thesis is dedicated to the memory of my loving husband, Ali, who was my companion for all the years I've known him and his words of wisdom and encouragement have been the source of support I needed to face challenges in my life. His kind heart and generosity will forever remain an inspiration to me, my children and all those who knew him well.

Acknowledgement

I offer my regards to all those writers and researchers whose knowledge and findings have been of great value to me and in writing this thesis. Also this thesis would not have been possible without the support of my supervisor Dr. Sue Pattison and the encouragement of Dr. Mahmoud Mansour, my professor at Tehran University.

Also I would like to thank the Department of Education in Tehran for their permission for this research to be carried out and I want to thank all the kind staff and the amazing pupils at the two schools of Parsian and Bahonar for their cooperation in participating in the research process. Finally I want to thank my family, my husband Ali and my children Ashkan and Sogol for supporting me throughout these years.

Content.....Page

Chapter three: Methodology

Chapter four: Results

Chapter five: Discussion and Implications for future study

List of Tables in chapter 2

List of Tables in chapter 3

List of Tables in chapter 4

Lists of figures

Abstract

Contemporary studies of the aetiology and psychopathology of depression in adolescents have identified the core factors for developing depression as facing negative life events, experiencing interpersonal problems and having deficiencies in skills of coping with challenges and problem solving. However, cognitive behavioural therapy (CBT) has been applied for depression for youth which mainly concentrates on modifying dysfunctional beliefs. The aims of the study are to apply creative problem solving therapy (CPST) and to investigate whether CPST is as effective as CBT. CPST was evaluated by a randomised control trial (RCT) with pretest, posttest and follow-up comparing the CBT and the control group using the Beck's Depression Intervention (BDI-II) and Short Mood and Feelings Questionnaire (SMFQ) followed by semi-structured interviews for the purpose of elaboration. A population-based adolescents sample consisting of 91 girls underwent six week (12 sessions) interventions. The results showed clinically significant improvement of the interaction between treatment and time $P = 0.001 < 0.05$ in overall depression and Mood and Feelings in both groups compared to the control group which showed no change over time in their scores on the two assessments. Significant differences were also found between CPST (M= Pre-test 24.81, Post-test 7.37 and Follow-up 8.50) and CBT (M= Pre-test 24.34, Post-test 10.78 and Follow-up 12.22) favouring the former. The results from the two month follow-up indicated that the CPST group showed fewer symptoms of depression $M = 8.50$ compared with the CBT group M=12.22. The results of the qualitative data also showed a considerable level of improvement and understanding of the interventions and content of the therapy in both groups, but they used different words and concepts expressing their sense of wellbeing. The results derived from semi structured interviews data revealed little about processes but focussed on the effects and that the students who were sampled had successfully learned the main concepts taught in their respective programmes. CPST represents a

promising intervention for minor and mild depression in youth. Repetition with a larger sample is required before roll-out to counselling and clinical settings.

Chapter One: Introduction to the study

1.1 Introduction

This chapter provides an introduction to the literature on adolescent depression (see searching strategy appendix 1). It discusses critical reviews of interventions used for adolescent depression and relevant studies from different point of views of adolescence. Previous studies have considered the treatment of depression among adolescents based on research on adults and mainly apply cognitive behavioural therapies (CBT) with little concern for the aetiology of depression in youth. They fail to view depression in youth from different angles or to integrate the effects of stressful life events, interpersonal, emotional, behavioural and cognitive vulnerability in understanding depression among adolescents. Recently a number of prevention programmes have been carried out around the world which includes some content such as problem solving therapy (PST) in CBT treatment to prevent depression in the school context. However, regarding their content, methodology and outcomes, these studies demand critical assessment. Therefore, such studies are reviewed and discussed in this chapter regarding the problems in and obstacles to psychological interventions in youth. As part of this discussion, the study also addresses methodological issues and deficiencies in existing research. The chapter also describes the significance, aims and the rationale for carrying out the present study. Finally, the specific questions which guided the study and the hypothesis to be tested are put forward.

1.2 Introduction to problems and obstacles

Despite depression having tangible effects on adolescents, it is likely that many to this day still suffer unnecessarily. Various studies (such as Logan et al. 2002; Moor et al. 2007) suggest that depression in youth often remains unrecognised and untreated. For instance, only one in four depressed people receive pharmacological treatment and less than 10% a talking therapy (Singleton et al. 2001).

Although several factors have been recognised in the aetiology of depression in youth, therapeutic approaches seem to focus mainly on one aspect, such as dysfunctional beliefs, and fail to consider other aspects of aetiology. Many interventions have been applied in the past decade based on various different models of cognitive behaviour therapy (CBT). In this method negative thoughts and dysfunctional beliefs are identified and are targeted using behavioural and verbal methods in order to reduce negative cognition and dysfunctional beliefs (Beck et al. 1979).

Dysfunctional beliefs have previously been assumed to be the cause of symptoms of depression in adults. However, regarding the fundamental study of the psychopathology of depression in adolescents, its origins of depression may be considered to lie in the stressful life events experienced by young people (Kendler et al. 2001), whereas this may be regarded as poor regulation in response to such life events (Caspi et al. 2003). There are also other points of view that focus on deficiencies in interpersonal problem solving skills and maladaptive responses to stress (Gazelle and Rudolph 2004), and therefore, may lead to inaccurate and negative cognitive interpretation of stressful events by adolescents (Gladstone and Kaslow 1995).

Furthermore, regarding the cause of depression to be dysfunctional beliefs and therefore focusing treatment on counteracting those beliefs seems to effectively underestimate several features of the aetiology of depression in youth. A recent study (Rudolph 2009) shows that presence of negative life events along with maladaptive relationships and

challenges in life have been considered as contributing vulnerability to depression. In fact, experiencing negative life events, when individuals have few social skills to manage those obstacles may lead to the development of such ways of thinking. This could be a reason why, nowadays, some prevention programmes in schools (Clarke et al. 1993) have focused on problem solving and self-control rather than concentrating on modifying cognition alone. The aforementioned findings implies that while all evidence points to the role of problems experienced by vulnerable youth and that the vulnerable adolescents are faced with several life challenges, insufficient attention has been paid to the importance of considering all aspects of the aetiology of depression in adolescents.

While it is essential to support depressed adolescents in terms of how to face challenges, there is still uncertainty as to which interventions are most effective and feasible. For instance, a systematic review of research to children and young people found problems around their effectiveness in studies (Pattison and Harris 2006). Simultaneously CBT targets cognitive styles and the modification of behaviour in adolescent depression, whereas interpersonal psychotherapy (IPT-A) puts more emphasis on developing better behavioural responses to relationship difficulties. Reviewing the effectiveness of three currently supported interventions for the prevention of depression known as CBT, interpersonal psychotherapy (IPT) and medication, Weersing et al. (2009) suggest that the treatments frequently do not work well and that they may perform poorly in those groups of adolescents most in need of intervention.

CBT has been highlighted as an effective intervention in a number of systematic studies and meta-reviews (Compton et al. 2004; NICE 2005) for improving depression in young people. However, a systematic review on effectiveness in young people (Pattison and Harris 2006), a meta-analysis study (Merry et al. 2004), and empirical research (Raiff 1982; Redburn and Juretich 1989; Powell 1994) found some limitations of the approach in working with youngsters. Other studies (such as Hollon et al. 1992; Golaguen et al

1998) found CBT effective for symptom reduction. In a meta-analysis, Merry et al. (2004) reviewed the efficiency of intervention programmes and found several deficiencies. They argue that there was inconsistency in the content of several programmes based on cognitive behavioural therapies (CBT), and that these did not identify the criteria for changing and improving mood. Based on the data on treatment response and effectiveness in practice they suggested that there is a need to develop strong and more robust interventions for depressed adolescents.

There are also several other aspects of the nature of interventions which lead to need to develop more appropriate interventions for adolescents. Firstly, the literature British Psychological Society (BPS 2005, NICE, p.30) on the causes of depression among young people shows that depression is more commonly encountered in a number of particular settings and groups of individuals; for instance, in adolescent school refusal mostly among girls, those who were maltreated or who had experienced traumatic events, self-harm, families with drug and addiction problems, divorce and separation, domestic violence, physical and emotional abuse, school difficulties, exam failure, social isolation and problems in friendships. This could be as a result of complicated and fast moving modern lifestyles; inevitably many young people nowadays are subject to being constantly bombarded with a variety of problems at different stages of their lives. Seeking sessions of CBT for each individual problem seems rather unrealistic; therefore, a method needs to be provided which could be applied to all different aspects of one's life and be effective for different types of problems. These results suggest that, regarding the aetiology of depression which emphasises negative life events and deficiencies in social skills, it may be important to apply effective approaches to meet the specific needs of young people with depressive symptoms. It is evident that these real life problems can explain the development of depression. This suggests that prevention and treatment strategies need to consider effective thinking and problem solving skills which

adolescents could learn and apply independently to any problems or challenges they may face.

Secondly, based on previous study (Kelly 1982) it is also crucial to note that emotional disturbance may be produced as a result of lack of social and interpersonal capabilities. There are some skills known as personal learned behaviours to improve social and interpersonal capabilities such as assertiveness, conversational skills, and interpersonal problem-solving competency, which "individuals use in interpersonal situations to obtain or maintain reinforcement from their environment" (Kelly 1982, p. 5). This is significant because it is likely that interpersonal problem-solving correlates with emotional and behavioural adjustment. Previous research (Spivack and Shure 1974; Coche and Flick 1975; Goldsmith and McFall 1975) also suggests that lack of problem-solving skills exists in a wide range of disturbed individuals and that improvement in problem-solving skills defined as effective responses to deal with a problematic situation leads to more adaptive functioning.

Thirdly, the lack of capacity to think efficiently, lack of social efficacy and thereby inappropriate problem resolution or ineffective response to social problems and circumstances seem to disrupt interpersonal relationships and thus these may negatively affect moods and feelings. Emotionally disturbed adolescents have been found to derive more ineffective and irrelevant solutions to social problems, generate fewer alternative solutions, and are less capable of viewing the problem from another's perspective compared to disturbed adolescents (Platt et al. 1974 and Siegel and Platt 1976).

Previous studies have also emphasised the role of problem solving and interaction. For instance, poor problem-solvers are more likely to not be accepted by peers than good problem-solvers (Solomon and Wahler 1973; Spivack and Shure 1974), and poor problem solvers also experience more withdrawal, hostility, and negative self-labelling (Combs and Slaby 1977; Kelly 1982), have poor relationships and show high levels of physical or

verbal aggression and more often experience academic underachievement and dropping out of school (Roff et al. 1972) as well as low self-efficacy (Bandura 1977). Working with adolescents and adults, Spivack et al. (1976) presented evidence on the relationship between social problem-solving ability and psychopathology. Therapy focused on one or more of four areas of possible interpersonal difficulties; grief reactions, role disputes and transitions and interpersonal deficits.

Consistent with previous research the conclusions of the BPS (NICE, 2005), current studies have suggested that specific components of problem solving ability may be more strongly related to depression than others (Nezu et al. 2004; D'Zurilla and Nezu 2007). For example, some studies have shown that depressed individuals have a more difficult time generating alternative solutions to their problems that non-depressed peers (Nezu and Ronan 1987; Marx et al. 1992). Other studies have shown that depressed persons have poorer decision making ability as compared to their non-depressed peers (Nezu and Ronan 1987). A number of studies have also found that depressive symptom severity is more highly related to negative problem orientation than any other component of social problem-solving ability (Kant et al. 1997).

In addition, creative thinking skills have been considered as essential life skills (Puccio and Murdock 2001). This could be important when the school may be the most appropriate place for providing such interventions. This is because schools may be considered not only as places for educational achievement, but also, for teaching pupils how to think and how to overcome problems in life. The failure of schools to consider this may create significant impairments in social life, with impacts on behavioural and cognitive developmental stages which interfere with educational achievements. Furthermore, schools could also be the site for presenting, maintaining and developing maladaptive relationships and friendship difficulties, which also may increase social deficiencies and social isolation and poor academic performance. Thus, schools are

appropriate places in which those at risk of developing depression could be identified. By understanding the clinical symptoms of depression, counsellors within schools could be sensitive towards recognising such symptoms and therefore identifying those suffering from them. This suggests that there may be need counsellors in schools to take into account the process of creative problem solving therapy (CPST) as an intervention in youth by in order to teach pupils skills in dealing with problems that can lead to further symptoms of depression and to improve mood and feelings of those students who are at risk of major depression.

However, this argument raises many issues and important questions of how well schools perform with regards to their responsibilities. While schools are appropriate places in which those at risk of developing depression could be identified, and despite the importance of adolescence, the treatment and prevention of depression in youth in schools has been minimal especially in developing countries.

Adolescence has been considered as a critical period of life, starting from the age of 12 or 13 with puberty, during which major changes occur at varying rates in sexual characteristics and interest, body image, intellectual development and ending with completed growth and physical maturity (Corsini 2002). Depression has also been conceptualised as a transient mood or affective state, a syndrome of related symptoms, and a clinical disorder (Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV), American Psychiatric Association (APA) 1994; International Classification of Diseases, (ICD) tenth edition, (World Health Organization, (WHO) 1993. This is also a period in which clinical depression occurs (Kessler et al. 2001); 50% of those suffering from depression are estimated to spontaneously recover, for the remaining half, symptoms may persist and significantly impair functioning (National Institute for Health and Clinical Excellence (NICE) 2005) which may be maintained throughout life (Kim-Cohen et al. 2003). The epidemiological findings in adolescents

(Costello et al. 1996) have shown that a significant number of young people up to 18 years have modest symptoms, up to 8.3% of adolescents suffer from a depressive disorder (Birhamer et al. 1996) and up to 20% will suffer at least one clinically depressive episode by the age of 18 (Merry et al. 2004). The prevalence of depression is also high among adolescents in Iran (Ghassemzadeh et al. 2005; Neshat Doost et al. 2005). In the UK prevalence estimates are of 1.4% amongst 11–16 year olds in the community and around 20% amongst 13-16 year olds attending primary care (Kramer and Garralda 1998; Green et al. 2005). During the transition period girls also report higher levels of such symptoms and disorders than boys (Costello et al. 2003). Therefore, the World Health Organisation (WHO) (2007) has concluded that depression is the second leading cause of disability for youth in late adolescence through to mid-adulthood.

Furthermore, the symptoms associated with depression can lower and impair the personal and social functioning of youth. In clinical terms and according to NICE (2005), a depressed patient experiences several changes in mood, thinking and activity during the occurrence of depression. Mood changes usually include sadness and irritability alongside a loss of pleasure in activities; cognitive changes generally lead to inefficient thinking with self-criticality and, as a physical effect, the depressed youth become less active with the presence of anxiety or agitation. These alterations also lead to poor self-esteem and self-criticality which also impair decision making in youth. Subsequently they will lose confidence in their ability, which will negatively skew their behaviour and social interactions. Aside from changes in personality, changes will occur in the body including low energy, tiredness, poor appetite, disrupted sleeping patterns, low activity levels and poor motivation. A patient diagnosed with minor depression is one who experiences two of the key depressive symptoms; sleep disturbance, appetite disturbance, poor concentration, guilt, suicidal thoughts, anhedonia, psychomotor retardation, and fatigue (NICE 2005).Thus experiencing only some of these changes may be enough to impair

personal and social functioning. Therefore, effective intervention which is consistent with the aetiology of depression in youth and meets the criteria of the psychopathology of depression in adolescence seems to be essential.

1.3 Universal and selective prevention programmes for depression in schools

Depressive symptoms are powerful indicators of the start of depressive episodes (Lewinsohn et al. 2000) and symptoms are strongly associated with educational, emotional cognitive and behavioural impairment (Gotlib et al. 1995). Thus, taking into consideration the effects of depression in adolescents, school could be viewed as a real life context for hosting depression where youth spend much of their early lives. In addition, the aetiology of depression emphasises the role of negative life events and interpersonal conflicts in creating depression, and so schools could be problematic places which may give rise to various interpersonal problems among friends, peers and where conflicts occur that could worsen depression. Therefore, recognising adolescents with sub-threshold depressive symptoms, such as of minor and moderate severity, and preparing them with an effective intervention to reduce existing symptoms seems warranted. Schools could be viewed as the appropriate places to apply effective interventions in order to prevent the emergence of depression in adolescence or to resolve it.

It has been nearly two decades since the types of preventative intervention known as universal or selective have been applied in schools. Universal interventions apply to the whole population irrespective of risk status (Mrazek and Haggarty 1994), while selective programmes target those who show subclinical signs of disorder (Garber et al. 2009). The latter are also known as targeted or indicated interventions, which apply to normal adolescents with a recognised risk factor such as sub-threshold depressive symptoms (Araya et al. 2011). However, the outcomes of such programmes seem rather

disappointing. This could be due to failure to match the aetiology of depression with the content of interventions used in these programmes. Selective interventions, nevertheless, have yielded larger effect sizes than universal interventions (Merry et al. 2004). This is probably related to the intensiveness, and purposefulness of selective programmes, where the interventions also applied in small groups.

To date, psychological interventions such as cognitive behavioural therapy (CBT) and interpersonal psychotherapy (IPT) are the first line treatment for most adolescents with depressive disorders (NICE 2005). Although several systematic reviews have indicated the efficacy of psychological interventions in adolescents (Harrington et al. 19¶8; Rosello and Bernal 1999; Compton et al. 2004), other studies (Merry et al. 2004 and Pattison and Haris 2006) found no such efficacy. Furthermore, the evidence to show the efficacy of psychological interventions in preventing adolescent depression in prevention programmes in schools is less reliable.

Prevention programmes for depression in adolescents have been conducted in several developed countries in order to promote mental health. The majority of these prevention programmes have focused on CBT; however, there are many inconsistencies in the content and outcomes of such interventions. For example, Merry et al. (2004) systematically reviewed preventative interventions for depression in children and adolescents, and found most studies to be methodologically poor. Importantly, nearly all universal school-based interventions programmes also used CBT models and one small study comparing the efficacy of individual psychotherapy (IPT) and CBT for depressed adolescents found that related improvements were maintained often a few weeks (Rosello and Bernal 1999). However, there were many inconsistencies in the content of CBT models used in these studies. There seems to be a lack of harmony between the understanding of the aetiology of depression, which considers several causes, and CBT methods which focus on only a few of the causes. Therefore, the outcomes of such

programmes are likely to be less reliable in treating adolescent depression. This is mainly because the CBT approaches used in prevention programmes tend to mostly modify cognitive and behavioural features through the development of positive thinking, although other skills such as self-regulation, problem-solving, social and coping skills have also been considered in some of the programmes (Merry et al. 2004). Given the aetiology of depression in youth, it is likely that approaches such as CBT will have several deficiencies. Firstly, concentrating on these skills proposed to reduce cognitive and behavioural risk factors for depression may ignore other factors such as maladaptive interpersonal relationship and coping with life challenges which influence adolescents to develop such negative beliefs, as a variety of problems may be experienced by adolescents. Thereby, the majority of prevention programmes focussing on CBT are likely to pay less attention to improving skills in coping with life challenges and promoting healthy relationships among adolescents.

Secondly, the outcomes of prevention selected and universal studies using CBT have obtained varying results. For instance, Shochet et al. (2001) examined the efficacy of the Resourceful Adolescent Program (RAP), which is an approach derived from cognitive-behavioural and interpersonal psychotherapies. In this study the participants were not randomly assigned to experimental conditions and the sample size was too small. The results showed that both intervention groups did not achieve significant reductions on the Reynolds Adolescent Depression Scale (RADS) (Reynolds 1987). Meanwhile, the results of another study (Merry et al. 2004) reported significantly greater decreases of depression scores on two measures of depression compared to the placebo group. Another study conducted by Possel et al. (2004) evaluated the effects of cognitive restructuring, assertiveness and social competence training on single sex groups over ten weeks. The results showed that the youth with sub-clinical depression scores showed a significant decline in depression scores compared with the control group. However, the findings of

another prevention of depression programme by Harnett and Dadds (2004) revealed no significant differences after the programme and at follow-up; this study also was limited by small sample size, lack of random assignment of students.

In their study, Spence et al. (2003) examined the impact of a 'real-world', universal, school based approach to the prevention of depression in which a range of problem solving and cognitive coping skills was taught to students to deal successfully with challenging life situations. For the students in general, those who were found to have grate improvement in problem-solving skills showed greater reductions in depression following the intervention supporting the mediational role of problem-solving skills in preventing depressive symptoms. While the short-term results were encouraging, at 12-month follow-up the effects of the intervention effects were no longer evident. One limitation of this study was a low participation rate (66%) and a high dropout rate of follow-up of around 40%. In another (problem-solving for life) programme (Sheffield et al. 2006) implemented by teachers, no significant differences was found between intervention and control students in terms of changes in depression, anxiety, coping skills or social adjustment even at post-test. This study was however, limited by reliance on student self-reporting and a low participation rate. The six hours of teacher training may also not have been sufficient to ensure adequate skills in programme delivery, and fidelity checks relied upon teacher reports rather than direct observation.

It is noticeable that the content of interventions has often combined diverse techniques, including cognitive restructuring, assertiveness training, and coping and problem solving skills. Some programmes emphasise coping and problem solving; others only focus on dysfunctional attitudes and negative thinking. One example of diversity in the content of intervention is the Penn Prevention Programme (PPP) for youth developed by Jaycox et al. (1994). This 12-session programme dealt with coping strategies, enhancing a sense of mastery and competence, and combating deficits such as lower academic achievement,

poor peer relationships, low self-esteem, and behaviour problems. Although the programme has both cognitive and social problem-solving components, the element is not addressed the beneficial effects of creative problem solving; instead, the sessions teach skills such as goal setting, perspective taking, information gathering, anticipating consequences, assertiveness, negotiation, self-instruction, and generating alternative actions. Also, some other coping strategies such as distraction, relaxation and distancing from stress are taught during the course.

Other CBT prevention programmes (Reivich 1996 and Shatté 199٧) have focused on other points such as peer pressure, trust, study skills, setting and achieving goals, friendship, families, self-esteem, and body image. Although the outcomes of such prevention programmes have been found to have some benefits regarding levels of depressive symptoms in adolescents, the diversity in their content is important for two reasons. Firstly, offering variety of CBT in terms of content may prevent consistency among researchers. Secondly, it is also important when researchers hypothesis relationships between intervention and outcome to specify how an intervention works; and in these current mixed approaches there is some ambiguity as to whether CBT programmes prevent depression by changing negative cognitions or various other components.

As a result of inconsistency in the results of different studies, researchers have paid more attention to the benefits of such interventions. For instance, McLaughlin (2009) reviewed universal preventive interventions for adolescent depression and found that many were effective in some trials (Spence et al. 2003) but not in others (Sheffield et al. 2006). She concluded, therefore, that there is ambiguity about the benefits of current interventions and proposed that researchers must develop innovative and effective strategies for designing and testing preventive interventions that are sustainable in communities.

It is very important to change our view on the content of interventions, and there is a substantial body of elements which can be added to CBT or IPS. However, youth need to gain the skills in creative thinking in order to be able to cope with their problems independently. Furthermore, according to the standards considered by the Society for Prevention and Research (SPR) (Flay et al. 2005) relating to the efficacy and effectiveness of these programmes, the criteria for efficacy have failed so far to consider the changes occurring in pupils' perceptions. It is also important to consider the ways in which pupils could benefit from interventions, but none of the programmes focus on this whereas understanding these changes could provide insight into the appropriate design of effective interventions.

A study in Australia, compared the application of CBT sessions for all pupils, those with high symptom scores, a control group with no intervention. The results showed that all groups improved equally, with a reduction of symptom scores between 0.5 to 1 standard deviation at 12 months (Sheffield et al. 2006). In Germany, a 10-session course based on CBT was offered to pupils and obtained a symptom reduction 0.5 SD lower than those in a control group (Possel et al. 2005). In New Zealand, 11 CBT sessions resulted better outcomes, but the results were not maintained at follow-up (Merry et al. 2004). Spence et al. (2003; 2005) reviewed intervention programmes and found that studies often demonstrate short-term effects which are not maintained of follow-up. Moreover, the interventions have been leaded usually by teachers rarely include quality sessions, and there were frequently significant reductions in attendance rates (Spence et al. 2003, 2005).

Several issues remain a challenge in adolescent depression. Merry et al. (2004) recognised several methodological limitations in these programmes including low sample sizes and participation rates and poor retention rates, short term follow-up, lack of attention to placebo control conditions, inadequate training of staff, the absence of

independent confirmation of quality and fidelity in programme delivery, and reliance on the self-reporting of depressive symptoms. They concluded that psychological interventions were effective compared with non-intervention, with a standardised mean difference (SMD) of –0.26 and a 95% confidence interval (CI) of –0.40 to –0.13. This represents a significant reduction in scores on depression, but not in follow-up studies. Moreover, Spence (2008) argued that the weakness of studies of intervention in youth depression severely limit the conclusions that can be drawn. It seems there is a need to apply better interventions, which are matched with the aetiology of adolescent depression,

There is vital need to apply an effective and reasonable intervention to help youth, especially those such as girls who are more vulnerable to depression, in order to overcome their problems and to help them to cope with emotional, cognitive and interpersonal difficulties in resource-poor settings.

1.4 Depression in the school context in Iran

Depression is common among adolescents in Iran with a point-prevalence around 10% in the general population and higher levels among those with low-income parents (Department of Education 2005). Although for various reasons there is little other information or clarity in the statistical data related to the number of people suffering from depression in Iran, it is likely that a significant number of students have symptoms of modest depression with overt psychological impairment. Iran has ranked amongst the most unequal countries with respect to income (World Bank 2001), and therefore many students who are at risk of depression may have no access to psychological therapies, and it seems that low income pupils are significantly less likely to receive support for their emotional difficulties. There is usually, but not always, psychological centre in each zone of the education system which consists several schools; however, the pupils and families attending these centres need to pay for psychological treatment sessions. The Tehran

Department of Education employs a full-time counsellor for each secondary school to guide students but this guidance is mostly concentrated on academic issues as a result of the competitive atmosphere in schools. Despite the severity of the effects depression can have on the character development of these young people, little attention is paid to those with depression. According to the British Association for Counselling and Psychotherapy (BACP), children and young people need to be supported by an effective source of support enabling them to act or function effectively, but it is likely that there are numerous concerns with both prevention and treatment issues. For instance, the lack of adequate sources of help places young people's lives at serious risk.

In every school in Tehran there is at least one counsellor and in every educational zone there is a counselling and psychology centre. However, the background of the treatment of depression in schools in Iran is likely to mean that depressed adolescents are consistently ignored and little attention has been paid to their treatment. In more severe cases their parents may have helped, either by turning to private sector psychologists or other counselling settings in some areas of the education system which provide services in exchange for money. Consequently patients from lower income backgrounds and those with untraced minor and moderate symptoms will remain in the same condition or develop more symptoms.

Although schools need to arrange suitable intervention programmes which improve thinking skills among depressed pupils, there is no sign of these programmes existing in state schools. If the counsellors employed in schools could provide pupils with sufficient methods of CPST, in time these pupils would learn and develop the necessary thinking skills to overcome their problems, before the latter seriously impair their thinking and behaviour. In addition, learning CPS is likely to help adolescents become independent learners and problem solvers. Several educators and psychologists (such as Osborn 1956,

1979; Parnes 1977, 1992; Puccio & Murdock 2001; Strenberg 2006) have emphasised that young people need to obtain creative skills to develop self-esteem, the ability to take control of their own lives and to address and resolve specific problems, make decisions, cope with crisis, work through conflict or improve relationships with others in critical stages of their life. With this in mind it is necessary to note that it would be very difficult for schools to teach these concepts separately. It is important to teach adolescents thinking skills such as creative problem solving which provide them with ways through which they can arrive at ideas and solutions independently, rather than directly giving them the solutions.

1.5 Theoretical perspective

Studies of the aetiology and psychopathology of depression in adolescents have recognised that maladaptive relationships, social and behavioural deficits and social disengagement are factors in vulnerability to depression when adolescents encounter challenges in their lives (Rudolph 2009). These increase the probability of engaging in negative thought processes following the occurrence of negative and stressful life events (Abela and Hankin 2009). On the other hand, the theory of creative problem solving defines a set of capacities enabling a person to behave in new and adaptive ways in given contexts (Gardner 1993; Lubart 1994; Lautrey and Lubart 1998) and for coping with the challenges of life (Torrance 1974) and surviving and thriving in a complex world (Puccio & Murdock 2001). Therefore, this theory may be viewed as the basis of effective intervention for overcoming depression in adolescents.

The theory of creative problem solving was initiated by Osborn (1956; 1979) and was later applied by others to develop creative thinking skills in ways which emphasise improving social life skills. Osborn's findings encouraged other researchers (Parnes 1967; Noller et al. 1976; Noller 1977; Parnes et al. 1977) to describe rules for divergent

and convergent thinking, problem finding, acceptance finding and to discover how an idea or option will succeed or fail. The process of CPS includes various structural skills such as fact finding, problem finding and defining, idea generation, and solution development and implementation.

First, the necessity of learning skills has been emphasised by many psychologists and educators, (Piaget 1954; Bloom et al. 1956; Rogers 1959 & Osborn 1963) who considered creative thinking skills as an important aim of education. Creative thinking and creative problem solving enable individuals to cope with the challenges of life (Torrance 1974), and creative thinking capacity enables a person to behave in new and adaptive ways in given contexts (Gardner 1993; Lubart 1994; Lautrey & Lubart 1998), and to survive and thrive in a complex world people need to think creatively (Puccio & Murdock 2001). Rogers (1959) also associated creative thinking skills with self-actualisation, in which individuals are able to achieve their own potential. Therefore, it is evident that these psychologists and educators' are concerned with the need to survive in a complex world.

Secondly, creative abilities influence the ability of thinking (Sternberg 2006) in which individuals learn to produce possible ways of planning and producing solutions for their own problems. They also learn the skill of brainstorming where individuals can produce as many novel ideas as they can to solve their own problems independently (Osborn 1979) rather than teaching directly to pupils to modify their negative and dysfunctional thinking.

Thirdly, activating thinking through the logical processes of thinking and brainstorming, adolescents may express their own ideas and emotions and develop the capacity to present their emotional and cognitive perceptions. They become sensitive to problems, search for solutions, make guesses or formulate hypotheses for problems, deficiencies and gaps in life (Fisher 1995).

Fourthly, if problems are defined as those situations for which an immediate and easily recognisable solution is not apparent, CPS provides a useful model and introduce a structure of methods based on the process of problem-finding, fact-finding, idea-finding, solution-finding and acceptance finding to help find a solution (Osborn 1979; Parnes 1992). Finding a problem seems to be one of the most important features of CPS, through which adolescents will be able to recognise their conflict and avoid responding to the challenges emotionally. Moreover, since depressed youth view events with a negative perspective (Beck1993), CPS is likely to introduce effective methods through which they can be encouraged to concentrate more on activating their thinking by considering different perspectives rather than being negative. This process seems to not only help adolescents avoid automatically generating dysfunctional beliefs, but to view any problem from different angles when attempting to identify specific problematic situations in everyday life.

Fifthly, the concept of deferred judgment is not only useful when brainstorming and finding ideas, but also it can be used in everyday life situations especially in their relationships. Here they are encouraged to hold back their immediate judgements and are prevented from making immediate emotional decisions purely based on negative judgments.

Divergent thinking is emphasised during the application of the CPS process, which involves a broad search for many diverse options and convergent thinking which involves a focused search and selection. In order to lead to a creative solution, throughout the process brainstorming as a technique of generating ideas is apparent which has been characterised by fluency, flexibility and originality. Learning to brainstorm involves absolute freedom of expression to find many possible solutions to a problem in a positive atmosphere, which later leads to discussion, classification of ideas, elimination of options and eventually making decisions (Fisher 1995). This indirectly teaches pupils to be

assertive, achieve good relationships and participate in discussions rather than remaining passive. This also helps pupils to learn to immediately seek solutions rather than having a negative evaluation of the problematic situation.

CPS has been applied to a wide range of behavioural and cognitive features. The improvement of young people's mental health (Laurence et al. 2000), the relationship between mood and ideation skills (Estrada et al. 1987) and creativity-stimulation and ability, class interaction and deferred judgment (Parnes & Noller 1972) and self-confidence, reducing stress, and control over life (Neilson 1990) are some examples of behaviour and cognitive studies considered in applying the actual process of CPS. However, there are inconsistencies in the methods, instruments and definition the process of CPS in different contexts. For example, the study by Parnes & Noller (1972) randomly placed 150 students in an experimental group to receive a short creativity programme and 150 were placed in a control group and did not receive any creativity training. This study indicated the effects of the CPS programme in deliberate creativity-stimulation and ability, class interaction and deferred judgment. Although the results showed those in the experimental group improved creative behaviour and problem solving abilities, there was no clarity about the processes used and outcomes measured in the research to achieve these results.

Nielson (1990) investigated the impact of a six-day introductory course on creative problem solving behaviour using seven divergent and convergent skills. The aim was to understand the impact of the course content on the lives of the participants. At the end of programme the study found that 74% of students reported at least one outcome resulting from the challenges they worked on during the course. Neilson also determined the effectiveness of the techniques taught in the programme using a pre-test/post-test design in which students were asked to comment on their key learning three and six months after. The results indicated increased self-confidence which was as a result of attaining

goals, experiencing less stress and more control over their lives, and becoming more open to people and ideas. Although the results of this study showed great improvements in participants, it concentrated only on divergent and convergent feature of CPS. This study is poor in applying the actual process of CPS, which concentrates on a variety of creativity techniques such as brainstorming and approaching problems in a creative manner.

A study by Clapham (1997) also showed that creative problem solving increases the motivation of participants, which in turn affects their mood for the better. The results also showed that participants in a creativity training programme gained ideational skills, enhanced their depression, self-perceptions and motivation, and reduced their anxiety. Recent research (Warshofsky 1999) further indicates that creative thinking skills promote wellbeing and good mental health. In conclusion, it has been found that the use of CPS is not limited to behavioural and cognitive problems, but it can be also applied to specific psychological problems such as depression. Regardless of limitations in methodology such as issues of random assignment, sample size and clarity of intervention, efficient treatments using CPS can play a significant part in the improvement of young people's mental health.

1.6 Debates regarding the application of CPS to depression research

Osborn (1956) explained his assumption about promoting thinking by introducing creative problem solving (CPS) stages. After this the need for applying problem solving therapy (PST) emerged at the 1968 American Psychological Association convention when D'Zurilla and Goodfried (1971) put emphasis on problem solving training to improve social competence (Kendall & Hollon 1979). Later, problem solving therapy linked psychological problems such as depression to real life problems and thereby taught

clients psychosocial skills (D'Zurilla & Goldfried 1971). It focuses on training in adaptive problem-solving attitudes and skills and the aim of this positive approach to clinical intervention is to reduce and prevent psychopathology and enhance positive well-being by helping individuals cope more effectively with stressful problems in living.

In the two past decades, problem solving techniques have been integrated with cognitive behavioural skills. As mentioned by Braswell and Kendall (2003), various forms of CBT combined with problem solving have been developed for youth. Although the clinical application and treatment known as problem solving therapy (PST) was recognised by (Nezu, 1986; D'Zurilla & Nezu 1999); however, these include no sign of the actual process of CPS as introduced by Osborn, (1956). Nevertheless, neither the addition of extra sessions of problem solving to CBT, nor the application of problem solving therapy that puts little emphasis on the details of CPS skills such as problem finding, brainstorming, convergent and divergent thinking and delaying judgement can reflect the potential effects of CPS in solving real life problems such as on those variables that collectively lead to depression. Therefore, to date there has been little application of full creative problem solving therapy (CPST) for depression.

For example, PST suggests that depression is encountered in a number of particular individuals who have experienced social and individual problems in their lives and also show deficits in problem solving skills in their behaviour (Mynors-Wallis 2000). The studies have also shown link between social problem solving ability and psychopathology (D'Zurilla & Goldfried 1971; D'Zurilla & Nezu 2007). However, in these studies there is little clarity on the definition of problem solving therapy. It sometimes has been defined in terms of the four process of problem solving without considering creativity techniques and sometimes has been explained as a set of social problem solving skills.

The first problem solving study on individuals with depression was conducted by Billings and Moos (1981); Nezu (1986). They show that life events and problems are linked to the development of psychological illnesses in which weak social problem solving ability is linked to the maintenance of psychological distress. When confronted with major negative life problems, those individuals who focused more on the problems in their coping responses were found to display less depressive symptoms. Nezu randomly assigned 26 depressed individuals to three groups: problem solving therapy, problem-focused therapy or waiting list control. Each treatment group received eight, 90-minute sessions of therapy. Problem solving treatment included training in the areas of problem orientation, definition and formulation, the generation of solutions, decision making and solution implementation and verification. Individuals in the problem focussed therapy group were informed about the fact that resolving problems which cause stress would result in a significant decrease in their depression; however, instead of providing them with a clear plan or a systematic model of how to solve those problems, they were encouraged to share them with other members of the group in each session. Members of the waiting list control group were told they could only be given treatment after the eight weeks due to the limited capacity of the sessions. The results were determined using the Beck Depression Inventory (BDI) (Beck et al. 1961) and showed lower depression scores in the problem-solving treatment group compared with either of the other two groups, and this difference was maintained at the six-month follow-up. Despite the lack of clarity on the sampling method used, this study provided the first evidence linking problem-solving with symptom resolution. Another deficiency is that this research did not apply all of steps of problem solving in CPS in which creative thinking strategies can assist thinking and aid the process of problem solving. In this study, the teaching of problem-solving skills was not been adequately established, and the researchers failed to adequately define the concepts applied in the process of problem solving therapy. This makes it difficult to

understand which techniques participants were using at every stage while problem solving competence is influenced by so many creativity variables as defined by Osborn and his colleagues.

The conceptual framework used by Nezu (1986) was expanded in other studies in the clinical context. Even with the aforementioned deficiencies, the majority of these studies show improvements in depression among both adults and youth using different tools. Research conducted by Mynors-Wallis et al. (1995) on major depression in primary care aimed to compare six 60 minute sessions of problem-solving treatment over twelve weeks with antidepressant and drug placebos with ninety-one patients. Three trained therapists were assigned blind to the treatment given and patients receiving the drug treatments received the same amount of therapist time as those receiving problem-solving treatments. The tools used in the study were the Hamilton Rating Scale for depression (Hamilton 1967) and the Beck Depression Inventory (Beck et al. 1961) both conducted pre-treatment, halfway through and post-treatment. At weeks 6 and 12, the mean score of the problem-solving group was 7.1 which was less than the amitriptyline (8.1) and placebo (11.8) groups. The proportions of patients who had recovered by week 12 were 60% in problem-solving, 52% in amitriptyline and 27% in placebo. Overall, the findings indicated that problem-solving treatment was as effective as amitriptyline for major depression. It was also feasible in practice, and was better accepted by patients and family doctors than amitriptyline.

Based on this evidence, another study by Mynors-Wallis (1996) evaluated a model of problem-solving treatment, aiming to improve patients' problem solving skills over four to six sessions. This treatment course was designed for use in busy primary care settings in the United Kingdom, with the intention that non-mental health specialists such as nurses and doctors would be trained to administer the treatment. Another randomised controlled trial with one hundred and fifty-one patients for major depression (Mynors-

Wallis et al. 2000) applied a combination of six sessions of problem solving treatment, antidepressant medication, or either treatment alone. The aim was to find out if the problem-solving treatment could be delivered as effectively by trained nurses. There were no significant differences between the groups on any of the outcome measures used. However, this result provided further evidence that problem-solving treatment is effective for depressive disorders in primary care and can be delivered by trained nurses as effectively as by GPs, bearing in mind that PST is likely to benefit patients who have a depressive disorder of moderate severity and who wish to participate in an effective psychological treatment. Further evidence from randomised control trials carried out in a range of non-educational settings such as primary care by Mynors-Wallis et al. (2000) was gathered from a comparison of three methods: problem solving treatment, person centred therapy and antidepressant medication. Patients in all three groups, showed a clear improvement over 12 weeks; problem solving treatment was effective as a treatment for depressive disorders in primary care.

A multicentre European study conducted in nine urban and rural communities Dowrick et al. (2000), used the same problem-solving treatment as the one used by Mynors-Wallis (2000) PST and group psycho-education groups were compared to determine the acceptability of these two psychological interventions for depressed adults through RCT. The emphasis of the psycho education prevention course was on promoting relaxation, positive thinking, pleasant activities, and social skills. Four hundred and fifty-two people between the ages of 18-65 identified as having depression were randomly allocated to these 3 groups to receive either six sessions of PST, eight group sessions of the psycho-education depression prevention course, or to be put on a waiting list**.** The results indicated recovery percentages of 62% for PST, 53% for psycho-education and 42% for waiting list group. This reinforced the idea that PST was more acceptable than psycho-

education courses and waiting list control, especially more improvement in quality of life measures was found in those who had received PST.

The results of these studies provide more evidence that problem-solving treatment is an effective treatment for depression which can be carried out effectively and feasibly on people experiencing mild, moderate and major depression. Moreover, the studies illustrate that problem-solving involves a more goal oriented, collaborative and active process than other therapies. However, it follows the exactly the same processes as PST used by Nezu, where the focus was on the general process of problem solving rather than the full range of stages and creative techniques of CPS. In the aforementioned studies although improvement is shown regarding intervention in depression, there are again conceptual and methodological deficiencies in applying problem solving skills to depression.

Despite the deficiency in the understanding of the CPS process, PST has been refined and revised several times over the years by D'Zurilla, Nezu, and their associates (Nezu et al. 1989; Nezu et al. 1998; D'Zurilla & Nezu 1999, 2007) considering some concepts of CPS skills such as “rational problem-solving skills” problem orientation or style. For example, a study by Nezu and Perri (1989) showed that depressed individuals who received full PST including problem-orientation training as a group, experienced significantly greater decreases in depression than depressed individuals who received PST without problem-orientation training. Nezu (2004) commented later that the lack of problem orientation training might explain why some treatments described as PST are not effective. The presence or absence of problem orientation training as a part of PST is regarded therefore to be worth examining as a moderator of effect size in meta-analysis. Therefore, many studies emerged to show the importance of different components of the PST package. The results of both the global meta-analysis conducted by Malouff et al. (2007) and Bell et al (2009) show that training in positive problem orientation and the use of the complete PST

package that is, training in problem orientation plus all four problem-solving skills significantly increased the efficacy of PST in reducing depressive symptoms. Additionally, the results also suggested that training in all four problem-solving skills also increased treatment effectiveness.

It needs to be emphasised that the first two processes introduced by Osborn (1956, 1977) and Parnes (1976, 1999) crystallise the importance of understanding the problem and finding a problem which are at the core of gaining an insight towards solving a problem. Therefore, it seems to make sense that, as research took more accounting of creativity techniques as recommended previously by Osborn, treatments had a more positive impact on outcomes. For example, the results of component analyses support the view that PST for depression should be implemented according to the manual described by D'Zurilla & Nezu (2007), which emphasizes training in a positive problem orientation as well as training in all four major problem solving skills which are problem definition and formulation, the generation of alternative solutions, decision making, and solution implementation and verification). The mean effect size for the group of studies where all five aspects of PST were provided was much larger than that for the group of studies where it was not (d=0.84 and d=−0.04 respectively). The results of a meta-analysis conducted by Bell (2009) indicate that, although PST is an effective treatment for depression, clinicians and researchers can maximize its efficacy by including training in problem orientation as well as the four major problem-solving skills.

Yet, it seems that the new version of the process as understood by D'Zurilla & Nezu (1999) still could not address the aim or the actual effects of the CPS process proposed previously by Osborn and Parnes, despite efforts to use others of its concepts such as rational problem solving and problem orientation. For example, the process understood by D'Zurilla & Nezu (1999) was explained as attempting to identify a problem when it occurs, defining a problem, attempting to understand the problem, setting goals related to

the problem, generating alternative solutions, evaluating and choosing the best alternatives, implementing the chosen alternatives, and evaluating the efficacy of the effort at problem solving. Therefore, this may imply that the core process of CPS needs to be applied in order to maximise the actual effects of those techniques generated previously by Osborn, (1956) and (Parnes 1976, 1992).

One important aim of Osborn's theory was to teach appropriate skills of dealing with problems. In proposing the CPS process, Osborn's aim was to foster a positive problem solving style and facilitate problem solving toward resolving real-life challenges whereby people rely on their own abilities and believe that problems are solvable in an appropriate way.

In addition to conceptual problems, there are some methodological deficiencies in problem solving research and practice in youth depression. Measurement bias arises from employing raters who are not blind to the experimental conditions. Lack of the random assignment of participants and small sample sizes are also other flaws of these studies. In addition, there is little clarity in describing the process of treatment, inadequate variable descriptions and the use of narrow criteria for teaching problem-solving skills. For example, most applied studies cover only some of the CPS processes as general components in the overall problem-solving process. The results of such a constricted focus may not be generalised to actual global creative problem-solving ability. Therefore, it is possible that inconsistent results in the literature and outcomes which have not been maintained in follow up studies could be attributed to inadequate conceptual formulations.

In summary, there are several gaps and deficiencies in research into the use of creativity for improving mood and depression, especially in the educational and counselling contexts and among the adolescent population. Few ethical research and a need for

adolescent mental health interventions (Pattison & Harris 2006), few comparisons exist between CBT and CPS, and no randomised controlled trials or any application of this type of intervention has been conducted with the young population of Iran. Therefore, the present research is intended to fill these gaps within the literature in order to understand whether creative problem solving could really be as effective as CBT, in counselling settings. Moreover, one important factor regarding the efficiency of intervention could be how it affects individuals' perceptions concerning the intervention and how effective it is. Little evidence exists of the effects of students' perceptions on the course of intervention or of how understanding the quality of these changes in pupils' thinking may develop insight into applying effective intervention in youth depression. This research thus seeks to propose creative problem solving (CPS) as an effective intervention for depression especially in counselling contexts and among the adolescent population. Furthermore, this study investigates the actual effects of creative problem solving skills rather than problem solving therapy amongst depressed adolescents. Studies in clinical settings have investigated the procedures of problem-solving without using creativity techniques, and there is no information about these applied in the adolescent's population or in real life contexts. Also, no information is available on the differential efficacy of CBT in comparison with creative problem solving therapy and no clinical, pragmatic and control trials have been undertaken so far in counselling settings with this population.

1.7 Rationale of the study

There are several ways in which why this study adds to the scholarly research and literature in the field. In reviewing the aetiology of depression among youth, this research draws out the core factors of negative life events, challenges in life, interpersonal problems and deficiencies in skills of coping with challenges which cause depression, and finds common ground between these factors and the aims of creative problem solving which are referred to in the literature as finding ways to cope with challenges in life.

This study may help to improve practice as well as policy for decision makers, psychological and educational staff, counsellors and researchers. Although CPS involves theory within the fields of psychology and education, the lack of information on the application of such interventions within counselling settings could be considered as serious gap in the literature. Counsellors and psychologists within education need to understand creativity in theory as well as in practice. They also need to enhance students' creative ability and application of the necessary creativity skills to everyday life problems if they are to support students.

This knowledge could be used to guide interventions in the counselling environment within education, to facilitate effective ways for students to activate their thinking and to deal effectively with their own problems. Academic performance and the quality of thinking may be enhanced by effective treatment in practice. Despite the understanding of CPS within the fields of psychology and education, the knowledge attained by psychologists, educators and counsellors has not been given sufficient attention in educational settings. With large proportions of students experiencing at least some forms of depressive symptoms throughout their education, it seems rather inopportune to wait until those symptoms develop further into more major problems before referring them to clinical care or waiting lists to receive care.

If the methods used within clinical care are similar to those also used by psycho-educators, it seems much more logical for those students at potential risk of depression to receive such interventions during their education in order to prevent the occurrence of problems such as depression.

This study provides a unique contribution to the knowledge base by applying the CPS approach within school counselling settings in Tehran and also by comparing CPS with cognitive behaviour therapy (CBT) and a control group. Existing studies in this field show that only problem-solving (PS) treatment has been used for the treatment of major depression in adults have major depression in Europe and United States. The clinical researchers in this field have been studying problem solving (PS) without considering creativity skills, thus reflecting only part of the underlying theory. But their findings may have implicitly been generalised to the entire CPS theory. Therefore, this study uses CPS theory and applies creative techniques such as idea generating, delaying judgment, decision making, reasoning, brainstorming, self-awareness, self-regulation, team work and managing problems, in CPS treatment for adolescents. The aim is to help adolescents gain mastery and self-control.

The investigation builds on Osborn's (1979) study and departs significantly from past research because it serves to extend the CPS theory to the context of depression context among adolescents and uses CPS to assess the relationship between the CPS process and depression. Therefore, this research will also be valuable for future CPS research and in leading to a deeper understanding of the dynamics of the CPS process and relevant tools.
Moreover, the literature on early intervention for depression supports this argument. The United Kingdom Department of Health recommends that health promotion should be one of the main functions of child mental health services, and this suggestion has been approved by professional bodies (Harrington & Clark 1998). Therefore, in the UK, children's and adolescent mental health services for depressive symptoms have made

important advances with more focus on community-based treatment programmes and on interventions delivered through educational or social care systems (Health Advisory Service 1995).

In addition Neimeyer et al. (1989) reported meta-analytic results indicating equally efficacious outcomes in individual and group modalities (with effect sizes of 0.73 and 0.74, respectively). Regarding the success of group therapy, the rising costs of mental health and counselling services for depression (Layard 2006), the decreasing availability of supportive resources (Singleton et al. 2001), and increasing numbers of depressed students in the present research context (Iran's Education Organisation 2004), group therapy is likely to be the preferred and most important treatment in counselling settings. There is also a need to apply the main process of CPS, as there is no identifiable evidence to show the actual effects of CPS group therapy in the adolescent student population. To conclude, the most crucial contributions of this research project concern adolescents in Iran. The considerable number of pupils at risk of major depression, time constraints, the restricted availability of trained psychologists and limited access to psychological treatments are all good reasons for evaluating the efficacy of creative problem-solving treatment for adolescent with depression in counselling setting in Iran.

Moreover, one particularly important factor regarding the efficiency of intervention could be how it affects individuals' perception and how participants find the intervention effective. It is also important to consider the ways pupils could benefit from interventions. Despite a huge volume of RCT studies into the impact of PST and CBT on youth with depression, studies that explore the perspectives of pupils after intervention are rare. In this RCT study the standard questionnaires were followed by semi-structured interviews with pupils, where the research sought to explore pupils' perceptions of what constitute improvements in their level of depression, mood and feelings, how pupils think about

these factors and how they perceive the interventions and what factors influenced them in understanding the advantages of intervention. Since intervention programmes have so far attempted to focus on these issues and there is no evidence of the investigation of the students' perception during the course of intervention, this research brings to attention the importance of understanding such changes, which could provide an insight into designing effective intervention.

1.8. The aims and values of the research for the youth in the context of Iran

The current thesis builds on the literature in aetiology of depression in youth and also the knowledge of creative problem solving on one hand and on the other hand experience acquired by the researcher since 1991 in the Iranian context. Firstly, critical reviews of the literature identifies that cognitively vulnerable individuals are more likely than other individuals to experience increases in depressive symptoms only in the face of negative events; in the absence of such events, they are no more likely than others to exhibit depression (Abramson et al. 1988; Abela and Hankin 2009). Moreover, the stressful life events experienced by young people with deficiencies in responses to stressful life events or have deficiencies in interpersonal problem solving skills (Gladstone and Kaslow 1995; Kendler et al. 2001; Caspi et al. 2003; Gazelle and Rudolph 2004) can lead them to develop negative cognitive interpretations of life. Furthermore, studies indicate that adolescence is a critical period for understanding depression, as it is during this time that the majority of individuals who develop depression experience their first clinically significant episode (Hankin et al. 1998; Abela and Hankin 2009).

Moreover, consistent with literature, working in several psychological and educational duties, especially in secondary schools, the researcher learnt that not only a most important period in life is the teenage years but also vulnerable youth in this context are

likely to experience negative life events while there is no sign of support from both school and parents. The working experience of the researcher as a psychologist began in 1991 working as a psychological testing examiner in the Educational Organization of Tehran, followed by the completion of a master degree in educational psychology where the truancy in adolescents was chosen as a master thesis. Working as an educational psychologist and counsellor in secondary and high schools and in a counselling centre and finally teaching in the university as a lecturer while also working in the university's counselling centre; the experience gathered throughout these years of working with people of different age groups was that depressed adolescents mostly lacked skills in coping with the problems and challenges they faced, and these problems often created feelings of hopelessness and disappointment within them, resulting in depression. Most of the pupils and students who came to seek help, first began by stating their problems; for instance, they began by recounting an event which had happened in the past and explaining their symptoms. Depression was amongst one of the conditions young people in this context were repeatedly diagnosed with in that interpersonal issues seemed to be at the heart of all of those problems. Their coping mechanisms seemed to be mainly emotional when they were in need of cognitive skills to override their emotional coping mechanisms. Evidence from the Tehran Department of Education (2007, cited in BBC Persia 2007) clearly shows that considerable numbers of youth commit suicide during each academic year. This suggests that coping with depression during adolescence could be vital in several respects.

It is particularly important that adolescence has been considered as a critical period of life during which major changes occur (Corsini 2002) when clinical depression occurs (Kessler et al. 2001) it may significantly impair personal and social functioning, and the experience of changes in mood, thinking and activity during adolescence (National Institute for Health and Clinical Excellence (NICE) 2005). However, despite the fact that

vulnerable young people who have experienced negative life events are in need of appropriate support, the majority of schools and parents in Iran seem to cause further problems rather than being supportive. Difficulties such as exam failure, problem with peers and lack of pleasant activities are common problems in secondary state schools in Iran. This could create emotional disturbances among youths which may lead to being mistreated by parents and school which create some level of self-harm. Emotional disturbance is produced as a result of lack of social and interpersonal problem solving capabilities in interpersonal situations (Kelly 1982, p. 5). Moreover, due to the competitive atmosphere around academic achievement in Iran, this may create significant impairment in cognition and behaviour. The vulnerable pupils do not receive any support from their school and may have been neglected by both school and parents.

Moreover, the considerable number of pupils at risk of major depression in Iran, time constraints, the restricted availability of trained psychologists and limited access to psychological treatments are good reasons for evaluating the efficacy of creative problem-solving treatment for adolescents with depression in the counselling setting in Iran. It seems much more logical for those students at potential risk of depression to receive such interventions within their education to prevent the occurrence of problems such as depression. Thus schools in this context must not only be places for educational achievement, but also for teaching pupils how to overcome problems in life. For instance, previous studies have emphasised that poor problem-solvers are more likely to not be accepted by peers than good problem-solvers (Solomon & Wahler 1973; Spivack & Shure 1974). Thus, they need to improve skills in facing problems in order to maintain good relationships with others. In Iran the schools as well as media have failed to deliver adequate educational programmes to audiences teaching them about the challenges of modern life, or the notion of depression and also ways of dealing with it. When young people face those challenges in life, especially those related to interpersonal and social

interactions, they have very little support from family and others of school as who have not been prepared to fully understand or appreciate the sensitivity of these issues and also might not know how to deal with them.

The studies have shown that depressed individuals have a more difficult time generating alternative solutions to their problems that their non-depressed peers (Nezu & Ronan 1988; Marx et al. 1992) and have poorer decision making ability as compared to their non-depressed peers while depressive symptom severity is highly related to negative problem solving orientation (Kant et al. 1997). Therefore, it seems logical that vulnerable youth in this context need to acquire the creative skills for their life. CPS proposes creative techniques such as problem finding, problem defining, idea generating based a brainstorming, delaying judgment, decision making and reasoning which are likely to be essential for life.

Based on the literature and researcher's experiences identified above, the study aims to understand whether or not creative problem solving would be an appropriate intervention for youth in this culture. In fact research tends to develop relevant true statements to explain the situation. For example, if the literature about depression in youths shows that lack of problem solving skills in facing challenges causes depression (cause), equipping youths with the skills of solving problems could reduce depression (effects), that is of concern or that describes the causal relationships of interest. This means the researcher explores the relationship among variables based on literature and propose this in terms of questions or hypotheses (Creswell 2011), thus it is important to emphasise that in fact the researcher intends to test the null hypotheses which is a guard against bias in RCT research.

Depression has also a long history of investigation and generation of several standardised measurements for severity of depression. Based on the three questions central to the

design of research conceptualised by Creswell (2009), the research follows the quantitative approach for the strategies of inquiry for developing knowledge based on cause and effects thinking which belongs to positivism, or objectivism. Thus the study's intention is to collect data on standard and predetermined measurements in order to test the hypotheses and thus employs strategies of inquiry of experimental design (RCT) that yield statistics data. Therefore, the methodology and the strategy or plan of action that links methods to outcomes is also experimental research.

However, regarding the methods of data collection and analysis, the researcher uses a social pragmatism model in which the research problems are informed using both standard questionnaires and semi-structured interviews which the later belongs to social constructivism approach. It is very important to understand that depression could be expressed in the way that young people describe their own feelings and perception. The semi-structured interviews are used as complementary or elaborative to the quantitative approach where two methods of data gathering are used to investigate different aspects of the same phenomena to deepen the interpretations and conclusions from a study (Farquhar et al. 2011). Thus, as a pragmatist the researcher acknowledges both positivism and constructivism by using semi-structured interviews after standardised questionnaire and believes that this method of data gathering can complement the findings from the RCT by providing deep understanding of research problems (Creswell 2011).

1.9 Definition of variables

A dictionary of psychology state depression as the emotional state of persistent dejection, ranging from relatively mild discouragement and gloominess to feelings of extreme despondency and despair which are usually accompanied by loss of initiative, listlessness,

insomnia, loss of appetite and difficulty in concentrating and making decisions" (Corssini 2002, p.265). It has also been defined as group of symptoms and behaviours clustered around three core alterations in experience, changes in mood, in thinking and in activity, sufficient to cause impairment in personal and/or social functioning and loss of pleasure (Goodyer & Cooper 1993; NICE 2005).

Furthermore in two famous sets of classification depression has been defined as: A transient mood or affective state a syndrome of related symptoms, and a clinical disorder (Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV-TM), American Psychiatric Association (APA) 2000 and International Classification of Diseases, tenth edition (ICD), World Health Organization (WHO) 1993. The single nine-item criteria set of depressive symptom in DSM-IV has been identified as having several symptoms such as: depressed mood, loss of interest, decrease in energy or increased fatigue, sleep disturbance, appetite disturbance, recurrent thoughts of death, inability to concentrate or indecisiveness, psychomotor agitation or retardation. DSM-IV also requires a fundamental disturbance in mood and gives priority to a depressed mood and loss of interest requiring that one of the two be present. People diagnosed with major depression have a heterogeneous course from self-limiting to life-threatening. Predictors of poor outcome include severity at initial assessment, lack of reduction of social difficulties at follow-up and low educational level. DSM-IV ategorises severity of symptoms and degree of functional impairment as follows: mild depression having few symptoms in excess of those required to make the diagnosis and only minor impairment in occupational and/or social functioning. Symptoms of moderate depression or functional impairment range from mild to severe. Severe depression also has several symptoms in excess of those necessary to make the diagnosis and marked interference with occupational and/or social functioning (DSM IV-TR).

The definitions of variables in more details (see appendix 2) in the CPS process based on Osborn (1979) and Parnes (1992) are proposed as followed:

Fact finding: The stage of increasing an adolescent's understanding of an objective area to avoid 'premature closure' of a problem and to notice aspects of the objective area that have previously been overlooked or not anticipated, finding new ways of viewing the objective area, considering alternative perspectives on the problem, determining priority areas and refining the understanding of the problem.

Problem-Finding: Efforts towards the development of a correct problem statement to generate potential solutions. Failure to do this means that adolescents could spend time dealing with the wrong problem, and in fact this stage determines how successful solving that problem will be.

Idea-Finding: With a good understanding of the problem situation from the previous two stages, adolescents start to gather as much help and information to stimulate ideas using various techniques individually or in groups.

Solution-Finding: Deciding which ideas out of those selected before could have the potential to solve the problem stated. The goal is to arrive at an effective solution, which requires more than just negative critical judgment. The emphasis should be more upon affirmative judgment and recognising potential in each idea by considering the positive points and their best features and if possible modifying them towards a workable solution**.**

Acceptance-Finding: The aim is to come up with a plan of action after selecting the high quality solutions, but before implementing any solution all potential challenges and obstacles ahead must be taken into account and appropriate precautions must be taken. The acceptance finding stage is of great importance since it first of all convinces the person that the best workable solution has been chosen and, if there are any doubts and

uncertainties about the solution, those could be reduced or eliminated at this stage. In addition, gaining the acceptance of the participant helps with gaining the acceptance of others. There are several tasks for adolescents in order to achieve these stages.

1.10 Research aims

The first aim of this study is to examine the effectiveness of CPS as an intervention for depression as measured by Beck's Depression Inventory (BDI) and mood and feelings as measured by the Short Mood and Feeling Questionnaire (SMFQ).

Secondly, this research examines the effectiveness of group CPS in comparison with group CBT and a control group in improving symptoms of depression, in mildly and moderately depressed adolescent girls aged 13-15 as assessed by the BDI-II and short MFQ, both before and after completing the intervention, as well as in follow-up 2 months after completing the interventions.

The third aim of this study is to investigate the nature of the participants' perceptions about the course of intervention and the degree to which they applied the skills in the various problems they were confronted with.

1.11 Research questions

Some specific questions guided this study in addressing the research problem, which was the explanation of creative problem solving (CPS) therapy as an intervention to improve depression among those students at risk of major depression. The following questions helped drive this study:

1. Is creative problem solving (CPS) as effective intervention as cognitive behaviour therapy (CBT) in improving depression, mood and feelings among adolescent girls in counselling settings in schools in Tehran?
2. How effective is CPS compared with CBT? To what extent could two different interventions affect students' depression as measured by BDI and SMFQ?
3. How effective are CPS and CBT compared with the control group in the reduction of symptoms of depression?
4. Are there any correlations between the outcomes of cognitive and somatic as measured by BDI in the two interventions among girl students?
5. What were the students' perceptions of those interventions as stated in individual interviews? To what extent did they comprehend the significance of the methods?
6. Were there any differences between groups in the in students' perceptions?

1.12 Thesis hypotheses

Based on prior research and theory, several hypotheses are addressed:

1. There will be significant differences between pre-test, post-test and in the two-month follow up in the CPS group (independent variable) and the outcome of the (BDI-II) (dependent variable).

2. There will be significant differences between pre-test, post-test and in the two-month follow up in the CPS group (independent variable) and the outcome of the (SMFQ) (dependent variable).

3. There will be significant differences between pre-test, post-test and in the two-month follow up in the CBT group (independent variable) and the outcome of BDI-II (dependent variable).

4. There will be significant differences between pre-test, post-test and in the two-month follow up in the CBT group (independent variable) and the outcome of SMFQ (dependent variable).

5. There will be significant differences between CPS, CBT and control groups at the end of therapy and in the two-month follow-up in the DSM-IV criteria in general factors of depression as measured by the BDI-II.

6. There will be significant differences between CPS, CBT and control groups at the end of therapy and in the two-month follow-up in the DSM-IV criteria in mood and feelings as measured by (SMFQ).

7. There will be significant differences between CPS, CBT and control groups at the end of therapy and in the two-month follow-up in the DSM-IV criteria in cognitive and somatic factors as measured by (BDI-II).

8. There will be significant differences in the number of students achieving a good mood outcome of <14 in the BDI and of <8 in the SMFQ among the three groups.

9. There will be significant differences between the perceptions of selected individuals about the interventions based on the content of individual interviews before and at the end of the study.

1.13 Conclusion

This chapter reviewed findings from relevant studies in adolescents in the aetiology, consequences and treatment of depression. Longitudinal follow-up studies have yielded valuable information on the causes of depression in this population. These studies suggest a high prevalence of depression during adolescence, significant impairments in dealing

with life challenges and interpersonal relationships when there are poor problem solving skills in facing negative life events.

The chapter identified the problems of depression in adolescents and focused on uncertainties in their backgrounds and emphasised how depressed adolescents encounter many negative life events concerning such factors as peer relationship, academic problems, social conflicts and impaired relationships. Three main factors affecting depression in adolescents were highlighted as negative life events and challenges, including the maladaptive relationships with peers and others through which individuals develop negative cognitions. The chapter also highlighted links between everyday problems, life events and depression.

Increased effort to integrate the problem solving approach in to intervention programmes over the last two decades inducing recruiting large samples of depressed adolescent, in both universal and selective programmes has explored ways of reducing depressive symptoms. Research in applying intervention for depression has advanced significantly during this time. Findings are now derived from real life contexts with more emphasis on problem solving approaches in the aetiology of depression in adolescents.

Although PST studies provide a potential platform for explaining certain epidemiological findings in the prevention of depression by improving problem solving skills, the findings from these studies have been far from perfect. Despite these advances, there are many areas which need further research. It is necessary to move beyond simplistic models of PST in order to advance our understanding of the stages of CPS. Therefore, research is needed to examine the significance of creativity techniques in youth populations, as PST studies so far have underestimated the effects of CPS. Therefore, a study is also needed to address this deficiency by examining the effects of CPS in an adolescent population. A RCT study also is needed to compare CPS with a well-known therapy such as CBT in youth depression.

The evaluation of pupils' perceptions about the course of intervention in depression is also needed to identify any differences.

Based on the known aetiology of depression the chapter reviewed why changing the way we deal with depression in youth is important. It was emphasised why current interventions such as CBT, which only focus on modifying negative beliefs, could have less lasting outcomes. In contrast, since creative problem solving focuses on resolving problems in life which are the main causes of depression, it was therefore introduced in this study as a potentially effective intervention for treating depression in adolescents. The definitions of the concepts used in this thesis, was then followed by a review of problem solving therapy (PST) and the studies of creative problem solving related to cognition, behaviour and depression, were briefly reviewed. The historical development of creative problem solving (CPS) and its impact on depression, behaviour and cognition were outlined. The significance of this research and the questions and hypotheses that guided this thesis were also discussed.

The next chapter reviews in more depth the aetiology of depression as well as the literature related to different psychological interventions such as cognitive behaviour therapy, interpersonal therapy and problem solving therapy. Furthermore the chapters discusses the possibility that why creative problem solving could have longer lasting effects when treating depression in adolescents.

Chapter 2: Review of the literature

2.1 Introduction

This chapter provides an introduction to the literature on adolescent depression. It offers a critical review of the aetiology of depression, relevant theoretical perspectives and studies of adolescents. Previous studies of the treatment of depression among adolescents tend to be based on research on adults, with little concern for the aetiology of depression in developmental stages within youth. Recently a number of studies have been carried out on the epidemiology and aetiology of depression among youths which consider it from different angles and integrate the understanding of stressful life events, and interpersonal and cognitive vulnerability to depression of among adolescents. The chapter previews an overview of core psychological perspectives on depression in youth such as cognitive and interpersonal approaches and discusses common factors among existing interventions. The chapter also provides evidence of how adolescence is a critical stage in life in which young people encounter many life challenges. The chapter further discusses the need for applying an effective intervention appropriate to the aetiology of depression in youth and argues that, depression is mainly rooted in real life situations causing significant impairment in adolescents. Research has provided valuable information about adolescent depression, and several types of treatment and prevention programmes have been conducted in real life contexts. The relevant studies are reviewed here, with an emphasis on findings regarding the problems with and obstacles encountered in previous interventions for youth. Next, creative problem solving therapy is be introduced and the chapter explains why the CPST perspective can be usefully applied in reducing depression and why it is useful to promote creative thinking strategies. As part of this discussion, the study also addresses methodological issues and deficiencies in studies of intervention and describes the significance and the aims of the present study and the

rationale for carrying out the research. Finally, the specific questions which guided the study and the thesis hypothesises are put forward.

2.2 Definition of depression in youth

There are two main categorical systems in terms of definition of depression and the process that govern its expression. The two criteria systems of (DSM-IV-TM), American Psychiatric Association (APA) 2000, and the International Classification of Diseases, tenth edition (ICD) have been accepted by empirical research and experts (see Table a and b).

The most commonly used categorical systems for depressive disorder are the (DSM-IV; APA 1994), and (ICD, WHO 1993) which have been established by empirical studies and balanced by expert opinions. Depression has been defined as a transient mood or affective state, a syndrome of related symptoms, and a clinical disorder defined by official nosology (Diagnostic and Statistical Manual of Mental Disorders, fourth edition [DSM-IV; American Psychiatric Association 1994], International Classification of Diseases 10th edition [ICD; World Health Organization, 1993]). They view depression as a psychiatric disorder based on the number, severity, persistence, and impairment of symptoms (Kazdin 1995). The most recent versions of these two categories have increasingly resulted in greater convergence between them (Essau et al. 1997).

Both ICD-10 and DSM-IV have recognised eight symptoms in common in expressing depressive disorder including: depressed mood, loss of interest, decrease in energy or increased fatigue, sleep disturbance, appetite disturbance, recurrent thoughts of death, inability to concentrate or indecisiveness, psychomotor agitation or retardation. The criterion set in DSM-IV includes an excessive guilt with feelings of worthlessness, whereas ICD-10 includes two additional items including self-esteem and ideas of guilt and unworthiness, but both require a fundamental disturbance in mood, usually depressed

mood or loss of interest or pleasure. The structure of the diagnostic algorithms in DSM-IV presents the nine items in one set, but indicates that either depressed mood or loss of interest is required for a diagnosis of major depressive episode. As much of the psychiatric epidemiological literature is based on the categorical approach, the definition presented in present research focuses on depressive disorders as defined by DSM (Gruenberg et al. 2005).

Major depressive disorder (MDD) represents a severe and an acute form of a depressive disorder (APA, 1994). In DSM-IV, MDD is diagnosed when the adolescent has either depressed mood or anhedonia together with the presence of at least four other symptoms that involve vegetative, psychomotor, and cognitive domains. In adolescents, depressed mood may be replaced by irritable mood; failure to make expected weight gains may be observed in lieu of significant weight loss or weight gain, or decrease or increase in appetite.

Table a: The nine symptoms of depression within DSM-IV-TR (2000) criteria

1. Depressed mood most of the day 2. Loos of interest or pleasure in all or most activities 3. Significant unintentional weight loss or gain (appetite disturbance) 4. Insomnia or sleeping too much (sleep disturbance) 5. Agitation or psychomotor retardation noticed by others 6. Fatigue or loss of energy 7. Feelings of worthlessness or excessive guilt 8. Inability to think or concentrate, or indecisiveness 9. Recurrent thoughts of death (APA, 2000, p. 356)
Severity of Depressive Episode

Mild	**Moderate**	**Severe**
- Few, if any, symptoms in excess of those required to make the diagnosis and only minor impairment in occupational and/or social functioning for at least two weeks - Experience two of the key depressive symptoms; sleep disturbance, appetite disturbance, poor concentration, guilt, suicidal thoughts, anhedonia, psychomotor retardation, and fatigue,	- Symptoms or functional impairment between mild and severe for at least two weeks - Experience between three to five of the key depressive symptoms: sleep disturbance, appetite disturbance, poor concentration, guilt, suicidal thoughts, anhedonia, psychomotor retardation, and fatigue	- Requires two or more major depressive episodes. Diagnostic criteria is depressed mood and/or loss of interest or pleasure in life activities for at least 2 weeks - Experience at least five of the above symptoms that cause clinically significant impairment in social, work, or other important areas of functioning almost every day

Table b: The expression of depression by DSM-IV, ICD & NICE

Mood and emotion	**Thinking**	**Activity and behaviour**	**Personality**
- Sadness - Irritability - Loss of pleasure - Loss of confidence - Anger - Aggression - Crying, - Poor motivation	- Inefficient thinking - Self-criticality - Negative thinking (negative view to self, others and future) - Self-critical - Poor decision making	- low activity levels - Poor motivation - presence of anxiety - Low energy, - Tiredness, - Poor appetite, - Disrupted sleeping patterns, - Low activity levels - Poor motivation	- Poor self-esteem - Poor self-criticality - Deficiency in decision making - Poor self confidence in their ability

Even though the definitions about depression are more or less the same, these definitions seem to be mostly very general. A dictionary of psychology describes depression as: "The emotional state of persistent dejection, ranging from relatively mild discouragement and gloominess to feelings of extreme despondency and despair which are usually accompanied by loss of initiative, listlessness, insomnia, loss of appetite and difficulty in concentrating and making decisions" (Corssini 2002 p.265). Depression also has been defined as a group of symptoms and behaviours clustered around three core alterations in

experience, changes in mood, in thinking and in activity, sufficient to cause impairment in personal and/or social functioning and loss of pleasure (Goodyer and Cooper 1993; NICE 2005). The World Health Organisation (WHO 1996) has regarded depression in terms of disability-adjusted life years (DALYs). Empirical evidence (Angst 1988; Roberts et al. 1995; Lewinsohn et al. 2003) supports the view that the necessary features, core symptoms and diagnostic criteria for all mood disorders are similar in children, adolescents and adults. All of these definitions seem to have the implication in common that depression impairs lives.

Furthermore, the symptoms associated with depression can lower and impair the personal and social functioning of youth. In clinical terms and according to NICE (2005), a depressed patient experiences several changes in mood, thinking and activity during the occurrence of depression. Mood changes usually include sadness and irritability alongside a loss of pleasure in activities; cognitive changes generally lead to inefficient thinking with self-criticality and, as a physical effect, the depressed youth become less active with the presence of anxiety or agitation. These alterations also lead to poor self-esteem and self-criticality which also impair decision making in youth. Subsequently they will lose confidence in their ability, which will negatively skew their behaviour and social interactions. Aside from changes in personality, changes will occur in the body including low energy, tiredness, poor appetite, disrupted sleeping patterns, low activity levels and poor motivation. A patient diagnosed with minor and moderate depression is one who experiences two to five of the key depressive symptoms respectively; sleep disturbance, appetite disturbance, poor concentration, guilt, suicidal thoughts, anhedonia, psychomotor retardation, and fatigue (NICE 2005).Thus experiencing only some of these changes may be enough to impair personal and social functioning. Therefore, effective intervention which is consistent with the aetiology of depression in youth and meets the criteria of the psychopathology of depression in adolescence seems to be essential.

The above changes also reduce self-esteem which also impair decision making. Subsequently depressed people will lose confidence in their ability, which will negatively skew their behaviour and social interactions. Changes will also occur in the body including low energy, tiredness, change in appetite, and change in sleeping patterns, activity levels and poor motivation.

Although the aforementioned provide a description of depression with an overview of the most common symptoms; depression in youth could be conceptualised in more depth. It could be viewed in a more specific manner in which it would vary depending on different factors such as the duration of symptoms, their onset number and nature, age, gender, and transitional period. There is also evidence of age differences in symptom expression that may reflect developmental changes in cognitive, emotional, biological, and social competencies (Cichetti and Toth 1998; Avenevoli and Steinberg 2001; Kovacs et al. 2003; Weiss and Garber 2003). Research in youth depression suggest that while somatic complaints decrease with age, hypersomnia and reduced appetite among girls increase during adolescence, and suicide risk peaks during middle (for girls) or late (for boys) adolescence (Ryan et al., 1987; Mitchell et al., 1988; Kashani et al. 1989; Kovacs and Gatsonis 1989; Weiss et al., 1992; Kovacs et al. 2003). Furthermore, more attention should be paid to the number of symptoms or duration of episodes among the large proportion of children and adolescents with subthreshold depressive symptoms (Kessler and Walters 1998; Angold et al. 1999) who report almost as much functional impairment and seek treatment at the same or higher rates as adolescents with major depression (Angold et al. 1999; Gonzalez-Tejera et al. 2005). These arguments imply that the understanding of the aetiology of depression in youth needs to consider transactional and developmental differences during the adolescence period and all of the factors and process that threaten youth at this stage. Failing to consider these factors may result in

insufficient treatment and support. This is particularly important given that adolescents may need to be supported by effective interventions at the right time.

When young people develop a depressive episode, it is likely that their wellbeing could be impaired. Regardless of different theories of depression in youth, all that depression impairs behavioural, social, emotional and physical health in youth. Research highlights that there are significant changes in physical, cognitive and behavioural activities (Ferguson et Al. 2005). Physical changes may include low energy, low levels of activity, apathy, tiredness and poor motivation. Cognitive changes lead to inefficient thinking and self-criticality. These youth will not value themselves and will blame all life events and difficulties as being their own fault. They doubt their abilities and regard themselves as failures in life and have no hope for a better future or in being able to make improvements. They may complain of a loss of concentration, pre-occupied minds and struggling to make decisions. Cognitive changes may lead to emotional changes such as a reduction in self-esteem, feelings of worthlessness, and loss of interest, with low emotional responsiveness, loss of confidence about their good qualities, irritability and aggression, disinterest in general appearance and declining academic performance for no apparent reason (BPS 2005). Therefore, in the process of supporting the vulnerable adolescents, all of the above parameters need to be taken into consideration.

2.3 The estimate prevalence of depression

Along with differences in definitions, there are also differences in the estimates of prevalence of major depression across national and international populations. For example, a national probability sample of adolescents in the US reported a 15% lifetime prevalence of major depression (Kessler and Walters 1998). In contrast, prevalence estimates of sub-threshold depressive disorders and syndromes, including minor

depression, are generally higher than those of major depression across all age groups (Angold et al. 2002; Costello et al. 2003; Gonzalez-Tejera et al. 2005).

The highest estimate for adolescents has been reported at 23.2%, according to Reinherz et al. (2003). Several studies, however, reported lifetime prevalence in adolescents with estimates ranging from 9.3% (Wittchen et al. 1998) to 24.0% (Lewinsohn et al. 1993). Other research (Karmer and Garralda 1998) indicates prevalence estimates of around 20% amongst 13-15 year olds attending primary care. According to the WHO (1996), the prevalence of depression is 4–8% in adolescents. However, epidemological studies (Birhamer, et al. 1996) suggest that up to 8.3% of adolescents suffer from a depressive disorder and up to 20% will suffer at least one clinically depressive episode by the age of 18. A summary by Costello et al. (2005) yielded estimates of the median and range of the prevalence of mood disorders in youth at 4% (0.2–17%), where approximately 17% of youth in the United States suffer from a serious mood disorder that leads to functional impairment. This implies that one out of every seventeen youth in the US may be in need of treatment; however, the results of these epidemiological surveys reveal that the vast majority of youth with serious problems do not receive treatment for their condition (Costello et al. 2005). In the UK prevalence estimates are of 1.4% amongst 11–16 year olds in the community and around 20% amongst 13-16 year olds attending primary care (Kramer and Garralda 1998; Green et al. 2005). And the cost of depression in the UK is estimated £17bn (Layard 2006), less than 10% of depressed people receive a talking therapy (Singleton et al. 2001).

Depression also has more prevalence among adolescents females compared to males whereas there are no significant gender differences among children (Costello et al. 2003). This could be as a result of the transition period where girls become more vulnerable to depression than boys due to experiencing specific critical factors; it may also be attributed female prevalence of depression begins to emerge around the age of 13 (Nolen-Hoeksema

and Girgus 1994). In a longitudinal follow-up study, however, showed depression among females begins to emerge after the age of 11 and again between ages 15 and 18 (Hankin et al. 1998). The inconsistency may be as a result of different type of methodologies, differences across samples and between different geographical areas. Regardless of different prevalence rates and with respect to the medium rate of incidents, the evidence shows that the adolescence years are the most critical period for developing depression. In addition, since depression increases during the middle adolescence years among females far more than among males, this suggests that more attention should be paid to protecting adolescent girls in this critical period. Therefore, it may be of vital importance for educationalists to be sensitive to changes in all aspects of life among adolescents and that schools are important places for improving and preventing depression. Taking into account all of the points mentioned above, sensitivity to changes in students who are at risk could prevent the development or conversion of those symptoms into full depression. With failure to care for the needs of young people during this period, it seems that vulnerability to depression becomes inevitable later in adulthood.

2.4 The psychological theories around the development of depression and debate concerning the aetiology of depression in youth

There are several psychological theories and psychotherapies which explain the aetiology of depression and thereby propose treatment accordingly. Psychoanalytical theory Freud (1896, 1900) introduces a psychodynamic model of personality based on the id, ego and super-ego. This theory emphasises the role of early child parent relationships in shaping the conscious and unconscious mind. New perspectives of psychodynamic theories (Blatt & Zuroff 1972; 1992) also are discussed in the study.

Cognitive theories of depression define vulnerability as an internal and stable feature of an individual that predisposes him or her to develop depression, they mainly concerned

with the relationship between human mental activity and the experience of depressive symptoms and episodes (Ingram et al. 1998). Within the cognitive theories the study discusses hopelessness depression theory(Abramson et al. 1989) which is a cognitive diathesis–stress theory that posits a series of contributory causes that interact with one another to culminate in the proximal sufficient cause of a specific subtype of depression hopelessness depression. Also the study explains cognitive theory (1967, 1983) which proposes that certain individuals possess depressogenic schema that confer vulnerability to depression. Beck's model is also a diathesis–stress theory that posits a series of contributory causes that interact with one another to culminate in depression (Beck, 1967 1983). Beck hypothesizes that depressogenic schema are typically organised as sets of dysfunctional attitudes and also the response styles theory (Nolen- Hoeksema 1991) which suggests that the way in which individuals respond to their symptoms of depression determines both the severity and duration of symptoms. There is also a perspective common in psychodynamic and cognitive theories which explain that certain personality traits serve as vulnerability factors to depression (Blatt & Zuroff 1972; Beck 1983). Each theory proposes a personality predisposition focused on interpersonal issues and achievement issues. Psychodynamic theorists label these personality predispositions as dependency and self-criticism (Blatt & Zuroff 1972), whereas cognitive theorists label them as sociotropy and autonomy (Beck, 1983). In both of the theories the extent to which they represent trait-like risk processes in youth remain unknown. Furthermore the study also argues about interpersonal theories. In addition to traditional interpersonal theories, the study also discusses about the contemporary developmental perspectives (Rudolph 2008). In this model depression is a disorder that occurs within an interpersonal context. Depressed youth experience significant disruptions in many aspects of their relationships. They view themselves and are viewed by others as having considerable impairment in their social skills. They often encounter rejection and conflict in their

relationships. Consequently, most contemporary theories of depression incorporate the role of interpersonal factors. According to this model, early family disruption (e.g., insecure parent–child attachment, parental depression) interferes with the development of adaptive interpersonal behaviours and fosters maladaptive interpersonal behaviours. These social-behavioural deficits cause youth to generate disturbances in their relationships, which heighten risk for subsequent depression (Rudolph et al. 2008)

2.4.1 *Psychoanalytical theories of depression in youth*

Several different approaches to depression seem to have been drawn originally from Freud's psychodynamic theory (Freud 1896, 1900) such as theoretical views on attachment theory and early child parent relationships (Bowlby 1980), the interpersonal perspective of (Salivan 1953), cognitive theory (Beck 1967), and cognitive vulnerability-stress theories, (Clark et al. 1995) which offered different points of view on the role of negative interaction and maladaptive interpersonal relationships in shaping negative attitudes in the aetiology of depression in adolescents. Freud (1896, 1900) was the first to introduce a psychodynamic theory of personality based on the id, ego and super-ego and he crystallised the role of early child parent relationships in shaping the conscious and unconscious mind, where the unconscious mind is viewed as the centre of conflicts and thus affects current behaviour. Working with his patients, Freud seems to be the first to emphasise the role of human cognition as well as interpersonal problems in affecting personality. Based on this theory discovering unconscious problems is likely to be the most important step towards understanding the aetiology and of treating depression. According to this perspective, developing insight into inner conflicts increases the likelihood of identifying actual problems in patients' minds, enabling them to gain a better understanding of the problem and thus resolve them appropriately. According to Freud (1900) dreams represent conflicts, wishes, worries, fears, and angers that have been

suppressed in real life during the personal developmental background which are unleashed at night time. Conflicts suppressed in an individual's unconscious could lead to psychological disruptions, including depression.

In psychoanalytic child psychotherapy interventions, the therapist and patient seek insight into conflicts and problem behaviours or modes of thought and how these are represented in current situations and relationships (NICE 2005). This leads to patients being given an opportunity to explore through play, drawing, talking and behaviour, feelings and conscious and unconscious conflicts originating in the past or in learnt behaviour. The technical focus is on interpreting and working through conflicts and recurrent problematic areas of behaviour and relating as they manifest in the treatment situation. All throughout growth, the human mind is also growing through absorbing what surrounds the person within the context of the person's relationships with other objects or people. Therefore, the role of interpersonal relationships in shaping the mind and cognition is of the utmost importance. Specifically in this study, both cognition and interpersonal relationships are equally important and should both be investigated as factors in developing depression. Freud seems to insist on the importance of the unconscious and the negative effects of problems that the individual is not readily aware of; therefore, it is likely that reversing this correlation by allowing the individual to gain an insight into their problems and understand the nature of the problems could be helpful when treating depression. Moreover, theories of self-awareness and self- efficiency (Bandura 1976) have been developed to help individuals become aware of their thinking and perception, as one's cognition is shaped through thoughts, derived from interaction with others and life events. Although psychoanalytic therapy is likely to be the core of all therapeutic approaches, since it holds that the role of problem finding and problem resolution is important, it is a non-directive approach in which the recipients are not taught specific skills. On the other hand, thought monitoring and other skills such as re-evaluating and problem solving have

been found to be very effective in studies where young people independently apply these skills to better understand themselves, their attitudes, emotions and cognitions (see Table c).

Table c: Psychoanalytic theories and therapies

	The concepts of theory	**Therapy**	**Advantages & disadvantages**
Psychoanalytic theories Freud, (1896, 1900) Dependent and self-critical personality Psychoanalytic Blatt et al., 1974; Blatt and Zuroff, 1992)	Psychodynamic of personality based on: id, ego and super-ego Early child parent relationship shapes Conscious and the unconscious mind conflicts and current behaviour Dreams are those conflicts, wishes, , worries, fears, angers that have been suppressed in real life during the developmental background Interpersonal relationship affects cognition and personality Conflicts suppressed in an individual's unconscious could lead to causing psychological disruptions including depression. Conflict finding and conflict resolution	Therapist and patient explore insight into conflicts and problem discovering the unconscious mind and inner conflicts increases the identification of actual problems in patients' minds and enables them to gain a better understanding of the problem This leads to patients being given an opportunity to explore through play, drawing, talking and behaviour, feelings and conscious and unconscious conflicts, originating in the past or in learnt behaviour. The technical focus is on interpreting and working through conflicts and recurrent problematic areas of behaviour and relating as they manifest in the treatment situation (ibid).	Allowing the individual to gain an insight into their problems and understand the nature of the problems could be helpful when treating depression. This theory is the core of all psychological approaches It is a non-directive approach which rely on the skilfulness of therapist The recipients are not taught specific skills such as thought monitoring, re-evaluating and problem solving to be able to apply them independently

2.4.2 *Cognitive theories of depression in youth*

Among cognitive theories of depression there are several groups of cognitive models of depression in youth. These include of the cognitive theories of dysfunctional attitudes (Beck 1967), the helplessness theory (Abramson et al. 1989; 1978), the contingency-competence control model (Weisz 1986), response styles theory (Nolen-Hoeksema 1991; Cole 1990), the theory of personality predispositions to depression (Blatt et al. 1974; Beck 1983; Blatt & Zuroff 1992) and the self-perceived competence model (Cole 1990, 1991a), which emphasise the relationship between experiencing depression and the mental process of cognition, where individuals can perceive, recognise, conceive, judge and reason with each other.

Although Beck (1967) previously viewed vulnerability to depression as an inner characteristic of an individual that influences him or her to develop and maintain depressive episodes he shifted later to a more realistic perspective in which he considered the role of interpersonal issues in creating such attitudes. The early cognitive models (Beck 1967) viewed negative cognition and dysfunctional attitudes and beliefs as sufficient causes of depressive symptoms and failed to consider the fact that vulnerability to the development of depressive symptoms surfaces in an individual only when facing negative events, as recently mentioned by Abela (2009).

Defining three cognitive patterns among vulnerable individuals, Beck identifies negative patterns towards the self, the future and the world, all of which serve to develop depression. Vulnerable individuals view themselves as inadequate or unworthy in experiencing life and feel that there is nothing they can do to change this (Beck 1967; 1983). These negative errors in thinking increase the probability that an individual will develop depression. Presenting the term "schema" as the source of a person's cognitive style, Beck (1967) believes that when an individual is faced with a situation, the schema most relevant to the situation is activated and consequently influences how the person perceives, encodes, and retrieves information in specific situations. Various studies (Lewinsohn et al. 2000; Abela and D'Alessandro 2002 and Abela and Sullivan 2003; Hankin 2007) have examined the components of Beck's theory in adolescent samples and have obtained results ranging from consistent to partially consistent with his 1967 theory.

However, considering interpersonal and achievement issues in addition to negative attitudes, Beck (1983) modified his view by introducing personality characters is known as sociotropy and autonomy. Taken originally from the psychoanalytic orientation Blatt et al. (1974) and Blatt and Zuroff (1992), Beck introduced these characters as interpersonal risk factors in vulnerability to depression. For instance, Blatt et al. (1974) recognised two types of depression as dependent (anaclitic) and self-critical (introjective) depression,

where a dependent anaclitically depressed person experiences feeling of loneliness and helplessness and fear of being left alone by others. They rely on others to provide them with feelings of mental wellbeing and are in constant need to be cared for and nurtured. They have difficulties coming to terms with loss and separation and try to seek immediate substitutes. In contrast, a self-critical introjective depressed person is self-critical and has feelings of unworthiness, inferiority, failure, and guilt. These individuals have a constant fear of disapproval, criticism, and of losing the acceptance and love of significant figures their lives.

Adapting his theory to that of Blatt, Beck (1983) hypothesised that those individuals who are high in sociotropy/dependency are concerned with interpersonal issues; they need to obtain the support of others to maintain a sense of well-being. Failing to obtain such support, therefore, can be assumed to cause vulnerability to developing depression. They develop signs of depression when they perceive disruption in their relationships with others, interpersonal loss, and social rejection. However, those individuals which exhibit high levels of autonomy or self-criticism are concerned with achievement issues; they need to meet their own and/or others' standards to maintain a sense of wellbeing. Failing to develop and meet such standards is then a risk factor in developing depression. This assumption has been supported by some research findings (Abela et al. 2007), whereas other findings (Abela and Taylor, 2003) provide no support for these models. Apart from this, Arieti and Bemporad (1978; 1980) also distinguished two other types of depression. Dominant other and dominant goal types are characterised respectively as wishing to be reassured of love and worth either by a dominant person or from focusing on a dominant goal. For example children with depression of the dominant other type react to a sudden loss of love or approval by developing a dependant relationship with that dominant other, in contrast those with depression of "dominant goal will react by focusing relentlessly

with all their efforts" on a specific goal. Based on this, whenever the dominant other is lost or the dominant goal is not achieved depression results.

Based on the above discussion, Beck seems first of all to have only taken into consideration dysfunctional beliefs as sufficient cause of depression, and paying little attention to why dysfunctional cognitions are created. Inspired by Blatt, he considered interpersonal relationships as a cause of the development of depression; however, he failed to consider this in his cognitive therapy. Secondly, considering that both Beck and Blatt seemed to have arrived at the same point of in the role of people struggling with interpersonal issues and achievement issues when it comes to vulnerability to depression, they mostly emphasised the states and symptoms of these two personality types instead of focusing on the causes of those struggles and problems. In addition, Beck didn't consider the role of negative life events as important factors in vulnerability to depression.

Another cognitive theory is known as the response styles model, which was introduced by Nolen-Hoeksema (1991) as she was interested in studying gender differences in youth, and her findings indicated that the rates of the occurrence of depression are higher amongst females than males, proposing two response styles named the rumination and distraction types. According to this model, women are more likely to ruminate over problems in response to a depressed mood, whereas men are more likely to distract themselves. She argued that individuals who engage in ruminative responses are likely to experience increased severity and duration of symptoms, whereas those who engage in distracting responses are likely to experience relief. The response styles theory hypothesises that the way in which individuals respond to their symptoms of depression determines both the severity and duration of such symptoms (Nolen-Hoeksema 1991) and some studies (Abela et al. 2002; Hilt et al. 2007) have supported the idea that rumination is related to greater severity of depressive symptoms in youth.

Diathesis-stress model of depression is also another type of explanation emerging from cognitive theories. For instance, other cognitive theorists (Abramson et al. 1988; Alloy et al. 1988) agree that such inner characteristics influence individuals when they experience negative events. This view is known as diathesis-stress was proposed that depression is produced by the interaction between an individual's cognitive vulnerability and certain environmental conditions that activate this diathesis (Nolen- Hoeksema 1991). Therefore, individuals are the same under normal condition, but when they are faced with negative life challenges people who are less vulnerable can respond with an appropriate level of distress; however, vulnerable people cannot respond appropriately and thus the symptoms of depression are assumed to appear. On the other hand, vulnerable individuals may be different with regards to their level of cognitive vulnerability. Different negative life events may have variety of outcomes among individuals with different levels of vulnerability. The higher the level of cognitive vulnerability an individual possesses, then less stressful negative events may be enough to trigger the onset of depressive symptoms or episodes (Abela 2009). Thus, even youth with low levels of cognitive vulnerability when confronted with extreme stressors may be at risk of developing depression.

In addition to the perspective that sees vulnerability to depression following negative life events, another cognitive theory of depression links a sense of helplessness to depressive symptoms in youth. Helplessness theory (Abramson et al. 1978; 1989) views a sense of hopelessness in facing life challenges as a vulnerability factor and a sufficient cause of depression across the early adolescent population. The theory assumes that the interactions of depressogenic inferential styles and the life events cause depression. This theory recognises three different styles about self, consequence and the world which serve as causal factors in hopelessness depression. Vulnerable adolescents may have the tendency to attribute negative events to global causes. They may also perceive negative

events as having many disastrous consequences. Finally, they may view themselves as flawed or deficient following negative events.

Consistent with other perspectives, this view also clearly implies that individuals who possess the aforementioned characteristics may experience depressive disorders when encountering negative events. This model introduces two further traits which are personal helplessness and universal helplessness. Personal helplessness is characterized as the belief that one's actions will not increase the possibility of the occurrence of positive outcomes or the non occurrence of negative outcomes, whilst universal helplessness refers to the belief that the occurrence of positive or non occurrence of negative outcomes is not dependent on an individual's behaviour or that of the relevant others. Some studies (Dixon and Ahrens 1992; Abela 2001 and Prinstein and Aikens 2004) support the hopelessness hypotheses, while other studies (Bennett and Bates 1995; Abela and Sarin 2002; Spence et al. 2002) have failed to support this explanation across youth samples (see Table d).

Table d: Cognitive theories and therapies

The name theory	The theory	The concept of treatment	Advantages & disadvantages
Cognitive theories Dysfunctional attitudes (Beck, 1967), Personality predisposition (Beck, 1983) Helplessness theory (Abramson et al., 1989; Abramson et al., 1978), Control related beliefs; Contingency-competence control model (Weisz's 1986), Response styles theory, (Nolen-Hoeksema, 1991; Cole's 1990), Self-perceived competence model (Cole, 1990, 1991), Dominant other and dominant goal personality Arieti and Bemporad (1978, 1980:	Viewed negative cognition and dysfunctional attitudes and beliefs as sufficient causes of depressive symptoms The negative error and schema lead to three negative patterns towards the self, the future and the world, When an individual is faced with a situation, the schema most relevant to the situation is activated and influences how the person perceives, encodes, and retrieves information in specific situation. Personality characters known as sociotropy and autonomy, consider interpersonal factors as the risk factors to vulnerability to depression.	Cognitive therapy (CT) for modifying thoughts Several sort of programmes known as CBT which added behavioural modification in cognitive therapy and recently they added some aspects of problem solving	Teach skills such as monitoring thoughts and cognitive error and modifying them Participants can apply the skills independently Fail to consider interpersonal and creative problem solving skills

2.4.3 *Interpersonal theories of depression in youth*

In contrast to this, another set of perspectives is known as interpersonal theories of depression. These theories concentrate more specifically on the role of interpersonal experience in the context of depression in youth and are based on attachment theory (Bowlby1969; 1978; 1982) and interpersonal psychiatry (Sullivan 1953). For example, interpersonal theory emphasises the role of the relationship and their interactions between parent and child in early years, which have an effect on the development of the child and can lead to either of those personality types referred to by Beck and Blatt as struggling with interpersonal issues or achievement issues. The caregiver's lack of sensitivity and responsiveness are two factors that could create a sense of unworthiness of love in an individual, and the caregiver may be viewed as cold and untrustworthy. Interpersonal problems such as those apparent in interactions between adolescents, friendship, child-parent relationships and poor communication with others are more frequent within depressed adolescents.

Interpersonal theories of depression also propose that characteristics and behaviours of depressed and depression-prone individuals disrupt social relationships by evoking negative responses from others (Coyne 1976; Gotlib & Hammen 1992; Joiner et al. 1999; Joiner 2002) and generating interpersonal stress and conflict (Rudolph et al., 2000). Alongside the early parent-child relationship, more recent models from interpersonal theory concentrate on current relationships among youth. Based on the current literature of interpersonal theory, Rudolph (2009) proposes a developmental interpersonal model. In her developmental perspective she first suggests that maladaptive relationships are the foundations of vulnerability to depression. This is based on the interpersonal theory which suggests that those people who define their self-worth in accordance with their success in relationships become susceptible to depression when they face interpersonal pressure or failure. As a result of regarding themselves unworthy and incapable and

others as untrustworthy, these individuals develop negative views towards the self and others and pessimistic expectations about all other relationships, which they will then apply to their future encounters of interpersonal situations as well. This will be followed by a lack of perceived control in relationships and therefore feelings of hopelessness about their social life. They also invest considerable time and energy in thinking about analysing and worrying about their relationships and become extremely sensitive to and aware of the behaviour of others, which can lead to over-reaction to rejection. Also these individuals would have the tendency to want to do please others and seek the approval of others at the cost of their own needs. When failing to achieve their goals, they experience feelings of shame and disappointment in themself.

Although some research (Abela et al. 2005) supports the idea of a link between maladaptive relationships and vulnerability to depression, the nature of the link has not yet been validated. More studies need to be carried out to determine whether these types of appraisals lead to subsequent depression. However, all of the factors mentioned above could be viewed in a different light. They may be interpreted as the result of deficits in individuals' interaction and weak communicational strategies, which they have learned throughout their developmental processes and within the family environment, in other words, failing to communicate appropriately in facing challenges in life results in the development of perceived failure.

How young people respond to stressful life events could be important. If presented differently one could see a link between the developmental perspective of interpersonal theories and the cognitive diathesis stress models of depression in youth. As with cognitive views, there are different types of responses to stressful life events such as effortful and involuntary responses, and involuntary responses could be viewed as relating to vulnerability to depression. Consistent with the effects of maladaptive relationships, in her developmental model Rudolph (2009) believes that social deficits

caused by poor self-regulation, social disengagement and engaging in negative behavioural self-focus lead to vulnerability to depression. According to this view, youth have not been able to achieve the needed self-regulation in response to the challenges they face in life. Purposeful and goal directed ways of responding to stress result in more successfully dealing with social challenges. Youth who effortfully responding are those who effectively manage their emotions and act in a purposeful and goal directed way, whereas involuntarily responding youth are those who become overwhelmed with emotions. With effortful responses adolescents are more likely to effectively deal with social challenges compared to youth with involuntary responses. Failure to deal with such challenges leads later on to a negative sense of self-worth and self-efficacy following the failure to regulate cognition and emotion in resolving social problems. Various researchers (Rudolph et al., 1994; Connor-Smith et al. 2000; Langrock et al. 2002; Jaser et al. 2005; Flynn and Rudolph 2007) also support the idea that depressed youth will show poor self-regulation within relationships and also less effective negotiation skills during conflicts, and less effortful engagement such as in problem solving skills than non-depressed youth.

In addition, and consistent with cognitive models of vulnerability to depression, youth with maladaptive relationship appraisals, social behavioural deficits and social disengagement are more likely to become at risk of developing depression when they encounter challenges in life (Rudolph 2009). They are also thought to react to situations in ways that create more risk of depression. Depressed adolescents also face difficulties in their close relationships such as lower level of intimacy, more conflicts, weak conflict resolution, and more friendship stress, arguments and break ups. According to youth and their parents, there are links between family disturbances and adolescent depression which surface more in less intimate and less warm parent-child relationships, and research also supports the idea that relationship disturbances between peers and within

families cause the occurrences of depression (Stice et al. 2004; Hankin et al. 2007). This is particularly important within adolescence, which involves transactions and broader changes to the life of an individual, especially for girls. Girls at this stage are more at risk of developing depression than boys, as girls have greater exposure and reactivity to challenges at this time

Thus, according to the interpersonal perspective, depression first occurs when youth experience significant disruptions in some aspects of their relationships in the interpersonal context. Secondly, they may recognise considerable impairment in social skills and consider that they often encounter rejection and conflict in their relationships. It is important that the interpersonal issues among adolescents be identified in order for effective interventions to be developed. The component risk factors of all of these theories and models, including cognitive perspectives and interpersonal vulnerability to depression, seem to have a similar message when considering young people, which is that depression occurs following the experience of life challenges and problems.

The present research has intention of clarifying all of the various factors that can assist in or lead to the development of depression. Deficiencies in interpersonal relationship are likely to affect thinking and lead to dysfunctional beliefs, especially when faced with negative and stressful live events and challenges. In terms of what is thought to lead to the development of depression, a multiple of factors have more recently been taken into account. Based on the literature concerning depression in youth, Abela et al. (2009), propose an integrative model for cognitive vulnerability to depression in which the important factors are grouped into three categories: those factors that increase the possibility of engaging in negative thought processes following the occurrence of negative events, the factors that contribute to the occurrence of stressful life events, and the factors that increase the likelihood that, once present, negative thought processes

produce depressive symptoms. In other words, in the absence of such events, cognitively vulnerable individuals are no more likely than others to exhibit depression (see Table e).

Table e: Interpersonal theories and therapies

The name theory	The concept of theory	The concept of treatment	Key messages; advantages & disadvantages
Interpersonal theories Interpersonal psychiatry (Sullivan, 1953) Attachment theory (Bowlby, 1969, 1978, 1982) Developmental model of IPP Rudolph (2009)	Emphasise on interpersonal experiences in the context of depression in youth Role of relationship between parent and child in early years and their interactions, and interpersonal issues The caregiver's lack of sensitivity and responsiveness are two factors that could create a sense of unworthiness of love in an individual, and the caregiver may be viewed as cold and untrustworthy. Social deficits caused by poor self-regulation, social disengagement and engaging in negative behavioural self-focus gives way to vulnerability to depression Failure to deal with challenges leads to a negative sense of self-worth and self-efficacy and failure to regulate cognition and emotion in resolving social problems	Interpersonal Psychotherapy (IPT) Need to learn effortful responses to effectively deal with social challenges They need self-regulation skills in response to challenges they face in life Learning effortful responding to effectively manages the emotions and act in a purposeful and goal directed way They need to learn the skills when face difficulties in their close relationships such as less intimacy, more conflicts, weak conflict resolution, more friendship stress, arguments and break ups Focussing on here and now, therapists and patients work together to create a positive atmosphere and try other ways of interaction and to modify the problems recognised in the therapy session (Rudolph, 2009).	Friendships, child parent relationship and poor communication skills with others are important factors.New models of IPP concentrate on current relationship In developmental model of IPP Rudolph (2009) integrate cognitive and interpersonal theories and proposes: Maladaptive relationships are the foundations of vulnerability to depression when they face interpersonal pressure or failure, view themselves unworthy others as untrustworthy, develop negative views towards self, others and apply to the other relationship and future, lack of perceived control in relationships and feelings of hopelessness about their social life. Disturbances and conflict between peers and families cause the occurrence of depression However, there is no specific skills for those problem, This treatment relies on the ability of the patients themselves and also the competence of the therapist in the technique used to apply this treatment would require the patients to have a good level of self-awareness to be able to respond to it (Davidson et al. 2004).

2.4.4 *Behavioural and social theories of depression in youth*

Originating from the operant conditioning paradigm (Skinner 1963) the behavioural theories view depression as the consequence of a lack of, or decrease in the efficiency of, positively reinforced behaviour and perhaps overt punishment for behavioural initiation. This may be a result of a decrease in the availability of reinforcing events, one's personal skills to act on the environment, the impact of certain types of events, or a combination of these. In addition, the mobilisation of support from family and other social networks may result in a negative feedback loop of social reinforcement for depressive behaviours (e.g. social withdrawal, positive social reinforcement for withdrawal, further withdrawal). In other words, in times of major stress from unexpected events, people may experience a

low rate of positive reinforcement for mood-enhancing behaviour and a higher rate of positive reinforcement for depressive behaviour (Davidson et al. 2004).

In new behavioural model, depression is viewed as a generalised low sense of self-efficiency (Seligman 1981), which leads to a 'learned helplessness' model of depression. Such models concentrate on the interaction between behaviour and different reinforcement patterns of in the environment in shaping a sense of helplessness. This view tends to illustrate the role of life experiences in determining cognition. Thus several negative interpersonal events and the lack of efficiency of positively reinforced behaviour, negative feedback or punishing behaviour may cause stress in life, which are then the basis for experiencing a depressive episode. This view, therefore, believes that in modifying helplessness behaviour attention should be paid to creating an environment consisting of successful experiences, self-control and acceptance training, and pleasant activities.

Based on the aforementioned views and consistent with other theories, it seems that the inability to control one's life leads vulnerable individuals to 'learned helplessness'; which is therefore the central of the aetiological issue in depression according to this view. Thus, it is important to realise that negative life events and interpersonal issues are likely to be at the core of developing depression. It implies that vulnerable individuals need to learn skills of coping with life challenges.

Perceived competence and control could be the basis of another model for the development of depression. The control-related beliefs model (Weisz and Stipek 1983; Weisz 1986) has been introduced to indicate that lack of perceived competence and control plays an important part in the development of depression in youth. In this model, control is defined as the capacity to cause an intended outcome and consists of the two factors of outcome contingency and personal competence. Outcome contingency refers to the extent to which the occurrence of an outcome depends on the actions of the relevant

individuals. Personal competence refers to the individual's ability to produce the behaviour that the occurrence of the outcome relies on. Similar to this, Bandura (1986) also distinguishes between outcome expectancies and self-efficacy expectancies. Outcome expectancies refer to the probability that certain behaviour will produce the desired outcome, whereas self-efficacy is the extent to which an individual is able to successfully produce the behaviour that results in the desired outcome. Several studies (Weisz et al. 1993; Han et al. 2001) have supported the relationship between lower levels of perceived competence and/or perceived control and higher levels of depressive symptoms in community and clinic settings with samples of children and adolescents. This model illustrates how important the role of interpersonal issues is in developing such beliefs among youth.

Another interesting social model of depression is known as perceived competency, as introduced by Cole (1990; 1991a). This model assumes that low levels of self-perceived competence serve as risk factors in the development of depression. This model clarifies the role of the feedback children obtain in different situations in their lives. Cole therefore focuses on various areas such as academic success, social life, physical attractiveness, athletic ability, and behavioural conduct which possess a significant salience in the development of a sense of self-competence among children and young people. Therefore, gaining positive feedback from parents, teachers, and peers is expected to lead to high levels of self-perceived competence; however, receiving negative feedback from such sources is expected to lead to low level of self-perceived competence among children and young people. A considerable number of studies in children and early adolescents (Cole 1990; Cole 1991b; Cole et al. 2001) have supported this model which is the only one that identifies the roots of depression in the aforementioned personalities and styles which assumes that the interpersonal feedback young people receive thereby creates negative attitudes.

In summary, in the light of the limitations of theories of the aetiology of depression as highlighted above, the primary aim of this research is to identifying the skills and techniques in such a critical stage of the life that can help adolescents overcome their interpersonal and cognitive issues and also allow them to determines and resolving their problems and challenges. From all of the different cognitive models, it seems that depression is likely to be caused as a result of many variables, including a sense of hopelessness or inability to control one's life, a general low sense of self-efficiency, the response styles of rumination and distraction and low levels of self-perceived competence. However, it is apparent that all of these cognitive models agree that depression is activated when vulnerable individuals face negative life events or encounter difficulties in interpersonal relationships. They also directly or indirectly imply that problems in interactions in different situations and problems in various areas of life such as academic and social life and behavioural conduct play a significant role in the development of sense of the self-competence among young people. Thirdly, all these views whether explicitly or not, are likely to be linked to other perspectives, such as ideas of unconscious mind from psychoanalytic perspective and the nature of interpersonal relationships according to attachment theory. Therefore, it is important to realise that, given the variety of challenges vulnerable adolescents may face throughout their lives, treatment or prevention strategies need to move away from a static model and instead become more flexible in teaching individuals how to understand their real problems in order to be able to think creatively when facing all types of challenges in life (see Table f).

Table f: Behavioural and social theories and therapies

The name theory	The theory	The concept of treatment	Advantages & disadvantages
Behavioural theory, learned helplessness Skinner, 1900 Generalised low sense of self-efficiency (Seligman, 1981), Bandura (1986), outcome expectancies and self-efficacy expectancies Perceived competency Cole, (1990, 1991a),	Concentrate on the interaction between behaviour and different reinforcement patterns of the environment in shaping a sense of helplessness Illustrates the role of life experiences in determining cognition. Inability to control one's life leads vulnerable individuals to 'learned helplessness Control is defined as the capacity to cause an intended outcome and consists of two factors of outcome contingency and personal competence.	Behavioural therapy (BT) Skills: increasing pleasant activities, encouragement, reward, increase activities in whole Positive feedback Creating an environment consisting of successful experiences, self-control and acceptance training and pleasant activities Gaining a positive feedback from parents, teachers, and peers, are expected to develop high levels of self-perceived competence; however	Thus several interpersonal negative events and lack of efficiency of positively reinforced behaviour, negative feedback or punishing behaviour may cause stress in life, which are basis for experiencing a depressive episode. Outcome expectancies refer to the probability that certain behaviour will produce the desired outcome, whereas self-efficacy is the extent to which an individual is able to successfully produce the behaviour that results into the desired outcome. , receiving negative feedback from such sources, are expected to develop low levels of self-perceived competence among children and young people

2.5 An area of agreement among different theories in shaping researcher's hypotheses

Despite the existence of different theories concerning depression in youth and although they state depression with different concepts, it seems that they have followed the same content. Moreover, it is likely that there is an area of agreement which is the presence of problems and life challenges in addition to lack of skills in regulating responses to challenges within interpersonal relationships. The aetiological studies on cognitive, behavioural, interpersonal and problem solving perspectives all agree that interpersonal problems and problems with life events are the underlying reason of depression among adolescents. Vulnerability to depression may be combined with stressful life events and interpersonal deficiencies, social difficulties or family conflicts, and emotional or physical abuse, which therefore activate the experience of depression. Lack of skills in coping with challenges in relationship conflicts and interpersonal stress could lead to the development of maladaptive beliefs and a sense of helplessness about oneself and relationships with others.

The role of negative life events has been also supported by empirical studies (NICE 2005; Meltzer et al. 2000; 2003; Kendler et al. 2004) which found that more than 95% of severe depression in young people arises in those who suffer from psychosocial difficulties and negative life experiences such as conflicts in the family, separation, physical, emotional and sexual abuse, academic failure, and social isolation etc. The evidence (NICE 2005) also shows that depression is more likely to be encountered in a number of specific settings among those with behavioural issues, those who have experienced traumatic events, have been abused or misused drugs and alcohol.

2.6 Debates regarding therapeutic approaches to depression in youth

In addressing these concerns, a range of psychosocial interventions psychoanalytical, cognitive, behavioural, cognitive behavioural and interpersonal therapy and problem solving have been developed for treating depressed youth (Brent et al. 2002). The cognitive and behavioural therapeutic approaches to depression more often involve both cognitive and behavioural components than either in isolation. The behavioural treatment for depression involves helping patients increase their frequency and quality of pleasant activities, so cognitive and behavioural therapies have been integrated as a single set termed cognitive behavioural therapy (CBT). The interpersonal and psychoanalytic therapies usually offer individual therapy in which there are no skills to offer individuals to cope with their depression, the process of therapies mainly rely on skill and expertise of therapists. Taking into account the core message drawn from the different models of the aetiology of depression proposed by cognitive and interpersonal theories, it is therefore important to propose an effective independent intervention for depression in youth. On reviewing the relevant literature, Beck (1967) regarded modification of negative cognition as a necessity in the enhancement of behaviour; and thereby he proposed cognitive therapy. This treatment focuses on replacing maladaptive with

adaptive cognition (Beck et al. 1979). Despite the benefits arising from this view considering the aetiology of depression mentioned earlier, this type of intervention cannot be generalised to all aspects of depression in youth. This is mainly because negative thoughts may not be the cause of depression; but rather are to some extent the effects of depression. Although Beck (1983) later modified his view by proposing a cognitive-interpersonal model of depression involving the effects of one's ability to interact with others in social relationship and exert control over environmental events, the therapeutic approach in CBT mainly concentrated on modifying cognition and dysfunctional beliefs.

2.6.1 *Interpersonal psychotherapy (IPT)*

Interpersonal psychotherapy (IPS) for depression is based on concepts originating from attachment theory (Bowlby 1969), which emphasises the quality of interpersonal relationships including relationship with parents, peers or friends following life challenges. The focus of this therapy, therefore, is on present interpersonal relations, recognising and modifying current problematic situations the patient encounters (Davidson et al. 2004). The therapy considers four problematic areas and deals with them on a 'one at a time' basis. The first is grief and complicated bereavement; for instance, when an adolescent loses or is separated from a significant figure in their life. The second is role disputes, which occur when a young person is in significant disagreement or has major differences of opinion with a parent or an important figure. The third area is the role transitions which appear when major interpersonal role changes occur and, finally, there are perceived interpersonal deficits of adolescents who lack belief in their ability in social interactions. The idea behind this therapy is that problematic events occur in the psychosocial environment which negatively affects moods and feeling. Negative interpersonal issues seem to lead to depressed moods as well as the maintenance of

depression, and the depressed mood also has negative effects on the patient's ability in interpersonal relationships and social life. Focussing on the here and now, therapists and patients work together to create a positive atmosphere and to try other modes of interaction so as to modify responses to the problems recognised in the therapy session (Rudolph 2009).

Although IPT seems to target the origins of depression in youth more than CBT does by recognising maladaptive relationships in their context, the potential treatment is not likely to offer the skills of powering thinking and problem solving. Moreover, despite being potentially applicable to a wide range of patients with a variety of problems, IPT treatment relies on the ability of the patients themselves and also the competence of the therapist in the technique used to apply the treatment (Davidson et al. 2004). Furthermore this method of therapy would require patients to have a good level of self-awareness in order to be able to respond to it and, also, there is little research evidence available to clarify what goes on in each individual session.

Reviewing and evaluating effectiveness of CBT, IPT which are the three current best supported interventions for adolescent depression, Weersing and Gonzalez (2009) suggest that these treatments frequently do not work well and that they may perform poorly in those groups of adolescents most in need of intervention. They concluded that the CBT treatment process is hampered by a limited understanding of the mechanisms of action and the core processes of currently available interventions. Moreover, based on the data on treatment response and effectiveness in practice, they suggest that there is a need to develop stronger, more robust interventions for depressed adolescents.

From the above, it seems that there is no clarity yet as to whether either approach allows a better comprehension of the situation. Cooper et al. (2007) thus suggested a pluralistic framework for counselling and psychotherapy. They took the view that integrative approaches such as cognitive behaviour therapy have been less successful, and

emphasised that psychological difficulties may have various different causes so that there is little chance of finding a particular method of therapy that could be applied to all various cases and be successful for all patients in any given situation. It would seem, therefore, that the conceptual and methodological issues in this type of therapy have not yet been fully addressed. Public health policy seem to need to develop an intervention for depressed teens that addresses their stressful and negative life challenges within specific contexts along with the poor responses of depressed adolescents. It seems that a method is needed that prepare and equip all people who are potentially at risk of developing depression at an early ages with the knowledge and skills they could put into practice to deal with their problems, to prevent depression from happening in the first place.

More recently there has been growing interest in applying the type of intervention known as problem solving therapy (PST). PST has been applied in clinical, counselling and health psychology settings and has been employed as a treatment method, a maintenance strategy and prevention programme in working with individuals and groups. Participants have included those with a wide range of problems including depression, stress and anxiety disorders, suicidal ideation and behaviour and also relationship problems. It is mainly used in cases where the patient has been identified as lacking the ability to cope effectively with problems as a result of deficits in problem solving skills (Wallis 1997). Originating in Osborne's approach who proposed the creative problem solving (CPS) D'Zurilla and Goldfried (1971) highlighted the process of problem solving and later the skills applied for depression for adults by Wallis et al. (1995; 1997) by emphasising the more general process of problem solving in clinical settings. Despite of gaining positive outcome, this approach seems to have simplified the core factors of creativity techniques.

Problem solving therapy is a self-directed psychotherapeutic intervention. Individuals learn the process first and then attempt to identify or discover effective or adaptive solutions for specific problems encountered in everyday life in a natural environment.

These skills are taught in advance in order to enable individuals to deal more independently with future problems. A problem is defined as a situation that requires a response for adaptive functioning when there are no immediate solutions available due to the presence of obstacles, which could originate either in the environment or within a person. A solution is defined as a situation-specific cognitive and behavioural coping response, which is the outcome of the problem-solving process when it is applied to a specific problematic situation by achieving the PS goals (Wallis et al. 1995; 1997).

Whereas the proponents of creative problem solving (Osborn 1953; Parnes 1967; Parnes et al. 1977; Isaksen et al. 2000; Treffinger and Isaksen 1985; Noller et al. 1976; 1981; Treffinger et al. 1982; Firestien 1988; Treffinger et al. 2000) emphasise the importance of creativity techniques. In problem solving therapy (D'Zurilla and Nezu 1999) the importance of these techniques has often been overlooked. Youth who find themselves battling depression and have allowed problems to become dominant seem to have a lack of understanding of the problem or the situation, and it is likely that they do not know how to solve the problem either. In the CPS process, ways of understanding problems and also solving them are both offered and taught to the individual. Those who utilise both creative and critical thinking and learn creativity techniques could become more successful problem solvers and therefore view a problem as an opportunity for growth with optimism and hope rather than seeing a problem as a threat.

Later D'Zurilla and Nezo (2007) have recently modified their CPS process to include the creative problem solving. This represents a shift from a general concept to a more specific process by focussing on two major and independent processes, a motivational element known as "problem orientation" and a practical element known as "problem solving proper" which pays more attention to creative techniques within the framework. Therefore, Nezu et al. (2003) considered the application of few creativity techniques to manage current and future problems. Thus the study taught patients to view problems

effectively by defining and breaking down problems into manageable sub-problem areas to generate many options and choose the best solution, which involved cognitive restructuring, problem and goal setting, role play/rehearsal, reframing and acceptance. However, it is still far from the actual process and the components of CPS previously proposed by Osborn and Parnes. Moreover, recent researches (Wallis et al., 1995; Wallis et al., 1997) have applied only the general process of problem solving in treatment for depressed patients in clinical settings.

2.6.2 *Cognitive behavioural therapy (CBT)*

Cognitive therapy was initially developed as a treatment for major depression among adults (Beck 1963, 1983; Beck et al. 1979). Later this therapy was combined with behavioural strategies; incorporating both cognitive and behavioural techniques the approach has received a great deal of empirical and clinical interest over the past 30 years. Cognitive therapists attempt to provide a rationale for understanding depression, strategies for coping with life's problems, and a sense of optimism. An explicit goal, as such, is to empower youth to give them a vision of a more positive future and tools for bringing this about.

CBT involves the strategic use of empirically supported techniques to address cognitive, behavioural, and social factors that underlie and maintain a child's distress. Based on a cognitive-behavioural formulation (Nezu et al. 2004; Persons 1989; Rogers 2005), interventions are selected that address the full range of cognitive, behavioural, somatic, and social symptoms of depression. In the cognitive domain, adolescents learn to apply cognitive techniques to change maladaptive, negatively valenced beliefs, attitudes, and thoughts that contribute to their depression. Within the behavioural domain, they are encouraged to participate in activities that provide them with a sense of accomplishment

and enjoyment and to re-establish trusting, supportive relationships with others. Social skills and assertiveness training are used to address behavioural problems that exacerbate and maintain their depression, and direct attempts are made to facilitate the development of close, secure relationships with parents and other family members. Within the physiological domain, anxious and agitated youths are taught to use relaxation imagery, meditation, and other techniques to regulate their moods (Reinecke and Ginsburg 2008).

The cognitive-behavioural therapist directly attempts to rectify cognitive deficits, distortions, and deficiencies that may be contributing to the youth depression, and develops the youth's social skills and affect regulation abilities.

Depressed youths tend to demonstrate negative views of themselves, others, and their futures. They see themselves as flawed, unlovable, undesirable, and ineffective and see others as critical, rejecting, and uncaring. At the same time, they view their future as bleak and feel incapable of bringing about desired outcomes. These negativistic beliefs and attitudes are seen by the therapist as objects to be understood and explored, rather than as facts to be accepted.

Beliefs are acquired and function in a social context. CBT aim is to understand beliefs, attitudes, expectations, attributions, and values and how these influence developing sense of him- or herself and others.

Cognitive models of vulnerability for depression tend to take the form of diathesis-stress formulations. That is, they assume that the onset of a depressive episode is precipitated by the interaction of a stressful life event (typically an interpersonal loss or a failure) and a pre-existing cognitive vulnerability.

Cognitive therapy was developed and was integrated to behavioural therapy and was termed as cognitive behavioural therapy (CBT). Although the method of cognitive and behavioural theory (CBT) was developed for depressed patients, the main aim was to make corrections to the perceptions of patients and give them more self-awareness of

their exaggerated negative cognition, and to review their self-statements so as to move away from negative to positive thoughts and thereby to modify their behaviour. The definition of CBT proposed by Kendall and Hollon (1979) is that CBT is "a purposeful attempt to preserve the demonstrated effectiveness of behaviour modification within a less doctrinaire context and to incorporate the cognitive activities of the client in the effort to produce therapeutic change" (p. 1).

In the past few years CBT with children and adolescents has expanded and integrated with some limited sessions of problem solving and diverse type of interventions (such as ACTION, PENN and TADs) have been designed with different content and programmes.

This movement happened largely as a result of the proposal of social and behavioural modification by D'Zurilla and Goldfried (1971), who explained the general process of problem solving in behavioural modification and after that Kendall and Panichelli-Mindel (1995) emphasised the importance of positive and adaptive problem solving attitudes and perspectives in young people's growth.

Several cognitive-behavioural treatment protocols for treating depressed youth have been developed during recent years (Brent & Poling 1997; Clarke 1990; Stark et al. 2006; Curry & Reinecke 2003; Treatment for Adolescents with Depression Study (TADS) Team 2004; Weisz et al. 2003). Each emphasises the acquisition of cognitive and behavioural skills that can used to manage depressed affect. Based on cognitive-mediation models (Dobson et al. 2003), these protocols are founded on the assumption that cognitive processes, mood, behaviour, and environmental factors transactionally influence one another over the course of development, and that by changing beliefs, attitudes, and thoughts, one can affect a change in one's mood and behaviour.

However, the integrated skills approach applied recently within CBT only serve the specification of CBT, which is cognitive and behavioural modification. It does not involved creative problem solving perspective which aims to teach creative thinking skills

to cope with the challenges in life. As an alternative to medication, CBT has been conducted in many contents around the world. Randomised controlled trial studies (Hollon et al. 2002) have compared CBT with pharmacotherapy and have found its efficiency to be satisfactory according to the criteria for evidence-based treatment. However, the results of other studies (National Institute of Mental Health Treatment of Depression Collaborative Research Program, 1995) contrast with with most of Hollon et al. (2002), and when comparing CBT with medication or interpersonal therapy did not find any differences in cognitive distortions among groups in favour of CBT. CBT has also been found to be an effective form of psychotherapy as a short-term treatment for symptom reductions (Golaguen et al 1998). Another study (Lineham 1993) suggests that CBT has failed to be proven to be suitable and helpful for everyone, as it is difficult for some people to succeed or respond to this method appropriately. In addition, the basis of CBT has been challenged in Eysenkck's (1992) study which argues that by exclusively dealing with current thoughts and focusing on the conscious mind, the process ignores the more important unconscious mind which Freud's theory of psychoanalysis holds responsible for the storage of a considerable amount of thought processes all below the level of consciousness.

2.6.3 *CPST therapy as an alternative approach and rationale for applying it to depression in youth*

Creative problem solving therapy acknowledges social behavioural deficits of depressed youths.

Research consistently reveals that depressed youths display social-behavioural deficits across a range of interpersonal contexts, including peer, romantic, and family relationships. Depressed youths describe themselves as less socially competent. They are less able to resolve conflict or to provide effective emotional support to peers; they are less able to make friends than their non-depressed peers (Hammen et al. 2004; Rudolph & Clark 2001). Depressed youths also

demonstrate ineffective interpersonal problem-solving skills and maladaptive responses to interpersonal stress. For example, in responding to social dilemmas, depressed youths endorse fewer sociable and less assertive responses and more hostile responses than non-depressed youths do (Rudolph et al. 1994). In the context of interpersonal stressors such as problems with friends or family, depressed youths report that they engage in lower levels of active, problem focused, and engagement coping such as problem solving, positive thinking (Connor- Smith et al. 2000) and involuntary responses such as rumination, emotional arousal inaction to stress (Jaser et al. 2005). Supporting the idea of deficits in interpersonal problem solving and maladaptive responses to interpersonal stress, research (Rudolph et al. 1994) reveals that depressed youths show poorer conflict negotiation skills and heightened lack of emotion regulation when faced with a social challenge. Teachers also describe depressed youths as more helpless such as showing a lack of initiative and persistence in challenging social situations than non-depressed youth (Rudolph et al. 2001).

Observations of depressed youths during family interactions also find depressed youths are more likely than non-depressed youths to show ineffective problem solving, less behaviour that facilitates on-going exchange such as affirmations, positive effect directed toward others more solitary behaviour, and fewer positive reactions to others, suggesting an overall deficit in positive interpersonal behaviour with parents (Messer & Gross, 1995). Depressed youths also show less autonomous assertion than non-depressed youths during parent–child interactions (Kobak & Ferenz-Gillies 1995, cited in Rudolph et al. 2008).

This therapy targets social behavioural deficits by offering several skills of thinking and problem solving to depressed youths. The initial model of creative problem solving (CPS) emerged directly from the work of Alex F. Osborn (1956), who had Osborn had an extensive interest in the field of creativity and problem solving and his writings greatly contributed to the field of CPS. One of his most important contributions was the development of brainstorming, and for that reason he is known as the ‘father of brainstorming’. He believed that evaluating an idea by judgement at the time of generating it suppresses our creative sides and prevents ideas from expressing themselves; therefore, he proposed that

finding an idea should be separated from evaluating that idea and he called this the principle of deferred judgement. He also stated that quantity results in quality, meaning that the more ideas are generated, the more chances there are of the production of higher quality ideas, leading to better solutions. Taking into consideration the aforementioned principles, Osborn then proceeded to propose a three-stage model of creative thinking.

Osborn offered three basic stages of creative thinking with two sub-stages. The first is fact-finding, which at first included two sub-stages of problem definition and preparation. Later these two sub-stages were considered to be a second stage known as problem finding (Parnes 1972) to put more emphasis on taking time to explore alternative problem definitions instead of settling down on just one. The third and fourth stages are idea-finding and solution-finding respectively. In the stage of fact-finding, the problems are defined after being broken into their major parts which are understood by collecting as much relevant information about the problem as possible. In the stage of idea-finding, the focus is on generating as many ideas as possible and adjusting them to their most usable format. Finally, in solution-finding, all previously generated and refined ideas are evaluated to select those with most potential for success as a way to resolve a problem. Parnes (1986) made another major contribution to this model, which was his recognition of convergent and divergent activities and incorporating these into every stage of the process. Moreover, he added another stage known as acceptance finding which followed solution finding.

Considering the aetiology of depression in more depth has guided this research aim to introduce an effective method for young people. This is because interventions need to be suited to the aetiology of depression among adolescents. Current cognitive theories (Abramson et al. 1988; Alloy et al. 1988) agree that depression occurs when vulnerable youth experience negative events and challenges. CPS seems to provide a process for dealing with problems arising from those negative events. Rudolph (2009) emphasises

that social deficits caused by poor self-regulation and social disengagement in response to challenges faced in life leads to vulnerability to depression. CPS can be considered to be a purposeful and goal directed strategy which could teach pupils how to respond to stress appropriately, thereby resulting in successfully dealing with social challenges.

It has also been argued by Compas, et al. (2009) that depressed youth have involuntary responses and thus become overwhelmed with emotions. Engaging in the CPS process, vulnerable pupils are likely to learn effortful responses and will be able to manage their emotions effectively and to act in a purposeful and goal directed way. Instead of automatically rejecting a new and unknown idea, learning CPS ignites curiosity among individuals, encourages them to ask as many questions as they can, and also teaches them to be open to new ideas and to consider various different aspects of an idea, such as creative, critical, emotional, positive, neutral sides and the bigger picture before immediately rejecting it.

One factor in vulnerability to depression is deficiency in interpersonal relationships. Lack of ability to communicate or solve problems effectively can lead to continued interpersonal difficulties and ongoing risk of depression (Gotlib and Hammen 1992). CPS, in fact, seems to involve better communicating skills. Considering the systematically structured process of CPS, it could be introduced to the pupils in the easiest and most logical way so that they can tackle their conflicts as rapidly as they can, before allowing problems to become more complicated, out of control, ongoing and combined with other issues. This is likely to improve the methods of communicating and interacting with the self, others and in other situations, and therefore would result in a better quality of relationships. The therapy's aim is also to create a supportive atmosphere, where problems and ideas can be present without being judged by others. Participants can also get involved in group discussions and present their own views (Stien 1975).

Depressed adolescents also have problems in peer relationship such as being rejected or bullied by their peers. Poor communication patterns with peers have been associated with depression (Nolan et al. 2003; Galambos et al. 2004; Allen et al. 2006; Klomek et al. 2007). CPS seems to provide more significant, effective and independent strategies for coping with such difficulties. Thus, by believing in their abilities to solve problems, it is likely that a sense of mastery can develop which would enable them to successfully negotiate with others and improve their relationships.

CPS also is likely to develop a healthy sense of oneself within an individual. Developmental theories of psychopathology propose that depression happens when a young individual is unable to achieve important developmental tasks such as a healthy sense of self (Cicchetti and Toth 1995). Applying the process of CPS in facing their problems adolescents could effectively regulate their emotions and thereby gain positive attitudes toward themselves.

Brainstorming is a significant technique at the centre of the CPS process (Osborn 1956). This skill encourages individuals to generate as many ideas as possible without evaluating them. This is very important, since youth fear being judged when they present their ideas. With this technique they are instead encouraged to produce and present ideas. The more ideas which are generated, the more chances there are of producing high quality ideas, which lead then leads to better solutions. Therefore, having more good solutions increase the individual's freedom of choice.

Hopelessness theory (Abramson et al. 1978; 1989) views a sense of hopelessness as occurring when vulnerable youth fail to achieve their goals. Given that self-control is at the core of CPS, this therapy is likely to allow individuals to gain mastery over their lives. Many young people feel the need to gain more control over life instead of allowing others to be in control. Using CPS to become more aware and familiar with the major problems

of life, and therefore dealing with them, they might gain greater control over their lives and therefore feel more in charge of the events taking place.

Furthermore, CPS has been recognised to be an essential skill in life (Puccio and Murdock 2001). Firstly, solving their own problems, pupils concentrate on their own abilities to recognise and solve their own weaknesses in their school work. Secondly, with numerous problems surrounded normal activity, vulnerable young people need to strengthen their self-esteem as well as their self-awareness and self-regulation.

Independence is one of the most important aims of CPS (Osborn 1979). Using their own ideas, pupils discover new insights into their abilities and talents. They gain a better perception of their selves and achieve increased self-esteem. Since CPS is a generic problem solving model, its principles could be applied to problems of any kind at any time, including both the present problems and also those in the future. This could help prepare young people in advance and give them more confidence in dealing with their issues. CPS helps individuals to be independent thinkers when working alone or in groups.

Delaying judgment and divergent and convergent techniques are the core of the CPS process in which pupils not only learn to delay their judgements until all facts are gathered but they also help them regulate their emotions and avoid any immediate judgement without considering all different angles (Parnes 1992). All of us are both creative and analytical, and our brains have been structured in such a way that needs both of those styles of thinking. As CPS covers both creative and analytical thinking, it helps people learn how to use these skills more harmoniously and to use their capabilities more effectively when resolving problems.

Enhancing listening skills is likely to be another benefit of CPS. Individuals learn to listen to each other's ideas, delay their judgement and hear all points of view in order to be able

to evaluate them better later. This process could also improve self-expression skills since pupils are expected to share their ideas within the group in a relaxing atmosphere. Pupils could also learn to appreciate other's capabilities and use each others' resources and experiences when dealing with their problems.

Self-confidence also seems to develop through the CPS process. CPS increases ones confidence in finding solutions to most problems and therefore reduces the stress accompanying each problem, resulting in an increase in confidence and a positive effect on pupils' mood, performance and relationships (see Table g).

Table g: Problem solving theories and therapies

The name theory	The theory	The concept of treatment	Advantages & disadvantages
Problem solving theories Creative Problem Solving (CPS) (Osborn ,1956and Osborn& Parnes, 1986) Problem solving therapy, (Nezu, 1992)	Evaluating an idea by judgment at the time of generating it suppresses our creative sides and prevents ideas from expressing themselves Finding an idea should be separated from evaluating that idea and called this the principle of deferred judgement The more ideas generated, the more chances are of production of higher quality ideas, leading to better solutions Applying the process of CPS in facing with problems adolescents could effectively regulate their emotions and thereby gain positive attitudes toward themselves. The process of CPS improve the methods of communicating and interacting with self, others and in other situations and therefore results in better quality relationships Enhancing listening individuals learn to listen to each other's ideas, delay their judgement and catch all points of view in order to be able to evaluate them better later	Three basic stages of creative thinking with two sub-stages as fact-finding, problem finding (problem definition and preparation), idea-finding and solution-finding and acceptance finding Gaining mastery over their challenges Brainstorming Defer judgment (for mastery over involuntary responses and emotions) Convergent and divergent activities (to produce many ideas and prevent become overwhelmed with emotions) and thus learning effortful responses Instead of automatically rejecting a new idea, give them to ask as many questions as they can and also teaches them to be open to new ideas and Give them skills to consider various different aspects of an idea (creative, critical, emotional, positive, neutral thinking) before immediately rejecting it. Encourage generating ideas without being judged by others.	Teach pupils how to respond to stress appropriately Teach skills of dealing with social challenges Offers the skills and techniques that can help them deal with finding and resolving their challenges Learning effortful responses they manage their emotions effectively and act in a purposeful and goal directed way Learning to avoid any immediate judgement without considering all different angles Enhancing the skills of deferred judgment, Learning to view a problem from different angles

2.7 How CBT and CPST express depression and what are their effects on depressed youths

In CBT deficits in cognition, thinking, attitudes and beliefs are as the result of personality predisposition, personality cognitive vulnerability and that the negative attitudes and beliefs are viewed as cause of depression. For example, vulnerable individuals view themselves as inadequate or unworthy and feel that there is nothing they can do to change this situation. Thus, in this approach it is assumed that depressed adolescents have negative view towards self, others and future (Beck 1983). Cognitive maladaptive schema leads individual to attribute negative meanings to their experiences. Moreover, cognitive vulnerabilities are typically seen as taking the form of depressogenic schemas or tacit beliefs. Recognising the dysfunctional attitudes the therapist helps people directly modify negative and dysfunctional thinking (Beck 1993). The therapist attempts to emphasise cognitive style or schema and helps participants to become aware of the negative attitudes. Changing the negative thinking to positive thinking seems to decrease the probability that an individual will develop depression.

Interestingly, the contemporary cognitive-behavioural theories of vulnerability to depression are presented in the form of diathesis–stress models (Abela and Hankin 2008; Rudolph 2011) in which risk for depression is seen as stemming from the interaction of stressful life events and pre-existing cognitive vulnerabilities, and that onset of a depressive episode is precipitated by the interaction of a stressful life event such as interpersonal loss or a failure and a pre-existing cognitive vulnerability. However, in CBT, with one exception, adding one session of general problem solving, most of the CBT sessions still concentrate on identifying and modifying negative cognition and dysfunctional beliefs and behavioural modification.

On the other hand in CPST deficiencies in skills in coping with negative life challenges and interpersonal problems are viewed as causes of depression. Instead of personality

dispositions a range of interpersonal, social, and environmental factors interact to cause depression. Thus, in this approach it is assumed that depressed adolescents have negative problem solving skills and thinking abilities in coping with life challenges (D'Zurilla and Nezu 2007). For example, deficiency in thinking skills which result in them thinking their attempts to solve life's problems will not be successful. Consequently, they either avoid addressing problems directly, or approach them in an impulsive, careless manner. Early experiences of abuse, neglect, or emotional unresponsiveness can lead children to believe that they are undesirable or unlovable, that they cannot count on others to reliably protect or support them, and that others are potentially rejecting and uncaring.

In CPS interaction of stressful life events such as interpersonal loss or a failure in addition to deficiencies in social skills and problem solving motivation are viewed as cause of depression. Therefore, instead of targeting the current state of dysfunctional beliefs, this approach offers several skills for improving thinking and problem solving. The process consists of identifying a problem when it occurs, defining the problem, attempting to understand the problem, setting goals related to the problem, generating alternative solutions, evaluating and choosing the best alternatives, implementing the chosen alternatives, and evaluating the efficacy of the efforts at problem solving. The process of CPS includes structural skills such as fact finding, problem finding, problem defining, idea generation, and solution development and implementation based on both convergent and divergent thinking. They also learn to identify a problem and view it from different angles while learning to defer their judgement and generate many ideas using the brainstorming technique. They are encouraged to hold back their immediate judgements and are prevented from making immediate emotional decisions purely based on negative judgements, and this process can lead to generating a creative solution (see Table h and I).

Table h: CBT versus CPS in definition and the expression of depression

The expression of depression by youth in CBT based on the criteria of (DSM-IV)	Expression of depression by youth in CPST based on the criteria of (DSM-IV)
-Schemas about themselves (seeing themselves as flawed, unlovable, defective), their world (seeing it as dangerous, rejecting, and unsupportive), and their future (seeing it as hopeless, they are unable to bring about desired outcomes). -Demonstrate negative thoughts about themselves, the world, and their future, a tendency to selectively attend to negative events and to recall experiences associated with loss or rejection. -Tend to demonstrate negative views of themselves, others, and their futures. -Having conflict and problems with their parents and peers -Have attachment, communications difficulties, and rejection -Tend to withdraw from others and behave in ways that alienate others and contribute to a loss of social reinforcement and are sensitive to social loss -See themselves as flawed, unlovable, undesirable, and ineffective and see others as critical, rejecting, and uncaring. - View their future as bleak and feel incapable of bringing about desired outcomes. -Depressive episodes are often triggered by arguments, conflicts, or loss in relationships with parents or peers **CBT expression of depression** -Deficits in cognition, thinking, attitudes and beliefs -They mainly have dysfunctional cognitive believes and attitudes towards self, others and future and lack of pleasant activities	-Schemas about themselves (seeing themselves as flawed, unlovable, defective), their world (seeing it as dangerous, rejecting, and unsupportive), and their future (seeing it as hopeless, they are unable to bring about desired outcomes). -Demonstrate negative thoughts about themselves, the world, and their future, a tendency to selectively attend to negative events and to recall experiences associated with loss or rejection. -Tend to demonstrate negative views of themselves, others, and their futures. -Having conflict and problems with their parents and peers -Have attachment, communications difficulties, and rejection -Tend to withdraw from others and behave in ways that alienate others and contribute to a loss of social reinforcement and are sensitive to social loss -See themselves as flawed, unlovable, undesirable, and ineffective and see others as critical, rejecting, and uncaring. - View their future as bleak and feel incapable of bringing about desired outcomes. -Depressive episodes are often triggered by arguments, conflicts, or loss in relationships with parents or peers **CPST expression of depression** -Deficiencies in skills in coping with negative life challenges and interpersonal problems are viewed as causes of depression -They mainly have deficiency in skills of solving problems when encounter the negative life challenges
CBT and aetiology of depression -Maladaptive schema which may lead them to attribute negative meanings to their experiences -Cognitive vulnerabilities are typically seen as taking the form of depressogenic schemas or tacit beliefs - Personality predisposition, personality cognitive vulnerability and negative attitudes and beliefs are viewed as cause of depression -Contemporary cognitive-behavioural theories of vulnerability to depression are typically presented in the form of diathesis–stress models in which risk for depression is seen as stemming from the interaction of stressful life events and pre-existing cognitive vulnerabilities. -Onset of a depressive episode is precipitated by the interaction of a stressful life event (typically an interpersonal loss or a failure) and a pre-existing cognitive vulnerability.	**CPST and aetiology of depression** -A range of interpersonal, cognitive, social, and environmental factors interact, early experiences of abuse, neglect, or emotional unresponsiveness can lead children to believe that they are undesirable or unlovable, that they cannot count on others to reliably protect or support them, and that others are potentially rejecting and uncaring - Interaction of a stressful life event such as interpersonal loss or a failure in addition to deficiencies in thinking and social skills are viewed as cause of depression - Deficits in social skills such as problem solving skills and problem-solving motivation -Deficiency in thinking skills which result them to think attempts to solve life's problems will not be successful, and consequently avoid addressing problems directly or approach them in an impulsive, careless manner and so either avoid addressing them or approach them in an impulsive, careless manner

Table I: CBT versus CPS, the therapies' assumptions and therapies' processes

Therapy assumptions (CBT)	Therapy assumptions (CPST)
-Positive thoughts lead to positive behaviours and positive moods, depressive thoughts lead to negativistic behaviour -Changing negative beliefs, attitudes, and thoughts affect a change in mood and behaviour -The assumption is to help depressed adolescents to become aware of negative beliefs, attitudes, expectations, and attributions and to substitute them with more adaptive beliefs and constructions -The assumption is that by rectifying factors implicated in vulnerability for depression, one can alleviate dysphoria and reduce the risk of relapse or recurrence -The assumption is to increase the availability and salience of positive reinforcement	-Responses to negative life events appear are moderated by the problem-solving skills and the strategies for confronting and resolving problems -The assumption is that depressed adolescents have negative problem solving skills and thinking abilities in coping with life challenges -Enhancing the problem solving strategies affect a change in mood and behaviour -The assumption is that to help depressed adolescents to become problem solver and good decision maker in confronting life challenges -The assumption is that to help individuals to gain mastery of and control over their life
Therapy process (CBT)	**Therapy process (CPST)**
-Identifying dysfunctional beliefs Monitoring moods -Identifying perceptions, exaggerated negative cognitions, negative automatic thoughts and perceptions, cognitive distortions, negative assumptions -Identification of cognitive distortions or biases, identification of maladaptive thoughts, -Modifying negative cognition, rectify cognitive deficits distortions, and deficiencies, developing realistic counter-thoughts -Recognising maladaptive behaviour -Enhancement of behaviour and modifying it, -Increasing pleasant activities, assertiveness and behave in ways that will elicit positive reinforcement, to limit behaviour that elicits negative reinforcement, and to reduce the use of maladaptive coping strategies -Encouraging in enjoyable, reinforcing activities to participate in social activities as a means of changing maladaptive beliefs -Activity scheduling, and relaxation training -Re-establish supportive relationships with peers and family members, -Limited skills of problem solving	-Identifying a problem when it occurs, -Encourage to hold back their immediate judgements about a mass problem and prevent from making immediate emotional decisions purely based on negative judgements, this process can lead to generating a creative solution (Decision making skills in peer conflicts and life challenges) -Defining a problem -Redefining a problem (Understanding the habits) -Attempting to understand the problem,(Deferred judgement) -Setting goals related to the problem, (Convergent thinking) -Stimulating creativity -Generating alternative solutions (Brainstorming and divergent thinking) -Evaluating problems, look at problem from different angles including positive, negative, creative, emotional and creatively, creative problem solving, convergent and divergent thinking including deferred judgement -Choosing the best alternatives solution -Implementing the chosen alternatives, and evaluating the efficacy of the efforts -Divergent techniques -Evaluation techniques, -Acceptance finding -Total five process of creative problem solving

2.6 Empirical studies in problem solving therapy for depression

The studies of PST for depression are either rare or there is less evidence from research with youth populations and no information is available to compare this therapy with other well- known treatments for adolescent. A study conducted by Hussian and Lawrence (1981) compared PST with a social reinforcement (SR) programme for the treatment of depression in a group of elderly patients living in a nursing home. Thirty-six patients who scored in the severely depressed range on the Beck Depression Inventory (BDI) (Beck et al. 1961) were divided randomly into three groups of problem solving therapy (PST), social reinforcement (SR), and a waiting-list control (WLC) group. In SR the rate of social reinforcement the participants received in their daily lives and social activities such as arts and crafts and participants were given SR for attendance, participating in a specific activity, perseverance, and interaction with other patients. Both treatment groups met for five 30-minutes training sessions during one week. The PST intervention was offered on an individual basis and involved discussion of each of the five stages of D'Zurilla and Goldfried (1971) model as well as practising solving the real-life problems of the patients. At the end of the first week of treatment, the SR and PST groups showed less symptoms of depression than the WLC group. After completing the second week of treatment, the group receiving PST was significantly less depressed than the SR and WLC groups and the superiority of PST was maintained at a 2- week follow-up.

The above research has several strengths. It compared PST with other therapy and a control group with the random assignment of participants and pre-test post-test and follow-up. However, the importance of several key points in the five stages of therapy considered in this model are either underestimated or ignored. The model used originated from Osborn and Parnes's approach to CPS, but key skills and tasks in creative problem solving such as divergent and convergent thinking and brainstorming seem to have been

paid little attention when in fact they are at the heart of solving the problems. For example the PST model could underestimate the first stage of fact-finding in Osborn and Parnes' approach to CPS which is crucial to solving the right problem. The stage of fact finding has several advantages. It firstly helps to avoid the 'premature closure' of a problem and to notice aspects of the objective area that have previously been overlooked or not anticipated. It also allows new ways of viewing the problem to be found, as well as considering alternative perspectives in order to refine the understanding of the problem. For instance based on Stien, (1974; 1975) lateral and divergent thinking could be put in use to find a solution to a problem which is not well defined or outlined,. The components of lateral and divergent thinking include originality, such as capacity to express new ideas, fluidity such as the quantity of answers given to a question, flexibility in variety of answers provided, and the capacity elaborate in terms of the level of detail, definitions, and concreteness of the answers. Brainstorming is a technique of generating ideas characterised by fluency, flexibility and originality. This technique was proposed to encourage people to solve problems by seeking many possible solutions in a positive and constructive rather than critical and inhibitory atmosphere. In addition, not enough exercises and techniques are used in this model to help stimulate the generation of more ideas. Such techniques might include the are the "What If" technique, "Two Words", "Reversals", "Relation algorithm", "Semantic Intuition", or "Attribute association Chains".

In addition, although studies of problem solving therapy have been carried out more often within clinical settings, there is no evidence of its use within the real life context of counselling in schools. Other studies (Wallis et al. 1995; 1997) have compared the use of PST with an antidepressant medication to improve depression in a primary care population. One randomised control trial by Laurence et al. (2000) compared the three methods of problem solving treatment, antidepressant medication, and combined

treatment for major depression in primary care which was measured by HRSD-17 and BDI. They found that although patients in all three groups showed a clear improvement over 12 weeks, problem solving treatment was an effective treatment for depressive disorders in primary care and the combination of problem solving and antidepressant medication was no more effective than either treatment alone. Another randomised control trial study was undertaken by Wallis et al. (1995) in which ninety-one adults with major depression were randomly assigned to PST, amitriptyline, or a drug placebo. Inclusion criteria involved major depression and scoring 13 or more on the Hamilton Rating Scale for Depression (HRSD) (1980). In all three treatment conditions, patients were offered six or seven sessions lasting from 30 to 60 minutes over three months. The results showed advantage of PST for depression and emotional disorder at 6 and 12 weeks post-treatment. It was also found that this treatment is a goal oriented, collaborative and active process. Although comparing this therapy with other methods of treatment could be viewed as an advantage of the research, such comparison studies only show that this therapy has been mainly compared with pharmacological therapy. Furthermore, there is not much clarity on the methods and procedures applied in these empirical studies. Moreover, the outcomes of these studies found that problem solving is an as effective, feasible and acceptable treatment for patients with major depression in primary care; however, there is no evidence comparing this therapy with other well-known psychological therapies such as CBT. In addition, the studies followed the five general stages in D'Zurilla and Nezu's studies with little focus on creativity tasks.

One study in the literature has compared PST with problem focused therapy (PFT). In this outcome study on adult unipolar depression, 26 clinically depressed individuals were divided by Nezu (2003) into three groups of problem solving therapy (PST), problem focused therapy (PFT) and a waiting list control (WLC). Both therapies were given over eight weekly sessions of between 1-and a half to 2 hours. PST group were involved

training in problem solving skills, whereas in PFT the nature of the problem was discussed with a problem solving attitude with no emphasis on or training in problem solving skills. Measures were obtained before and after treatment and at a 6-month follow-up assessment using BDI, the Depression Scale of the Minnesota Multiphasic Personality Inventory (MMPI-D) (Hathaway and McKinley 1967), and PSI (Heppner and Peterson 1982) and the Internal-External Locus of Control Scale (Rotter 1966). The results indicated a substantial reduction in depressive symptoms in the PST group which were maintained over the 6-month follow-up period and this improvement was significantly higher than those in PFT and WLC after 6 months. The results also showed that the group receiving PST showed increased self-appraisal of problem solving effectiveness and also changed significantly in locus-of-control-orientation from external to internal. Overall the results of this study provide support for the basic assumption that PST procedures can improve depression by increasing the individual's ability to solve problems.

Arean et al. (1993) specifically applied Nezu et al.'s (1989) intervention model of depression to an older population. Seventy-five individuals were studied who met all the criteria for the research which were being over 55 and diagnosed with major depression, scoring 20 or above in BDI, and 10 or above in the Geriatric Depression Scale (GDS) (Yesavitch et al. 1983). Participants were randomly assigned to three groups of PST, RT (Reminiscence Therapy) or a WLC group. The treatment groups were led by the same trainer who had been trained in both therapies in group settings, and each group met for 12 weekly sessions of 90 minutes. The PST groups were trained in the five stages of problem solving whilst the RT group life history was reviewed in order to gain a better perspective and therefore achieve more satisfaction with significant positive and negative life events. The overall results indicated that both therapy groups were significantly less depressed on all three measures of depression after the treatment compared to the

individuals in WLC, and the effects were maintained 3 months after the completion of the treatment. However the PST group showed lower depression than RT on two of the depression measures (HRSD and GDS). After the treatment, a significant portion of the PST group (88%) compared with RT (40%) and WLC (10%) no longer met the RDC for major depression.

In the light of limitation, in the knowledge base highlighted above, this research intends to maximise the effects of creative problem solving by applying Osborne and Parnes' 1986 model of CPST which embodies all the techniques and key points proposed and is the most complete and rounded form of problem solving therapy in the school context. Feldhusen (1999) suggested that individuals "can be taught to monitor their own cognitive activity, to purposely seek alternatives, to recognise new ideas or solutions when they come to mind, and to test the validity of potential solutions or new conceptions" (pp. 256-257). He also suggested that in terms of divergent thinking, individuals can be taught to self-regulate and improved ideational skills to increase the number and types of ideas generated.

Furthermore this is especially important for therapy, because depressed individuals seem to have difficulty with ideation and ideational skills are important aspects of creativity. Training depressed adolescents to consciously apply these skills could help them handle the challenges of life and enhance their creative performance. In addition, using the critical elements of the CPS programme, such as identifying the problem, defining the problem, developing ideas through the brainstorming process, and learning the techniques of divergent and convergent thinking, would benefit all participants and would make creativity intervention more accessible to a wide variety of the problems young people face. Learning skills in generating ideas seem likely to increase the chances of developing a preferred solution to a problem in daily life.

Moreover, Sullivan (1953) believed that a significant component of psychiatric problems develops through interpersonal interaction and context, and therefore in line with this appropriate treatments need to improve the way individuals apply the strategies or skills of communication and interaction in resolving interpersonal problems. A pupil may struggle in communicating or interacting with others in school, but through learning CPS he/she could gain access to the roots of his/her underlying issues, find ideas which lead to solutions to those problems and later apply those solutions to the problem. Unlike with interpersonal therapy, where it is the therapist's responsibility to help patients in that way, in CPST the whole process is clear and purposeful both for the therapist and for patients.

Secondly, in terms of changing interaction and communication styles, patients acquire different responses from others such as peers, friends and relatives. By delaying judgment, adolescents can generate as many ideas as they can for any identified problems they are faced with, and after generating ideas they can start evaluating them from different angles. The use of these procedures and techniques can increase their self-awareness and self-esteem when they want to judge themselves, others, the world and the future, and the accumulation of these alterations, in turn, can lead to changes in the patient's mood.

2.7 Conclusion

This chapter has reviewed the literature on depression in adolescents and highlighted the importance of applying appropriate interventions within school in order to prevent depression as a first step. Several key points were highlighted based upon the literature on the aetiology of depression as well as therapies for adolescents. Although interpersonal and cognitive deficiency factors are important variables, depression occurs when vulnerable youth encounter negative life events. It is logical to conclude that cognitive

and interpersonal factors in interaction with critical negative life events play an important role in the development of depression in youth.

This information, however, has not yet contributed to the development of empirically supported treatment approaches for use with depressed adolescents or the creation of effective depression prevention programmes for those at risk. The psychological therapies available known as CBT and IPT focus on only some risk factors known to be involved in the aetiology of depression in youth. Many CBT intervention programmes have also been designed with a variety of contents, and the effectiveness of these programmes is supported by in some empirical studies but not others. Thus the need to design an appropriate, sustainable and robust psychological intervention has been recognised by many researchers.

The chapter also described other approaches such as problem solving therapy, and clarified the deficiencies in research and theory such as little attention being paid to creativity interventions. The effective psychological treatment for depression known as CPST introduced and discussed. In general the available data support the efficacy of problem solving therapy in treating depression; however, methodological deficiencies being into question the reliability of conclusions drawn from existing research. In addition, studies investigating the actual effects of creativity training and creative problem solving (CPS) treatment among depressed adolescents in counselling settings are rare, and no pragmatic trials have been undertaken in such settings.

The chapter also proceeded to explain the background to creative problem solving and outlined the rationale for applying it. It has been explained why CPST as an intervention could reduce risk factors such as negative life challenges and interpersonal problems which have been identified as significant in the aetiology of depression. Thus, it would be more useful to put into practice an intervention that deals with the causes of depressive

symptoms, such as real life problems, rather than focusing merely on dysfunctional beliefs which are the effects of those problems,. The next chapter explains and discusses the methodology used in carrying out the present research.

Chapter 3: Methodology

3.1 Introduction

The chapter describes the procedures followed in carrying out this research. A theory is a set of interrelated concepts that present a systematic view of phenomena by specifying the relations among variables (Kerlinger and lee 2000). Since CPS initially leads to an increase in a pupil's ability to think in dealing with challenges and problems (Parnes 1992), and also since lack of problem solving skills in dealing with life challenges creates depression through interpersonal situations (Nezu and Nezu 2008; Abela 2009), thus it is likely that gaining the ability to think creatively resolve problems through the stages of CPS which may lead to a decrease in depressive symptoms The chapter also explains rationale for choosing the methodology and also the procedure of sampling, assessment and recognising depressed pupils, applying interventions and analysing of data. Since methodological reporting is correlated with methodological quality (Huwlier-Müntener et al. 2002), therefore to ensure credibility the present research followed the guidelines of the Consolidated Standards of Reporting Trials (CONSORT) for the statement, design and reporting of the intervention for the research in this study and on the efficacy of its interventions. The CONSORT was originally developed to aid researchers in reporting RCTs clearly and comprehensively, and it can also be a helpful tool in the design and conduct of RCTs (Altman 1996). Thus, based on amendments made by the American Psychological Association's Publications and Communications Board in April 2003 (Dittman, 2004), the chapter will describe the procedure of the research study using this guideline. The study also explains that although randomised controlled trial (RCT) is the gold standard in research methodology for testing the efficacy of an intervention (Trudeau et al. 2008), it cannot explore participants' experiences and the meanings an intervention has for participants (Aldridge 2007).

3.2 Introduction to the methods of data gathering

Based on the main aim of the research, the manner of data gathering in present study is RCT, the quantitative approach, which belongs to the positivist philosophy and objectivist ontology. Semi-structured interviews also applied following the RCT for the purpose of elaboration and explanation to explore participants' attitudes and perceptions to interventions. Therefore combining the two different ontologies could be regarded as controversial.

For example, one argue says they are incompatible because they are based on fundamentally opposing philosophical assumptions regarding epistemology. The first is the notion believes real causes of educational and psychological outcomes can be discovered objectively and reliably, that reality can only be found through objective observation. However, the second method used in the idealism which belongs to an interpretivist epistemology and a constructionist ontology which believes reality is subjective and meaning is created through social interaction. Thus the results cannot be combined to RCT results. Bryman (2001, cited in Verhoef and Vanderheyden 2007, p.75) however accepts there are certainly differences between qualitative and quantitative research approaches but he suggests that such differences should not be exaggerated to the point where the methods may not be combined or used to complement one another. In addition the need to combine methods arises not only from the requirement for high internal, external validity but also the demands of the specific research question (Greene et al. 1989, Sandelowski 2000).

In this study the interviews are employed with the aim of seeking elaboration, illustration or clarification of the RCT results. RCT as a quantitative method of data gathering is well suited to answering questions such as whether or not an intervention works for a group of individuals or how one intervention compares to another intervention. When RCT is followed with the interviews as a qualitative method of data gathering the research can explore participants' experiences, the meanings an intervention has for

participants (Aldridge 2007). It increases the interpretability, meaningfulness and validity of findings (Sandelowski 2000), and therefore, it increases validity of dependent and independent measures. Many researchers (Rothwell 2005; Feneck 2009) acknowledge that RCT is the most powerful and objective established research method for assessing the efficacy of interventions. However, other researchers have criticised it for not being able to uncover what is really happening below the surface of these effects (Blakwood et al. 2010). This suggests that the quantitative data and their subsequent analysis provide a general understanding of the research problem. Therefore, the addition of interview to RCT can address and assist understanding of interventions, the meaning of an intervention to participants, their beliefs about the treatment.

Therefore the study followed by conducting semi-structured interviews to describe and explore below the surface of these effects and how pupils in schools in Iran understand the interventions. Therefore, the research accepts that qualitative methods can complement RCT for the purpose of gaining a better understanding of the research problem (Tashakkori and Teddlie 2003; Creswell 2005).

3.3 Rationale for applying RCT and validity of design

The basic aim of science is theory as well as explanation, understanding, prediction and control (kerlinger and Lee 2000). A theory is a set of interrelated concepts, definitions, and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena. In this study it was found that CPS can lead to the an increase in the pupil's ability in thinking in dealing with challenges and problems (Parnes 1992), since lack of problem solving skills in facing life challenges create depression through difficulties in interpersonal situations (Nezu and Nezu 2008; Abela 2009) thus it is likely that gaining the ability to thinking and

creatively resolve problems through the CPS stages may cause a decrease in depressive symptoms and in depressive mood and feelings scores.

The study's intention was to compare the means not only of three different groups of conditions in pre-and post-tests, but also to determine the differences between the means and variances of three groups, in order to understand whether or not the subjects achieve a good mood outcome. The experimental manipulation of CBT, CPS and control groups was carried out, after which the groups were again tested on the aforementioned measures. The differences between the three groups were then tested statistically.

The aims of this research is whether or not CPST works comparing with CBT and control group and also whether this intervention is effective in the context of school. Experimental designs have been found to be effective in answering questions about causal relationships (Kerlinger and Lee 2008). However, there are several disadvantages of applying an experimental design. The design of present study was chosen to attempt to maximise variance in the independent variable, to control variance in extraneous or unwanted variables that may have an effect on the experimental outcomes, and to minimise the error or random variance, including errors in measurement. The RCT design can provide answers to research questions as validly, objectively and accurately as possible.

Despite having several advantages, the researcher was aware of the potential disadvantages of experimental design. For example, there are a set of obstacles known as internal and external threats to validity (Cample 1957; Campbell and Stanley 1963, cited in Nezu and Nezu 2008) when designing and implementing an experimental design. These threats involve the degree to which the conclusions are sound, and correct with regard to causal statements. Internal validity emphasises whether or not a given stimulus made a significant difference in a given situation, while external validity refers to the

degree to which such an effect can be generalised to other populations, settings, and variables.

One important threat to internal validity in experimental trials is the selection of participants. This involves threat involves the potential existence of significant and systematic differences regarding the characteristics of participant such as gender, age, intelligence, ethnicity and substantial differences in socioeconomic status, financial and personal resources between groups before treatment begins. These differences could cause concern about the valid interpretation of cause-effect relationships regarding the impact of treatment. It was assumed here that gender may be a possible contributing factor in variance of depression scores or dependent variables. The study therefore excluded male participants by using subjects only from schools for females. To prevent and control such threat to validity, random assignment to conditions is considered a crucially important element in experimental trials, it reduces its potential negative impact to internal validity. In addition, having a comparison group (CBT) as well as a control group in this study is also considered to be another method of reducing threats to internal validity (Shadish et al. 2002, cited in Nezu and Nezu 2008).

The type of school may have potential effects which may be regarded as a threat to internal validity. To prevent this, the study first excluded private schools, elite schools and those state schools which have entrance examinations based on the student's academic background. The study, therefore, used subjects who were as homogeneous as possible with respect to those independent variables. However, other variables among this population, such as the family situation, intelligence, aptitude, social class, previous experience, motivation and academic performance among subjects of state schools were dealt with in the study by the random assignment of participants into the three conditions. Such randomisation is the only powerful method of controlling for all possible extraneous variables (Kelinger and Lee 2000). The study numbered participants from one to ninety-

six and randomly assigned them in the three experimental conditions using a software programe discussed below. This process also helps to minimise measurement error and, in turn, the reliability of data is increased.

Thus, if the treated participants are found to cope better than the control or comparison groups, this may be due to the interference of potential pre-existing differences such as difference between two schools. So, to control this threat, all three intervention conditions were implemented in both schools. However, this may create other problems such as participants amongst themselves outside the sessions. To avoid this threat, the importance of keeping the content of the sessions confidential was emphasised to students in the first session of each therapy. Attention was paid to this as one important rule for participating in the continuing sessions; however, pupils were free to discuss the intervention with their parents if they so desired.

The occurrence of any event other than the differing treatment conditions in or outside of the study, a factor known as history is another threat to internal validity. For example, in this RCT study addressing the efficacy of CPST for depression such event might include the occurrence of final exams (Shadish et al. 2002, cited in Nezu and Nezu 2008). To prevent such a threat to internal validity for of all participants in different conditions needs to be as similar as possible. For example, using the random assignment of participants, waiting list control participants and also pre-post-test manner (Kerlinger and Lee 2000) are evaluated after such an event. If the results show difference at post-treatment between the experimental and control conditions, this suggests that the treatment under investigation is actually effective.

Maturation is another threat to internal validity. This refers to the various process as which occur over time, such as natural growth, ageing, or changes in intelligence, physical strength or interest that are internal to the study's participants during investigation. In this research the length of the intervention from pre-test to post-test was

short (8 weeks) and also the participants were homogeneous regarding age. Being girls of 13-15 years, which is the period of starting puberty. To prevent the intellectual level the study designed the adequate control groups and comparing group to minimise this threat to internal validity (Kerlinger and Lee 2000). Moreover, the random assignment of participants to different interventions can be effective to minimise such threats to internal validity.

The study avoided changes to the measurements during the experiment, and participants were informed about avoiding other forms of treatment for the time being. Also the researcher arranged the sessions so that the interventions were equal as possible. For example, the timing and length of training interventions were equal for all groups and the interventions were carried out according to handbooks and manuals and also using Powerpoint presentations. To prevent the threats to validity of statistical conclusion, the researcher chose adequate statistical power (multivariate analysing of variance (MONOVA) in order to be able to interference them adequately.

Various aspects of testing and instrumentation can also threaten internal validity. This for examples refers to, whether or not the administration of a pre-test can impact on subsequent performance, or if familiarity with the testing procedure can affect post-test or follow-up tests. This study included two parallel tests in order to prevent practice effects. In addition, the inclusion of a control condition that separates the influence of treatment from that of testing is important in guarding against this threat to internal validity (Shadish et al. 2002, cited in Nezu and Nezu 2008).

For the aforementioned reasons the study chose a RCT pre-test post-test follow-up design to compare the effectiveness of the two different interventions of CPS and CBT as well as a control group design. Two parallel measurements valid in the treatment of depression in mildly and moderately depressed adolescents aged 13 were used.

The randomised controlled trial (RCT) has been considered during the past six decades to be gold standard with regard to questions of treatment efficacy (Nezu and Nezu 2008, p. 3). A major objective of an RCT is to provide reliable and valid evidence that a given intervention had given effects when evaluating the efficacy of a psychosocial intervention. This type of design has been developed specifically to avoid several threats to internal and external validity in research. Randomised controlled trial (RCT) has played a massive role in producing valid data upon which practice can rely (Edwards et al. 1998).

The RCT has many advantages, including a control group, random assignment and pre-test post-test follow-up features as in this study. Participants were pretested on a measure of BDI-II and the parallel test SMFQ as the dependent variables. Target participants were also assigned randomly to the CPS, CBT and control groups using a randomisation computerised system. Randomisation and control procedures and pre-and post-tests ensure that the experimental procedures used are capable of preventing threats to the internal validity. Therefore, such an RCT can determine the presence and strength of a causal relationship between the given treatments of CPS and CBT and the outcomes which in this study are scores of the Beck Depression Inventory (BDI-II) and the Short Mood and Feelings Questionnaire (SMFQ) can also be evaluated.

The efficiency of the different interventions can be evaluated by comparing the means and standard deviations resulting from the three conditions. The research design intimately links to analysis of variance paradigms, which eliminate the amount of error variance. Error variance is the variability of data due to, for example, random fluctuations, errors of measurement, variation in responses from trial to trial, guessing, momentary inattention, slight temporary fatigue and lapses of memory, and the transient emotional states of subjects. For instance, factors associated with individual differences among subjects, or systematic variance which cannot be identified or controlled has to be

considered in terms of error variance (Kelinger and Lee 2000). Thus, any changes post-intervention are assumed to be the result of the interventions and not other variables.

3.4 Semi-structured interviews for the purpose of elaboration of the quantitative data

This section presents the qualitative findings of the study. As discussed earlier, the interviews were employed after post-study with the aim of seeking confirming and also elaborating the acquired results through the quantitative data analysis. Creswell (2011) displays three elements of inquiry termed knowledge claims, strategies, and methods of data gathering and shows how combining these three elements, form different approaches to research. Based on the three questions central to the design of research conceptualised by Creswell (2009), the knowledge claims or the epistemology and theoretical perspective were made by the researcher and the strategies of inquiry is objectivism or positivism or quantitative approach for developing knowledge. However, regarding the methods of data collection and analysis researcher possesses pragmatism knowledge claim in which the research problems is informed using both standard questionnaires and semi-structured interviews. The semi-structured interviews are used for the purpose of elaboration and also as a complementary method to the quantitative approach where two methods of data gathering are used to investigate different aspects or dimensions of the same phenomena to deepen or broaden the interpretations and conclusions from a study (Farquhar et al. 2011).

The research first collected quantitative data and analysed them and followed to collect qualitative data using interviews and analysed second in the sequence to help explain, or elaborate on, the quantitative results obtained in the first phase. The purpose of interviews after RCT is to explore participants' experiences and beliefs in depth. The research needs firstly to delineate between degrees of methodological integration in such research.

Depending on the research's purpose and questions the study reserves the term 'multi-method' for less integrated designs, for example when a qualitative component is simply added to an RCT but the data collection, analysis and interpretation are kept relatively separate (Verhoef and Vanderheyden 2007).

The interviews build on the data gathered through questionnaires and the two data were connected in the intermediate stage in the study. The qualitative data and their analysis refine and explain those statistical results by exploring participants' views in more depth (Rossman and Wilson 1985; Tashakkori and Teddlie 1998; Creswell 2003).

3.5 Research aims

The main aim of this study is to investigate whether or not a group course of creative problem solving (CPS) is effective in comparison with cognitive behavioural therapy (CBT) and a control group in terms of improving depression, mood and feeling in groups of young people with mild and moderate depression. The following aims guided this research:

1. The first aim of this study is to examine the effectiveness of CPS as an intervention for improving the symptoms of depression as measured by the Beck's Depression Inventory (BDI-II) (Appendix 3) and to improve mood and feelings as measured by the Short Mood and Feeling Questionnaire (SMFQ) (Appendix 4) in mildly and moderately depressed adolescent girls aged 13-15 in schools before and after completing the intervention, and at 2-months follow-up.
2. The second aim is to examines the effectiveness of CPS in comparison with CBT and a control in improving symptoms of depression, in groups of mildly and moderately depressed adolescent girls aged 13-15 as assessed by the BDI-II and

the SMFQ, before and after completing the intervention and at two months follow-up.

3. The third aim of this study is to investigate the participants' perceptions of the course of intervention in both groups and the changes that occur in their thinking and attitudes.

3.6 Research questions

The research questions asked are as follows:

1. Is creative problem solving (CPS) an effective intervention in improving depression and mood and feelings among adolescent girl students in the counselling setting in schools in Tehran?
2. Is creative problem solving (CPS) more effective intervention more than cognitive behaviour therapy (CBT) in improving depression and mood and feelings among adolescent girl students in the counselling setting in schools in Tehran?
3. How effective is CPS compared with CBT? To what extent could two different interventions affect students' depression as measured by BDI and SMFQ?
4. How effective were CPS and CBT compared with the control group in reducing the symptoms of depression?
5. Are there any correlations between cognitive and somatic outcomes as measured by BDI-II in the two interventions among girl students?
6. What were the students' perceptions of those interventions as expressed in individual interviews? To what extent did they comprehend the significance of the methods?

7. Were there any differences in students' perceptions as expressed i individual interview?

3.7 Thesis hypotheses

Based on prior research and theory, several hypotheses are addressed, so following null hypotheses were to be tested in this study:

1. There will be significant differences between pre-test, post-test and in the two-month follow up in the CPS group (independent variable) and the outcome of the (BDI-II) (dependent variable).

2. There will be significant differences between pre-test, post-test and in the two-month follow up in the CPS group (independent variable) and the outcome of the (SMFQ) (dependent variable).

3. There will be significant differences between pre-test, post-test and in the two-month

follow up in the CBT group (independent variable) and the outcome of BDI-II (dependent variable).

4. There will be significant differences between pre-test, post-test and in the two-month follow up in the CBT group (independent variable) and the outcome of SMFQ (dependent variable).

5. There will be significant differences between CPS, CBT and control groups at the end of therapy and in the two-month follow-up in the DSM-IV criteria in general factors of depression as measured by the BDI-II.

6. There will be significant differences between CPS, CBT and control groups at the end of therapy and in the two-month follow-up in the DSM-IV criteria in mood and feelings as measured by (SMFQ).

7. There will be significant differences between CPS, CBT and control groups at the end of therapy and in the two-month follow-up in the DSM-IV criteria in cognitive and somatic factors as measured by (BDI-II).

8. There will be significant differences in the number of students achieving a good mood outcome of <14 in the BDI and of <8 in the SMFQ among the three groups.

9. There will be significant differences between the perceptions of selected individuals about the interventions based on the content of individual interviews before and at the end of the study.

3.8 Independent and dependent variables

The most useful way to categorise variables is as either independent or dependent (Kerlinger and Lee 2000). Change in independent variable is the presumed cause of a change in the dependent variable. In other words change in the dependent variable is a consequence of changes made to the independent variable by the researcher. Also, the independent variables are manipulated by the researcher, which in this research means using different interventions on different groups of subjects, so that these variables can be considered as active variables. In this study two different interventions and one control treatment are considered as independent variables, to understand how the three different conditions affect students post-intervention. Therefore, the kinds of intervention made in the CBT, CPS and control groups of depressed adolescent are regarded as independent variables. The independent variables in this study are as follows:

1. Cognitive behavioural therapy (CBT) delivered to one group
2. Creative problem solving therapy (CPS) delivered to other group
3. No specific therapy (control group) delivered to a third group

The effects of these different interventions are examined through the measurement of dependent variables which are assumed to be the consequence of changes made to the independent variable by the researcher. The dependent variables in this study are as follows:

1. Overall depression scores at pre-test, post-test and follow-up in the CBT treatment group

2. Overall depression scores at pre-test, post-test and follow-up in the CPS treatment group

3. Overall depression scores at pre-test, post-test and follow-up in the control group

4. Mood and feeling scores at pre-test, post-test and follow-up in the CPS treatment group

5. Mood and feeling scores at pre-test, post-test and follow-up in the CBT treatment group

6. Mood and feelings scores at pre-test, post-test and follow-up in the control group

6. Cognitive factor scores at pre-test, post-test and follow-up in the CPS treatment group

7. Somatic factor scores at pre-test, post-test in the CBT and CPS treatment group

3.9 Pilot study

The pilot study was carried out in order to improve the design of the study and to give the researcher a better idea of how to prevent and control unwanted variables. It was also

conducted in order to test the effectiveness of the questionnaire and the application of the interventions and to test the reactions of pupils assigned to the control group. The pilot study took place in a school in a deprived area in the south of Tehran which was not selected at random, but was chosen because the head teacher agreed that this study could take place there. All stages of the pilot study followed the same ethical procedures as those used in the main study as discussed bellow. This research involves controversial subject of depression, and in order to prevent any potential for panic or of feelings of upset among parents and pupils, an effort was made to use the terms (mood) and (feelings) when referring to depression, as in Iranian culture the term ‘depression’ may not be acceptable to the population. Therefore the terms ‘mood’ and ‘feeling’ were thought to more diplomatic alternatives.

Consent was sought from families with the help of the head teacher, by sending consent forms and information sheets to each family in the main study. Only those pupils with a signed consent form were able to proceed further in participating in the study, and were given a talk by the researcher in person on the procedures to be used in the research. During this talk the students were taken through the information sheets, which explained the process step by step and at the end of the talk the pupils were asked to sign their consent forms if they wished to participate further. The pupils who had parental consent were still given the option of withdrawing from the study should they wish to do so. Those who gave consent were given the BDI-II and SMFQ questionnaire to complete. Despite no one wishing to withdraw from the study at that stage, the researcher had planned for some to not participate in filling in the questionnaire where alternative activities would be offered for the time it took others to fill in the questionnaire. From the analysis of the questionnaires in terms of the target criteria of SMFQ 8 and above and BDI-II 14 and above, the researcher identified a total of 86 pupils (28%) as having mildly

and moderately depression, 49 (16%) as having major depression, and 172 pupils (56%) with no depression.

Consequently, the 86 students who scored 14-28 in BDI-II and 8-18 in SMFQ were identified as having mild and moderate depression and became the pilot research target group. Each participant was then randomly assigned to one of three groups. Two groups receiving two different interventions and a control group received no specific intervention. The pupils in the intervention groups were given further information sheets and consent forms describing the intervention procedure and participation in the sessions along with the timetable for the programme. Pupils in the control group were told that due to the limited number of people receiving the interventions, they had been are put on a waiting list and would receive the intervention of their choice after the end of the first round of therapy.

Because of the sensitivity surrounding informing those with major depression about their condition, extra precautions were taken. The students identified as having major depression were informed in individual meeting by the researcher about how to seek professional help with the assistance of two invited psychologists from the counselling centre of that educational area. They were given the options to either book appointments to see the counsellor in the school or to be referred to the counselling centre. With the pupils' permission they were introduced to the head teacher and their parents were also informed by the counsellor. These students along with those with no specific depression (scoring < 14 in (BDI-II) and < 8 in (SMFQ) were excluded from the study.

The two interventions used were CBT (based on Munoz and Miranda 2000) and CPS (based on Osborn, 1956, 1979; Stein, 1975; Parnes, 1979) and the interventions were given in 6 daily sessions.

At the beginning of sessions and before the start of the interventions, the pupils were briefed about what it meant to keep all discussions confidential outside of the sessions; furthermore they were reassured that all information discussed would remain confidential and that the researcher would not pass on any of the information to another party unless with their own permission. If the content of the research was to be used for other purposes, names and details would be made anonymous or changed to fictional names. Pupils were also reminded of their option to withdraw from the study at any time during the course of the interventions should they wish to do so.

The following strategies were employed to enhance the validity and credibility of the research. The research objectives and how data would be used were articulated verbally and in writing, so that participants clearly understood the procedures. Furthermore, the researcher' biases, values and personal interests or reflectivity about the research topic and process were identified prior to the study, acknowledging that all inquiry is laden with values. It was also decided to use a PowerPoint presentations and handbooks during the sessions to ensure that training in all classes was as similar as possible. The researcher was also aware that when studying a sensitive topic it was necessary to cancel the real names of people, places, and activities; this was also discussed with participants prior to the study. All of this information was also provided in the information sheets and referred to in the consent form.

3.9.1 *Decisions made as a result of the pilot study findings*

Based on the experience of the pilot study, the decision was made to limit the size of the group for each intervention in the main study. Larger groups of 28, and 29 proved to be more difficult to handle and the interventions could be delivered more effectively to smaller groups. If large numbers of pupils were identified as falling within the study criteria, they would have to be split into smaller groups, for example in 2 groups per

intervention in each school. It had been assumed that the numbers of pupils identified as having mild and moderate depression in each school would be lower than was to be the case in practice. Therefore, based on the unexpectedly high number of people identified in only one school during the process of the pilot study, the decision was made to reduce the number of schools chosen in the main study. In addition, based on the experience of the pilot study, it was deemed appropriate to spend less time on giving direct instructions and to allow pupils more time to work on their problems and utilise skills and techniques introduced in the intervention, either individually or in groups, in order to gain a better understanding of the intervention. Another decision was made to prepare an explanation about depression for use where pupils in the control group were unenthusiastic in accepting the session. For this purpose, a moderately explanation based on the standard description of depression, (NICE, 2005, p.), was drawn up and used in discussions with pupils where appropriate.

3.10 Main study design

3.10.1 *Population and context*

Permission was sought from the education authority in the city of Tehran (Appendix 5). The targeted population included all state secondary schools for girls in year 6, 7 and 8 (aged 13-15) registered comprehensive state secondary schools in the academic year 2008-2009 in Tehran, Iran. The two schools were collected randomly based on two-stage cluster sampling. The two secondary state schools consisted of 279 and 324 students are located in the south the north of Tehran respectively. Although one of these secondary schools was situated in the north of Tehran which typically houses middle class families, the majority of students in these two schools were from working class and low income families and those families who could not afford to send their children to private schools.

Due to the competitive conditions in this society, private schools in Iran and particularly in Tehran play an important role and their number has increased sharply in the past twenty years. For this reason the number of skilled teachers, staff and managers in state schools has declined leading to the weaker personal development of pupils and relationships there. The quality of education at these schools is not good enough, leading to bellow average progress. Youth people within the schools are also given not help in the form of free meals or clothes or any psychological or medical support. However, the Department of Education does provide training programmes and workshops for the professional development of counsellors and managers in all state schools.

All pupils within these two schools were tested after consent obtained. The mean age of participants was 13.4 among those who scored 14-28 on the Beck's Depression Inventory and 8 or greater in the Short Mood and Feeling Questionnaire as required participants in the study. The results of pre-tests show16 to 28 (mean 24.37) and 10 to 19 (mean 14.74) in BDI-II and SMFQ respectively indicating mildly to moderately depression.

In the second stage the testing procedure was conducted in each school in the counsellor's designated room. The study was conducted in a step by step process often distributing information sheets and consent forms for both students and parents (Appendixes 6-9). The initial BDI-II measurements were applied inside the classrooms; however the second measurement (SMFQ), the initial interviews and also the post-test and follow-up measurements and the semi-structured interviews in the study were carried out in the counsellor's room.

3.10.2 *Randomisation and sampling*

The method of drawing samples from a population such that every possible sample of a particular size has an equal chance of being selected is called random sampling, and the resulting samples are random samples (Kirk, 1990, cited in Kerlinger and Lee, 2000, p. 165).

In this study, two-stage cluster sampling identified each school district as a cluster and a random sample of the school districts was taken. The Random Library of Python Programming Language (2008) as discussed below was used for the generation of random numbers. Therefore, two school districts were collected randomly from the list of 22 in the presence of a representative from the Tehran Educational Organisation. Then, from these two schools districts, another random sample of schools within the districts was taken (Kerlinger and Lee 2000, p. 180). In the next stage the lists of all secondary schools within the school districts were then provided by the representative of the educational authority. In order to exert more control over extraneous variables such as gender, academic background, social class and financial position, male schools, private schools, gifted schools and those government schools which had entrance examinations were excluded, and therefore the study included schools which were as homogeneous as possible (Shadish et al. 2002, cited in Nezu and Nezu 2008).

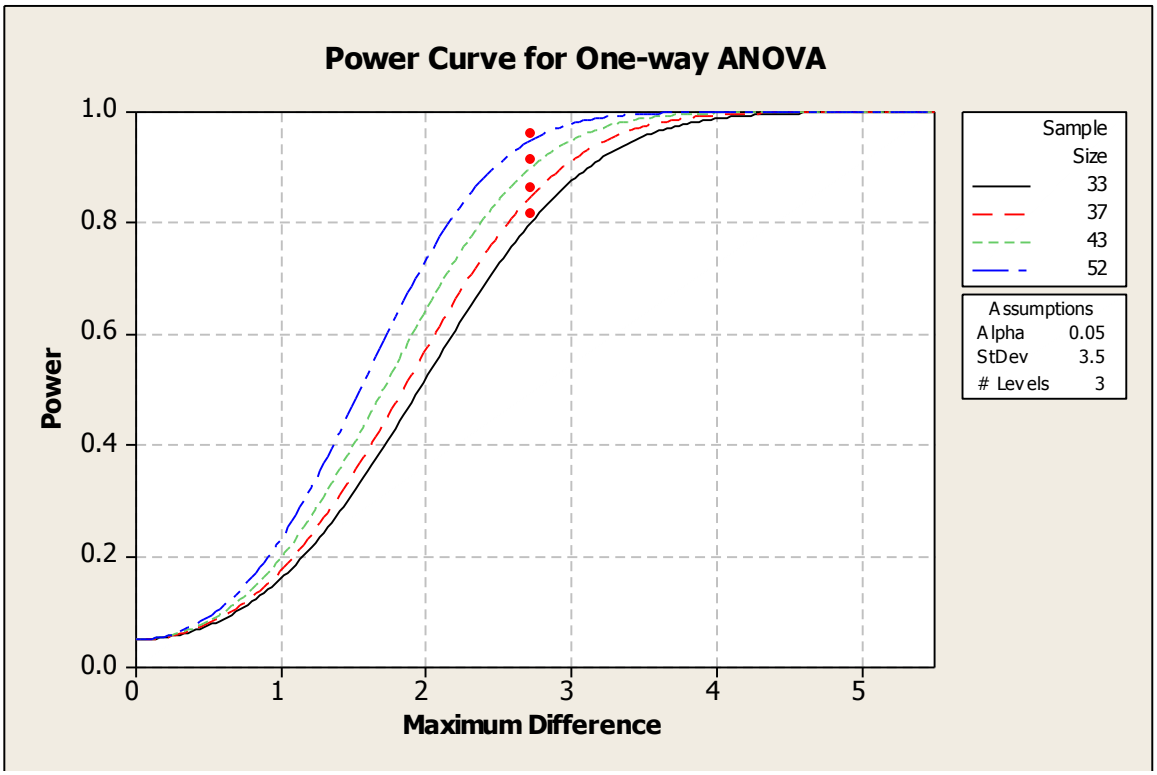
The names of the remaining 17 schools in both districts were numbered and coded from 0-16. The Random Library of Python Programming Language (2009) was used for the generation of random numbers (see http://docs.python.org/library/random.html and for the Shuffle Function, http://docs.python.org/library/random.html#random.shuffle and finally for the choice function see http://docs.python.org/library/random.html#random.choice.) Each school in the list was given a number starting from zero to 16. The shuffle function then arranges these

numbers at random, which means that every school has an equal chance of being chosen. Next an index of one number between 0-16 was chosen at random, which means that any school could be selected randomly from the whole list.

3.10.3 *Power and sample size justification*

The Beck Depression Inventory for depression as the main outcome measure was chosen for calculating the sample size purposes. The study was designed to have 80% power of detecting a chance in the primary outcome at the level of 5% of statistical significance. To detect a minimum difference of 2.75 on the pre-test scores between the (CBT, CPS and control groups) at a power level of 80%, the use of Minitab software show that the research needed about 33 cases per group at an alpha level of 0.05. So the sample size of 32 cases per group was deemed well within the expected range. Figure (1) shows the power curve for one-way ANOVA from Minitab.

Figure 1 Power curve one-way ANOVA



3.10.4 *Research tools*

The tools used in this study were the BDI-II and SMFQ, which have been validated for use with youth depression around the world and are used in many different treatment studies of depression. These two measurements are particularly suitable for rating the severity of the symptoms of depression. Other measures, such as the Reynolds Adolescent Depression Scale (RAD) (Reynolds 1986), The Centre for Epidemiological Studies Depression Scale (CES-DC) (CES 1990) are also commonly used to assess depression in adolescents; however, the SMFQ and BDI-II were chosen for this study because both its items correspond closely to those of the DSM-IV criterion (American Psychiatric Association 1994). In addition, Farsi versions of both scales are available and have previously been used in student and adolescent populations in Iran, and modified translations of both in Farsi to suit Iranian culture are readily available. BDI-II is the modified form of a previous version known as BDI-IA which this also is based diagnostic criteria for major depressive disorders (MDD) that are described in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (American Psychiatric Association 1994). Four new symptoms of agitation, concentration difficulty, feelings of worthlessness, and loss of energy, are included in the BDI-II and other items such as more concerning weight loss, body image change, work difficulty, and symptoms of somatic preoccupations were excluded. The questionnaires are also intended to be used to assess the severity of depression, which means identifying the presence and level severity of symptoms consistent with the criteria of the DSM-IV. They are not intended as sole diagnostic measures.

3.10.4.1 *Beck's Depression Inventory (BDI-II)*

The Beck Depression Inventory (BDI-II) (Beck et al. 1996) is defined as the primary outcome measure applied at baseline, 7 and 18 weeks. The BDI-II is a 21-item self-report questionnaire used for measuring the severity of depression in adolescents and adults aged 13 and older. Each response can be 3, 2, 1, or 0 and items have been revised to be more consistent with the DSM-IV criteria for depression (Beck et al. 1996). Each symptom rates on a 4-point rating scale ranging from 0 to 3, total scores can range from 0 to 63, and the time frame specified for the BDI-II rating is for the "past 2 weeks, including today". Total scores ranging from 0 to 13 represent normal to minimal depression. Total scores from 14 to 19 are recognised to present minor or mild depression, 20 to 28 as moderate, and 29 to 63 as severe or major. The DSM-IV uses of the term 'minor depression' and has been characterised as a patient experiencing 2 of the key symptoms simultaneously. For moderate depression the number of key symptoms experienced rises to 5 or 6 and for severe conditions the number rises to 7 or more. Those key depressive symptoms include sleep disturbance, appetite disturbance, poor concentration, guilt, suicidal thoughts, anhedonia, psychomotor retardation, and fatigue.

The questionnaires used in this study took approximately 15 minutes to complete. BDI-II is a brief and well-established depression questionnaire which has been translated into many languages and used widely throughout the world. It is also one of the most widely used self-report instruments for measuring and detecting depression in adolescents (Archer, et al. 1991). Several studies have shown it to have acceptable internal consistency, test–retest reliability, and construct validity with adolescents (Reynolds 1994). The psychometric characteristics of BDI-II have been investigated across a variety of adolescent clinical and nonclinical populations (Beck 1988; Steer and Beck 1988). Thus the BDI-II is likely to provide a good measure of the cognitive changes expected to occur with the present interventions.

The reliability and validity of the BDI-II have been reported to be comparable to that of the BDI-IA. The BDI-II manual discusses several kinds of reliability measures that were developed based on clinical and college student samples. An analysis of internal consistency yielded a Cronbach's alpha of 0.92 for the outpatients and 0.93 for students. Item-total correlations were performed on the scores of both samples, yielding significant correlations (at the 0.05 level) for both groups on all items. For the student sample item-total correlations ranged from 0.27 (Loss of Interest in Sex) to 0.74 (Self-Dislike) (Arbisi 2001). Other researchers (Steer & Clark 1997; Whisman et al. 2000; Wiebe and Penley 2005) have also established similar results in the 0.89 to 0.93 range. Test-retest reliabilities have been calculated and yield an average correlation of 0.93. The BDI-II content validity was designed to address all aspects of depression based on the criteria in the DSM-IV.

Steer et al (1997)have shown that the BDI-II demonstrates both convergent and discriminate validity with respect to other self-report measures of depression such as the Beck Hopelessness Scale (BHS) and Scale for Suicide Ideation (SSI), yielding correlations of 0.68 and 0.37 respectively. BDI-II scores have also positively correlated with the Beck Anxiety Inventory (BAI) at 0.60, the Revised Hamilton Psychiatric Rating Scale for Depression (HRSD-R) at 0.71 and the Revised Hamilton Anxiety Rating Scale (HARS-R) at 0.47.

An iterated principal-factor analysis of the inter-correlations among the 21 BDI-II symptom ratings recognised somatic-affective and cognitive dimensions among adolescents and adult was carried out by Beck (1996). They reported that the BDI-II displayed convergent and discriminant validity with respect to clinical rating of depression.

BDI-II has previously been used among adolescents in Iran (Ghassemzadeh et al. 2005) and in other countries in Asia such as Turkey, showing good psychometric properties.

Ghassemzadeh et al. (2005) examined the psychometric properties of a Persian-language version of BDI-II in an Iranian student sample, comparing mean item scores on the BDI-II-Persian with those on the English-language version administered to North American students, and assessed the internal consistency and test-retest reliability of the BDI-II-Persian and its concurrent validity against a measure of negative automatic thoughts in depression, the Automatic Thoughts Questionnaire (Hollon and Kendall 1980). They also examined the factor structure of the BDI-II-Persian by comparing the fit of various proposed models to the data using confirmatory factor analysis. The BDI-II-Persian had high internal consistency (Cronbach's α=0.87) and acceptable test-retest reliability (r=0.74). In factor analysis, models with strongly correlated affective-cognitive and somatic-vegetative factors provided a better fit than models with only one global factor. These data support the reliability and concurrent validity of the BDI-II-Persian as a measure of depressive symptoms among nonclinical samples.

3.10.4.2 *Short Mood and Feeling Questionnaire (SMFQ)*

Mood and Feeling Questionnaire (MFQ) is a brief, easy to administer, self-report measure of childhood and adolescent depression, designed for the rapid evaluation of core depressive symptomatology or for use in epidemiological studies of youth aged 8 to 18. Shorted version the (SMFQ) includes the highest loading 13 items from the MFQ, takes 2 to 3 minutes to complete, and is used to assess core depressive symptoms and screen children in epidemiological studies (Angold et al. 1995). The SMFQ is currently used best as part of general assessment procedures (NICE 2005, p. 24), the SMFQ test was applied in this study as parallel to the BDI-II.

Items were derived from diagnostic criteria for depression and dysthymia and cover the affective, melancholic, vegetative, cognitive, and suicidal aspects of depression as specified by the Diagnostic and Statistical Manual of Mental Disorders (3rd revised ed.

(DSM-III-R) American Psychiatric Association, 1987; Angold, 1989;1995). The response format is straightforward, with possible responses of "not true," "sometimes true," and "true" in the past 2 weeks. It has 3-week and 3-month test-retest reliabilities of 0.84 and 0.80, respectively (Sund et al. 2001), has high internal consistency (Angold et al. 1995; Sund et al. 2001) and shows good concordance with depressive diagnoses derived from standardised, diagnostic interviews (Wood 1995; Kent and Vostanis 1997). A correlation of r = 0.91 has been reported with the Beck Depression Inventory (BDI) and r = 0.71 with the internalizing scale of the Youth Self Report (Sund et al. 2001).

In a factor analysis, reliability assessment, and bivariate correlation analysis, Cronbach's alphas for the MFQ and the SMFQ have been found to be 0.92 and 0.87, respectively. SMFQ and MFQ scores were very highly correlated at r = 0.95 (Angold et al. 1995). These results indicate that the 13 SMFQ items were appropriate, and for each item except one. The factor loadings in this study were higher than those found in a prior study sample from a general population (Angold et al. 1995). For the SMFQ, a ≥ 8 cutoff had the best sensitivity and specificity compared to a depression diagnosis in a general population sample (Angold et al. 1995). It correlated well with the Children's Depression Inventory (CDI) at r = 0.67 (Angold et al. 1995; Angold et al. 2002) and discriminated well between psychiatric and non-psychiatric patients (Angold et al., 1995; Costello and Angold 1988).

Sharp et al (2006) presented a combined item response theory and categorical data factor analysis of a clinical measure of SMFQ in a community sample of 7 to 11-year-old children. Both latent variable models supported the internal construct validity of a single underlying continuum of the severity of depressive symptoms. SMFQ items discriminated well at the more severe end of the depressive latent trait spectrum. Item performance was not affected by age although age correlated significantly with latent SMFQ scores, suggesting that symptom severity increased within the age period of 7-11. These results

extend existing psychometric studies of the SMFQ and confirm its scaling properties as a potential dimensional measure of the symptom severity of childhood depression in community samples.

NeshatDoost et al. (2005) investigated the psychometric characteristics of the MFQ in a sample of 1645 adolescents in Iran who were randomly selected from schools in the city of Isfahan through cluster sampling and also among a clinical sample of 30 adolescents who were referred to the counselling centre of the Isfahan educational authority and diagnosed as having depressive disorders in psychiatric assessment. The reliability analysis showed that the Cronbach's Alpha was 0.93 for the MFQ ($p< 0.001$). The analysis on concurrent validity showed that the correlation of the MFQ and the Beck Depression Inventory was 0.71 ($p < 0.001$). The cut-off point of the MFQ was computed through discriminate analysis among the normal and depressed groups. The result showed that the cut-off point and canonical correlation were 33.25 and 0.79 respectively. The percentage rank for this cut-off point was 0.84. The result of a univariate analysis of variance revealed that the effect of gender, age and district was significant ($p < 0.0001$). The authors concluded that the SMFQ can be used as a reliable and valid questionnaire in research and clinics for diagnosing depressive disorders in children and adolescents. In addition this study showed that the BDI-II and SMFQ tests were significantly correlated, suggesting that the two scales measured the same concepts and variables.

The MFQ was also examined by Kuo et al (2005) for its utility in screening youth in juvenile justice settings for depression. In a cross-sectional study conducted at the King County Juvenile Detention Centre, a representative sample of 228 detained adolescents completed structured assessments, including the MFQ and the Massachusetts Youth Screening Instrument. Fifty youth also completed the Voice-Diagnostic Interview Schedule for Children. The internal reliability coefficient for the MFQ short form (SMFQ) was = 0.87. Factor analysis produced a unifactorial scale with item loadings of

0.43 to 0.78. At SMFQ cutoff of 10, sensitivity and specificity optimised at 1.00/0.79. The prevalence of major depressive disorder was estimated at 32.1% with a 95% confidence interval = 25.3% to 39.2%). The SMFQ has thus shown potential for the depression screening of detained adolescents. It is particularly important to emphasise that dependent measures mentioned above can show the state of depression, mood and feelings based any criteria such as DSM-IV, but how pupils describe the intervention and how they understand and perceive interventions remain unclear. Therefore, it is likely that the standard measurements in RCT need to be followed by an appropriate qualitative approach, such as interview for the purpose of elaboration or explanatory of the research, for exploring participants' attitudes and perceptions after the course of intervention.

3.10.5 *Data collection procedures*

The present study utilised randomised control trials RCT at pre-test, post-test and follow-up, including a control group to assess the effectiveness of CBT and CPS therapy in a sample of pupils with minor and moderate depression where the researcher had control over the independent variables of each type of therapy intervention. A summary of the procedure of collecting data and the application of interventions is given in (Tables A, B and C), and the programme timetable for intervention in schools is given in (Table D).

The independent variables of the type of therapy were:

1. Group therapy involving creative problem solving therapy (CPST)
2. Group therapy involving cognitive behaviour therapy (CBT)
3. Control groups involving specific therapy but several leisure activities such as puzzles and drawing.

Participants were tested on each of the dependent variables before and after intervention and at a two-month follow-up. The following three dependent variables were measured in order to investigate the effects of the independent variables:

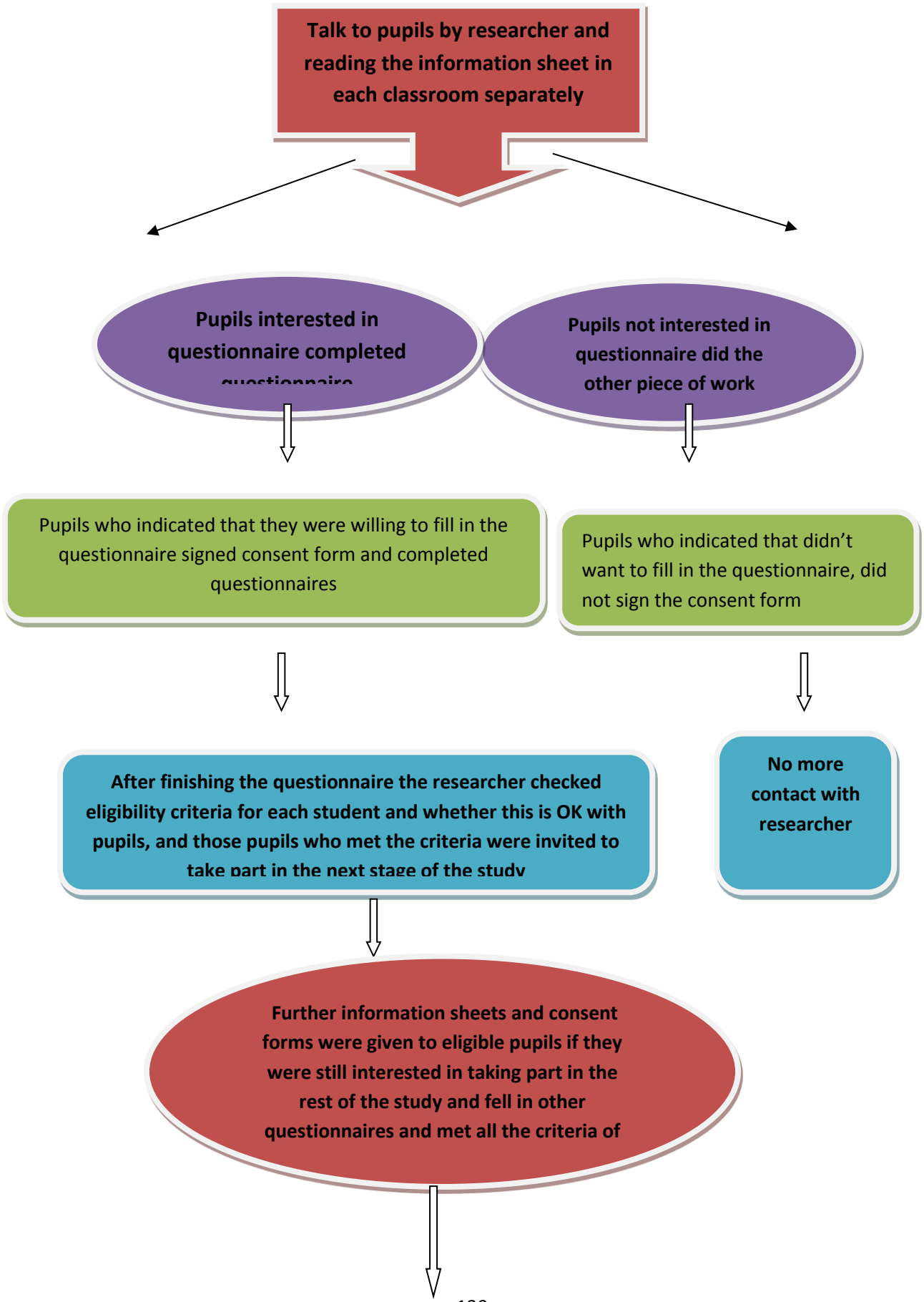
(a) Levels of overall depression, where a high level signified a greater amount of depression.

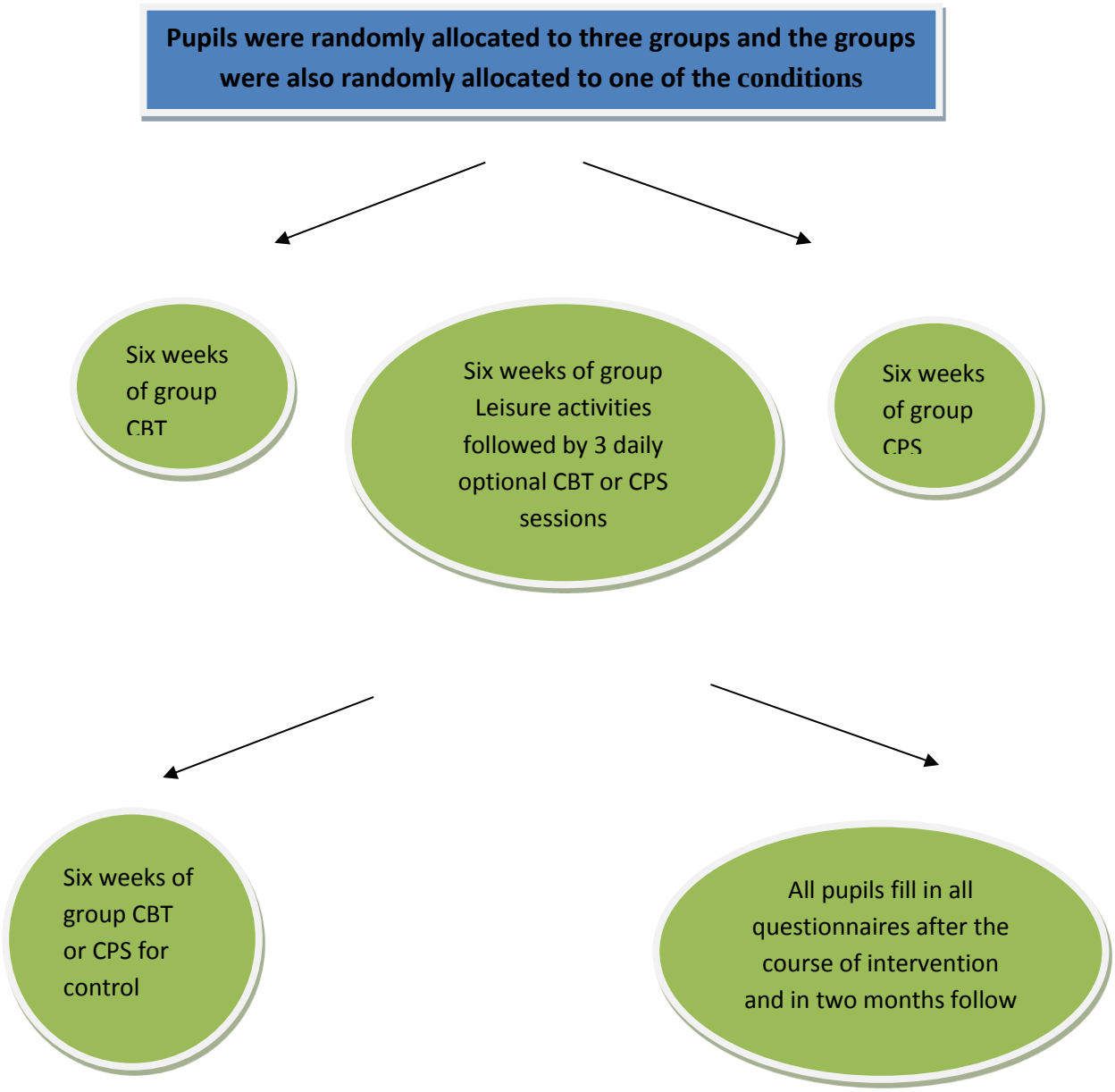
(b) Level of mood and feeling, where a high level signified a greater amount of negative mood and feelings and depression.

(c) Level of cognitive factors in depression only (BDI-II), where a high level signified a greater amount of the cognitive factors in depression.

(d) Level of somatic factors of depression (BDI-II), where a high level signified a greater amount of somatic factors in depression.

Table A: Procedure flowchart





***Please note that at any time pupils could choose to not take part in this research.**

Table B: Data collection procedures

Quantitative (stage one) Week 1 Pre Test	Weeks 3-9 Applying the course of intervention for 6 weeks 90 minutes per session	Week 10 Post Test	Qualitative (stage two) Week 10	Follow up Week 18
1-BDI-II 2-SMFQ	Intervention 1: creative problem solving therapy (CPST) Intervention 2: cognitive behaviour therapy (CBT) Control group 3: no specific intervention	1-BDI-II 2-SMFQ	Individual semi-structured interviews	1-BDI-II 2-SMFQ

Table C: Programme timetable for intervention in the first school

Sessions	(CBT group)	(CPS group)	(Control group)
First Saturday First Sunday	8 - 9.30	10 – 11.30	13 – 14.30
Second Saturday Second Sunday	10 – 11.30	13 – 14.30	8 – 9.30
Third Saturday Third Sunday	13 – 14.30	8 – 9.30	10 – 11.30
Fourth Saturday Fourth Sunday	8 – 9.30	10 – 11.30	13 – 14.30
Fifth Saturday Fifth Sunday	10 – 11.30	13 – 14.30	8 – 9.30
Sixth Saturday Sixth Sunday	13 – 14.30	8 – 9.30	10 – 11.30

Table D: Procedures for applying research

Meeting with manager of research in Department of Education in Tehran (permission for working in schools obtained)	Randomisation process for selecting schools applied			
Meeting with head-teacher, counsellor in school one by one for discussion about research	Research information leaflets and consent form sent to parents of whole school	All consent forms gathered and information sheets and consent forms for pupils were prepared		
Information sheet about the research and consent forms distributed and were read, for any pupils who was not willing to contribute to the research other activities were prepared during the screening process	Initial screening pre test (BDI-II and SMFQ) was applied class by class N1= 324 231 pupils were found without depression	51 pupils were screened as mild to moderate depression in the first school 42 pupils were found with major depression	Second school therefore was considered and all previous process in the second school was applied N2=279 202 pupils without depression	46 pupils were screened as mild to moderate depression 31 pupils were found with major depression
After initial screening students were informed about what would happen and this was administrated class by class by the researcher	Students were told that everyone needs to receive training on thinking skills starting with those who need it most	Eligible students were invited to the next stage of screening by invitation letter	Those recognised as major invited to attend a meeting with counsellor and researcher to inform them about other professional support and with their permission to inform their parents	
Another screening and short interview (pre test) was applied with eligible pupils in the counsellor's room				
Random assignment of participants was applied to randomly assign 96 pupils to three groups: CBT, CPS, control	Handbook (manual) and PowerPoint presentation was prepared for participants	Timetable programme was given to these students		
Intervention programmes were applied in every school separately once a week for every school (3 classes in a day in every school once a week were run)	CPS = 32 CBT = 32 Control = 32 The number of pupils in each group (13 -16)	Every session consisted of 90 minutes, two 40 minute sessions and 10 minute break (Duration of course of intervention was 6 weeks of double sessions)	Every session consisted of presentation, practice, discussing things by pupils, sharing their ideas, individual practice	The groups in CBT and CPS had separate intervention; the control group had no specific intervention. Each group consisted of 13-15 pupils
Interventions for control groups were managed and applied	Post test screening process (BDI-II and SMFQ) was applied a week after finishing interventions	Semi structured interviews were applied for 8 pupils selected randomly		
Follow-up screening process (BDI-II and SMFQ) was applied in week 18				
Total: 603	Without Dep: 433	Major Dep: 73	Mild to Moderate: 97	

The information sheet accompanied by a diagram stating the key messages of each therapy and describing the research process had been prepared for students prior to the study (Appendixes 6-9). The information sheet was prepared based on the ethical issues emphasised by the BPS and BCPA in order to give information about the study. The parents were informed in advance of the research and had given consent for the participation of their child in this study.

A psychologist colleague was also invited to take part in the study in order to help the researcher and take independent measurements. Pupils were informed about the rule of confidentiality and were told that only the researchers would be aware of the answers they would give to the questionnaires and that the questionnaires would not be seen by anybody else apart from the researchers. The questionnaires would be stored in a safe place for a few years and then destroyed. Other anonymous data would be kept separately for an unlimited period and might be used for other research projects. The students were told that these interventions could be suitable for everyone, but those who are more eligible would receive the intervention first. The researcher and her colleague gave information sheets to each class and to those students whose parents had given consent for their participation. Only one parent had not agreed to her daughter participating in the study, and thus this student was given other activities to do during the gathering of data. The information sheets were read by students independently and were explained verbally to pupils in each class separately and time was allowed for pupils to ask as many questions as they wanted about any of the aspects of the study. Moreover, consent forms to participate in the study are signed by pupils who wished to complete the questionnaire. It were explained to the students both verbally and in writing on the information sheet that if at any stage of the study they felt upset or experienced any other emotional difficulties, that they should immediately inform the researcher.

Only students who explicitly agreed to participate in the study and had given their signed consent to do so were included in the research to receive the interventions**.** The pupils knew that they could stop at any time if they did not want to answer or participate in the intervention sessions. All participants within the schools who were willing to participate in the study class by class in both schools completed the BDI-II and answered all of the questions. Participants were given detailed verbal explanations on how to complete the baseline questionnaire which was the BDI-II (Beck et al. 1996). The participants were

told the importance of answering all of the questions, a suitable time to take for each question was suggested and further explanations were provided at the request of students.

Some puzzles and activities had been prepared in advance for non-participating students to keep busy during the time it took for others to fill in the questionnaire. However, only one pupil in the two schools did not want to complete the questionnaire, and therefore those activities were given to her to keep busy and she was not required to give a reason for not participating.

Before they started to fill the questionnaire, the importance of answering all questions was stressed. They were encouraged to answer every question one by one, to read each question and the four available choices, and then tick the choice that best defines their situation within the last 2 weeks or more. The completion of questionnaires took place under the supervision of the researcher in each class in both schools one by one. It was explained to pupils how they needed to fill in the questionnaire and they were told that if they could not understand a question they needed to ask the researcher for help in order to prevent missing data.

3.10.6 *Inclusion and exclusion criteria for screening those with minor to moderate depression*

All of the students in the first school (324 pupils) and their families were informed about the research through information sheets and consent forms prior to the study for screening purposes (see Appendices 3, 4, 5 and 6). Participating students were required to be in the 13-15 years age range and to have symptoms of the mild or moderate depression according to DSM-IV criteria based on the BDI-II which had lasted for at least two weeks. They should have specific levels of mood and feelings and want to improve their mood**,** be considered capable of deciding for themselves that they would take part in the

study, attended school fairly regularly, were not at significant risk of hurting themselves or others, were not involved with other mental health services for young people, including the school's counselling service, were not likely to move schools, and finally were considered capable of maintaining confidentiality about the intervention sessions of intervention and the problems discussed by other pupils.

The most recent relevant criteria to have been established were published in the Diagnostic and Statistical Manual of Mental Disorder in 1994 and 2005 (DSM-IV, TM). Three primary diagnostic categories of depressive disorders are provided in which symptoms differ in number; and severity and are termed minor, moderate and major depression respectively (American Psychiatric Association, 1994, 2005). Any of the pupils with major depression as identified through the screening process were referred with their permission and parental consent to therapeutic services and were excluded from the study for ethical reasons. The young people were given the opportunity to opt out of the screening process by completing alternative activities to the standardised tests; these were included in the same information pack (7 students were absent and only one student was not willing to complete the questionnaire; therefore 323 students completed the questionnaire). The students who were recognised as having mild and moderate depression were assessed using the second parallel measurements, of the SMFQ test, to make sure that outcomes were the same. Therefore, the students scoring in the rages of 14-28 in the BDI-II and +8 in the SMFQ were included in the study from school P in district 10 and school B in district 2 of Tehran.

After all of the data were gathered, the questionnaires were scored by summing the ratings for each of the 21 symptoms per student. Total scores ranging from 0 to 13 represent normal to minimal depression. Total scores from 14 to 19 were recognised as minor depression, and those from 20 to 28 as moderate depression, the scores of 29 to 63 represented severe or major depression. The results identified 52 individuals with minor

to moderate depression from one school, and therefore the inclusion of a second school was considered to bring the sample size up to the required number. The same procedure was followed in the second school and 46 pupils with minor and moderate depression were found which altogether gave a total of 98 pupils recognised as part of the target population. In these secondary schools 73 pupils (31 + 42) were also found as having major or severe depression.

Those with no specific or minimum levels of depression were told that the intention had been run to the creative thinking course for promoting better mood and feelings for all pupils, but due to restrictions, only a limited number of students were included based on the priorities of the study. For those young people with major depression scores, suggesting possible clinical depression, their parents were informed after obtaining the pupils' consent, and these pupils and their parents were advised to contact mental health services if they would like further help. The same process was also applied in the second school and, after the reading information sheet the consent form for participation was signed by all students except one who did not want to participate in the intervention sessions. Therefore, 96 pupils were enlisted in the study (see Table E).

Table E: The number of pupils was screened and recruited in the research

Population screened in the first and second schools	Without depression	Scoring as major or severe depression	scoring as mild and moderate depression	Intervention CBT, CPS, Control
S 1: 324	231	42	51	16 per each group
S 2: 279	202	31	46	15 per each group
Total: 603	433	73	97	

3.10.7 *The process of applying the interventions*

Target pupils were invited to take part in to the study in invitation letters to attend in a session in the counselor's room. Those who were willing to participate, therefore, were asked to complete the SMFQ which is a 13-item measure to which each response can be 2, 1 or 0. The SMFQ was completed in about five minutes to ensure that these target population were identified as having mild-moderate depression through other tests as well as the BDI-II. Interestingly, the results of the SMFQ were consistent with those of the BDI-II. Another information sheet was given to these students explaining the whole process of the interventions.

The researcher explained intervention process both verbally and through a second information sheet about the activities participants would be involved in during the intervention, such as completing another questionnaire, interviews, and recording sessions of therapy, and they were informed that only the researchers would listen to these tapes and that no member of school staff would listen to any of the tapes and see the questionnaires. They also were encouraged to ask any questions they had about the study. The students were informed that some of them may only be offered leisure activities in the first stage and then intervention, but they were told that this was part of the study and after six to eight weeks had passed they would have the option of attending six days of either CBT or CPS intervention to take place in school.

The same process was also applied in the second school, and after reading the information sheet the consent form to participate was signed by all students except pupil who did not want to participate in the intervention sessions; therefore, 96 pupils were enlisted in the study.

3.10.11 *Random assignment of participants*

Randomisation is a suitable method used to generate a random allocation sequence, such as using tables of random numbers or computer-generated random sequences; for example, in experiments in which investigators randomly allocate eligible people into groups to receive or not to receive one or more interventions that are being compared. A list of random numbers may be used to randomise participants; the list should not be close to the individuals responsible for recruiting and allocating participants in order to avoid potential bias influence in the allocation process (NICE 2005). This research used the Random Library of Python Programming Language (2008) for the generation of random numbers (see http://docs.python.org/library/random.html, and for the Shuffle Function http://docs.python.org/library/random.html#random.shuffle and finally for the choice function http://docs.python.org/library/random.html#random.choice). Before the random assignment all written consent forms for the target students were double-checked to make sure ethical procedure had been completed. An independent statistician was recruited at this stage to divide the 96 pupils into three different groups of 32 each. A unique number ranging from 0 to 95 was assigned to each pupil, forming an array of 96 numbers, with the target 96 students numbered from 0 to 95 (school P = 0 - 50 and school B = 51 – 95). Index numbers 0 to 31 were considered to be the first group, 32 to 63 as the second group and 64 to 95 as the third. Then the list was shuffled repeatedly. After shuffling, the three groups were each assigned a group marker CBT, CPS or control. To do this, an array of three elements was formed, assigning 0 to CBT, 1 to CPS and 2 to Control. Then shuffling was conducted with the second array, and after an arbitrary number of shuffling operators the index number 0 was assigned to the first group, 1 to the second group and 3 to the last group. Therefore, the participants were randomly assigned to one out of the three groups. In total, 32 were randomly assigned 32 to the CBT group, 32 to the CPS group and 32 to the control group where the study obtained a randomisation as follow:

School “P” the first school: CPS = 18, CBT = 17, Control = 16

School “B” the second school: CPS = 14, CBT = 15, Control = 16

This process eliminated any systematic differences that might exist among the subjects and produced experimental groups similar in all respects prior to treatment (Peers 1996, p.4) (see appendix 7 for the computer program codes).

3.10.12 *Intervention Leader*

The current thesis builds on the knowledge and experience acquired by the researcher since 1991, from working in pre-school, primary, secondary and high schools in Tehran, Iran, with various psychological and educational duties as a teacher and researcher testing intelligence traits, counsellor and finally as an university lecturer. In all these years of experience the researcher has learnt that a most important period of life is the teenage years especially in girls. The focus of the study therefore is on adolescent girls aged 13-15.

The first working experience of the researcher as a psychologist began in 1991, working as a psychological testing examiner in the Educational Organization of Tehran followed by the completion of master degree in educational psychology before becoming an educational psychologist and working as a counsellor in secondary and high schools and in a counselling centre. Finally the researcher taught at university as a lecturer while working in the university’s counselling centre as well.

The experience gathered throughout these years of working with people of different ages was that both children and adolescents mostly lacked skills for coping with the problems and challenges they faced, and often these problems created feelings of hopelessness and disappointment within them, resulting in depression. Most pupils and students who came to seek help, first began by stating their problems, for instance describing events in the

past and explaining their symptoms. Depression was amongst the conditions these people were regularly got diagnosed with. Also interpersonal issues seemed to be at the core of all of these problems; for instance with children problems revolved around relationships with parents, separation or loss. In the case of adolescents these interpersonal problems were mostly romantic or concerned friendship difficulties. Most of the above issues may have been resolved with the presence of appropriate thinking and coping skills; however, deficits in these had caused the problems to appear deeper and more challenging to the people concerned. Their coping mechanisms seemed to be mainly emotional, when they were more in need of dominant cognitive skills to override their emotional coping mechanism.

The researcher used CBT and IP with clients, both of which were very useful; however, what always struck the researcher was that these clients needed a better set of creative thinking skills to put in practice more independently and promptly. When in the UK the researcher became was familiar with the creative problem solving approach and began to think that whether this knowledge could help depressed people cope with their depression, or even better, prevent depression if taught to individuals at a younger age. The researcher became aware that parts of CPS, known as problem solving therapy (PST) have been used in preventing and treating depression.

Having read more of the research literature and about the use of PST, it became apparent that not all of the creative techniques of CPS had been fully utilised in PST. The researcher therefore decided therefore to use the original theory and apply all of the CPS techniques and creative skills in treating depression among adolescents. Since CBT was also a popular form of the treatment of depression, it was decided to compare CPS with CBT. It is important to consider adolescence as a critical period, and the background in Iran shows that there have never been enough regular intervention programmes carried out in schools.

All of the intervention sessions in the present study were delivered by the researcher. In order to prevent any bias each session was delivered with the assistance of a Power-point presentation highlighting with key learning points, and class activities and a handbook were prepared. The latter contains a detailed operational manual with checklists for the researcher's actions, which helped to guarantee the integrity of treatment when applying interventions in each group.

3.10.13 *Interventions*

All participants in the two intervention groups cooperated well with the study and showed great interest in participating; however, 5 students each in the control groups in the two schools did not complete the sessions and withdrew from the study and therefore had to be excluded. Their explanation of refusal to participate in the study that participating in the group was viewed as having no benefits and being waste of time. The remaining 27 pupils in the control group were asked to complete their homework or other leisure activities such as puzzles and drawings; they were also given opportunities to ask questions. Efforts were made to keep the answers to such questions to a minimum without explaining any skills of the therapies. These pupils were told that they would be given the option to choose either one of the interventions as soon as the first course was over. There were no withdrawals or absences in the intervention groups in this study, which suggests that both forms of psychological treatment were broadly acceptable to the pupils in both groups.

3.10.10.1 *CBT Intervention*

The cognitive, behavioural, therapy (CBT) intervention was based on group manuals (Munoz and Miranda 2000) which consist of behaviour and cognitive modification techniques. The manual contains detailed operational guidelines with checklists for the

researcher's actions which seem to guarantee the integrity of treatment when applying the intervention to groups. The manual was built on the work of Beck and colleagues (1986) with depressed patients and has been applied before to young people with depression in Iran. The intervention was applied first in a pilot study to make sure of its applicability to groups within the age range of the study. The CBT intervention consisted of 12 group sessions, applied in 6 weekly double sessions each lasting ninety minutes (40 minuets + 10 minutes break + 40 minutes). The number of sessions was comparable to most other similar studies with adolescents. In previous studies with other populations, shorter group interventions also obtained good results (Araya et al. 2011). There was an introductory session, five sessions dealing with thought re-structuring, one session related to identifying emotions, three sessions of problem solving and one closing session with a revision of the learning and planning for the future.

CBT was delivered to the targeted pupils in the counselling room in the two schools during school hours. A detailed manual specifying key learning points and objectives for each session in the Farsi language was prepared and students received a similar but shortened workbook. Each session was delivered with the assistance of a Powerpoint presentation of key learning points. Information sheets and class activities were prepared for students key massages in the CBT intervention can be found in in Appendix 10, and a summary of all sessions containing key points discussed in each are provided in Appendix 11). An example of the procedure of CBT applied during therapy session is prepared (Appendix 12).

3.10.10.2 *CPST Intervention*

The second intervention contained the process of creative problem solving (CPS). This type of therapy is based on the group format (Osborn 1956, 1979; Stein 1975; Parnes 1979) and consists of several creativity techniques such as problem solving, divergent and

convergent thinking, and brainstorming. The manual was built on the work of Osborn and Parnes (1979) and was applied first in the pilot research to make sure of its applicability in the groups within this age range of the study. A detailed operational manual with checklists for the researcher's actions was prepared to ensure the integrity of treatment when applying the intervention to groups. As with the CBT, CPS was applied in 6 weekly double sessions each lasting ninety minutes (40 minuets + 10 minutes break + 40 minutes). The number of sessions was comparable to those in most other similar studies in PST with adolescents, where shorter group interventions have obtained good results (Nezu et al. 2007).

Students worked individually as well as in groups to complete their own statements and work on their problems. Similar to CBT, CPS was also delivered to targeted pupils in the counselling room in the two schools separately during school hours. A detailed manual specifying key learning points and objectives for each session in the Farsi language was prepared and students received a similar but shortened workbook. Each session was delivered with the assistance of a Power-point presentation with key learning points. Information sheets and class activities were prepared for students and the key messages of the CPS intervention can be found in Appendix 13, and a summary of all sessions containing key points discussed in each are provided in Appendix 14. An example of the procedure of CPS applied during therapy session is prepared (Appendix 15).

3.10.10.3 *Control group*

The control group was provided with six sessions at the same length as those in the treatment groups. Participants were given the 6 sessions in similar structure (40 + 10 + 40 = 90 minutes) as the CBT and CPS groups as well as the same leader; however, no specific interventions were delivered in the sessions. The sessions were relatively

unstructured, they were not goal directed, no therapeutic homework was set, the CPS or CBT models were not discussed and there was no specific focus on cognition.

The participants were asked to work on a range of leisure activities, such as word searches and other activities. The activities were given for their normal enjoyment value, rather than their therapeutic nature. Participants were allowed to work on their own homework, talk together and engage in leisure activities such as puzzles and drawings. When the students in this group asked the therapist questions regarding the intervention, the therapist lead the sessions for the most part with non-directive discussion around uncontroversial topics such as the students' interests and domestic matters. However, an explanation of depression was prepared for use when pupils found it difficult to accept a therapist who seemed to avoid discussing relevant matters with them. For this purpose, a standard description and explanation of depression was drawn up and used during discussions with pupils where appropriate.

Generally, the participants in the control group had a rather low attendance rate, leaving sessions early and showing minimal signs of improvement compare to those in the CBT or CPS groups; nevertheless some of these students were happy because this was an opportunity to avoid participating in other classes.

However, the researcher was aware that it would be unethical to leave depressed young people without access to therapeutic help and support often the 6/8 weeks trial period; and the BACP Code of Ethics needed to be adhered to and BERA). Therefore, participants were offered a therapeutic approach at the end of the trial in week 8 for those individuals who were interested. In the final session in which the post-tests were conducted the researcher informed these students about taking part in a real intervention. The interventions were applied for the control group in the same way as those in the

experimental groups after the second baseline assessments; these students were also given a chance to choose either CBT or CPS.

3.11 Individual semi structured interview

Individual semi structured interviews were conducted in week 10 in order to obtain information about some qualitative aspects of the outcomes of the interventions by involving students to explain about their experience in the therapies. The intention was to obtain information about variables such as pupil's perceptions, concerning how pupils felt, perceived and expressed their own thoughts, attitudes, and experience in their own words.

Four participants in each of the experimental groups were selected randomly based on the Python Software Programme described earlier for the random allocation of the sample. The researcher asked lightly structured questions where pupils were individually interviewed in the counsellor's room in order to be able to elaborate on or expand the research findings. An attempt was made to determine whether the findings were accurate from the standpoint of the researcher, the participants, or the readers of such account (Creswell and Miller 2000). All interviews were recorded and transcribed (see Appendix 16 for transcriptions of all interviews), and mainly focused on the following questions:

Table F: Questions were asked students in semi-structured interview

How did you find the intervention?
What is your feeling now?
How did you perceive the therapy?
What did you learn from the therapy?
What other things could help you to relieve depression?
What are the most important things which affected you in the therapy?
What are your opinion of being in the group?
What other things did you learn from the therapy?

To help to improve accuracy, credibility and validity of the interviews the researcher used a technique of member check. Thus the researcher's interpretation and report was given to a colleague in order to check authenticity and also to check viability of the interpretation about final report of text.

3.12 Follow up measurement

A follow-up study of the participants was conducted to obtain more information on the effects of the intervention; therefore, both sets of measurements were taken again in week 18, around two months after the interventions.

3.13 Data analysis

The study examines differences in more than one dependent variable, and so in other words the aim was to assess the effect of treatments using more than one measurement.

In studies with more than two variables, although it would be possible to examine the relationships between them two at a time, there are serious disadvantages to restricting oneself to this approach; it is preferable initially to explore the data with multivariate rather than bivariate tests (Bryman and Cramer 2005, p. 254). The study uses one set of data to illustrate their analysis, all of which can be carried out with a general statistical model called a general linear model whose basic principles are similar to those of other parametric tests such as the *t* test, one-way analysis of variance, and simple regression.

The study employed the multivariable analysis of variance (MANOVA) to compare the two interventions versus the control group, adjusting for stratification variables and baseline SMFQ and BDI-II scores and taking appropriate account of the hierarchical nature of the data. To compare pre- and post-therapy and follow-up mean scores while adjusting for observed mean differences between two treatments groups, a baseline analysis of variance was undertaken using the SPSS19 software. Depression scores at 7 weeks using ANOVA and MANOVA between the CPS and CBT groups and the control group were compared.

The technique uses for example the total post-therapy BDI-II and SMFQ scores as dependent variables, with the pre-test or baseline BDI-II and SMFQ scores and treatment groups as the explanatory or independent variables. To determine the effects of the treatments on overall depression as well as cognitive and somatic factors in the three groups a multi-variance analysis of covariance (MANOVA) was conducted. Also, individual analysis of covariance for independent and dependent variables were conducted to understand whether or not the CPS treatment had a significant effect on the post-training creativity index and whether or not treatments had significant effects on the depression scores. To determine how training conditions differed from one another in affecting the dependent variables (depression scores) comparison tests using ANOVA were carried out.

One of the advantages of using multiple measures is to find out how restricted or widespread a particular effect may be. In studying the effectiveness of treatments for depression, for instance, we would have more confidence in the results if the effects were picked up by a number of similar measures rather than just one. Another advantage is that, although groups may not differ on individual measures, they may do so when a number of related individual measures are examined jointly. It may be significantly better when these two measures are analysed together. This analysis is sometimes referred to as a multivariate analysis of variance (MANOVA).

A multiple measures design has two or more dependent or criterion variables, such as two separate measures of depression. However, a repeated measures design consists of one or more factors being investigated in the same group of participants. In repeated measures designs it is necessary to counterbalance the sequence of the two conditions to control for order effects. It is also advisable to check that the sequence in which the treatments were administered did not affect the results. The order effect would constitute a between-subjects factor, since any one participant would only receive one of the two orders. In other words, this design would become a mixed design which includes both a between-subjects factor (order) and a within-subjects factor (treatment). An example of a mixed between–within design is where the dependent variable is assessed before as well as after the treatment. In this study the aim is to compare the effectiveness of CPS with that of CBT and the control. The repeated measure in a mixed between–within design has two advantages. The first is that the pre-test enables us to determine whether the groups were similar in terms of the dependent variable before the treatment began. The second advantage is that it allows us to determine if there has been any change in the dependent variable before and after the treatment has been given. In other words, this design enables us to discern whether any improvement has taken place as a result of the treatment and whether this improvement is greater for one group than the other. Another advantage of

this design is that it restricts the amount of variance due to individual differences, since the same treatments are compared with the same participants.

3.14 Potential ethical issues

The researcher had an obligation to respect the rights, needs, values, and desires of participants. For this reason a written information sheet was prepared prior to conducting the research which explained the research process by stating key information accompanied by diagrams. The pupils read information sheets independently, and all of the material was explained verbally to pupils in each class and they were allowed to ask as many questions as they wanted about the study at any stage. Moreover, consent to participate in the study from both students and their parents had been gained. It was explained to students both verbally and also in the information sheets that if at any stage of the study they felt upset or experienced any other emotional difficulties; they should immediately inform the researcher.

The researcher used translations of the words of ‘mood’ and ‘feeling’ instead of mentioning depression both in talking and in the written information sheet. The students were told that these programmes are suitable for everyone, but due to limitations of the study some pupils were excluded.

Those with no specific or minimum level of depression were told that the intention had been to include creative thinking courses for promoting mood and feelings for all pupils, but that due to various restrictions, only limited numbers of students were included based on the priorities of the study. Young people with possible major depression according to the scores may have been suffering from clinical depression, after obtaining pupils’ consent their parents were informed, and these pupils and their parents were advised to contact mental health services if they would like further help.

In order to prevent participants from experiencing any distress or disturbance during the research and in all stages of the study, the terms cognitive behaviour skills and creative problem solving for improving mood and feelings were used.

The parents were informed in advance about the research study. All pupils were invited to read the information sheet and the study was explained to them verbally. The information sheet was prepared based on consideration of the ethical issues emphasised by the BPS and BCPA. It gave information explaining the study, and also about whether or not they would be willing to complete the questionnaires and interviews and take part in the research if they met the criteria of the study. Students only were asked to complete the questionnaires if they had explicitly agreed to do so, and any pupil who did not want to participate was offered school work to do instead. In addition, those participants who were recognised as being eligible to take part in the study were invited to meeting to explain more to them about the study and another information sheet was prepared for them. Only students who explicitly agreed to participate in the study and had given their signed consent to do so were included in the research to receive the interventions.

The address, telephone number and e-mail of the researcher as the leader of the study were included in information sheet to be contacted if they had any queries about the study at any stage. The pupils were assured that it was up to them whether or not they completed the questionnaires. If they did not want to, there were other activities that they could do instead, and they were assured that they would not be punished in any way for not completing the questionnaires. It was explained that they could stop at any time if they did not want to answer questions or participate in intervention sessions.

The normal rules of confidentiality within child protection guidelines such as those of the British Association for Counselling and Psychotherapy (2008) for research with children and adolescents were matched with the present research procedures. Pupils were informed

about confidentiality and were informed that only the researchers are aware of what they had written on their questionnaire, and that these answers would not be seen by anyone else in their school or their parents or friends. They were informed that their completed questionnaires would be stored in a safe place for a few years and then destroyed; however, anonymous data would be kept separately for an unlimited period and might be used for other research projects, but no one who reads these papers would be aware of their identity.

They were informed that what they discussed during the course of the intervention and their questionnaires responses may be used anonymously in a final report. However, their names and the names of their schools would not be linked with what they said and their names and details would remain anonymous unless they agreed otherwise. Only the researcher would have access to their information in relation to participation in the project, although they were free to talk about these things to anyone else that they chose to information with after the intervention was over. They were informed they could speak to the researcher at any time about any aspect of the study, and they would be free to withdraw from the project at any time and without giving reasons. If they had any questions, inquiries or complaints they should contact the researcher. Counsellors, researchers and other professionals often use case material and audio recordings of counsellors and clients for training and research purposes.

It was explained to the students that the questionnaires would ask them about how they feel, and there was a small chance that this might leave them feeling upset or worried. They were informed that if so, they should come to see the researcher or the school counsellor as soon as they could.

If they were able to take part in the study they would get a letter explaining what would be happen next. The students had been given details of the researcher's schedule for any questions and queries to be asked.

The researcher explained both verbally and through the information sheets about the research study and the activities would need to do during the intervention, for example completing another questionnaire, being interviewed, and recording the sessions of therapy. They were also informed that some of them may participate in interviews after the intervention. They were informed that only the researchers would listen to those tapes and no members of school staff would have access to the material. The students were informed that some of them may only be offered leisure activities, but that was is part of the study and after six weeks they would have the option of attending six sessions of either the CBT or CPS intervention to take place in school.

Therefore, if the intervention was shown to have a positive effect then the potential of the study to promote positive mental health in adolescents was deemed to represent a significant benefit to society.

3.15 Conclusion

The basic questions regarding the aim of this research referred to whether or not CPST is effective compared with CBT as other type of therapy and a control condition and whether or not this intervention is likely to effective in real world settings such as schools. Experimental designs such as RCT have been found to be effective (Kerlinger and Lee 2008), and the study RCT pre-test, post-test and follow-up, including with a control group to assess the effectiveness of each type of therapy in selected sample of pupils with minor and moderate depression, where the researcher had control over the independent variables of each type of therapy intervention.

CPS initially leads to an increase in a pupil's ability in thinking in dealing with challenges (Parnes 1992) and also, based on the aetiology of depression in youth, a lack of problem solving skills in life challenges can create depression through interpersonal situations

(Nezu and Nezu 2008; Abela 2009). Thus it is likely that gaining a better ability in thinking and creatively resolving problems through the CPS stages may cause a decrease in depressive symptoms as measured by depression and mood and feelings scores. CPS also seems to cause a differential effect regarding the efficacy of intervention compared with CBT in causing a decrease in depression and mood and feelings symptoms. The study's intention was to compare the mean effects of not only three different conditions comparing pre- and post-tests, but also to determine the differences between the means and variances of the three groups, in order to understand whether the subjects achieve a good mood outcome. Specific questions guided this study to solve the research problem, which was the need for creative problem solving (CPS) therapy as an intervention to improve levels of symptoms of depression among those students at risk of major depression.

The chapter has also outlined several steps and procedure used in conducting the research. The application of two measurements and the reasons for using them were explained. The chapter also provided some information about the target population, randomisation of the sampling, the interventions and the process used in the research. The procedures used for measuring variables in the baseline stage after completing the intervention and in the follow-up were explained. Finally, the risks, benefits and potential ethical issues of the study were discussed and the strategies employed to protect the validity and credibility of the research were explained.

Chapter four: Results

4.1 Introduction

The purpose of this chapter is to present both quantitative and qualitative findings. The data is analysed first by categorising, ordering, summarising and manipulating it. The attempt of the data such as scores, means, correlations and analysis of variance and tests of significance conducted for this study in order to answers to the research questions and hypotheses are presented. The research also identifies the differences between mean scores, which reflect the relationship between the experimental independent variables for CPS, CBT and control groups and the dependent variables measured of depression and mood and feelings scores. The differences between the groups and how effective the interventions were at reducing depression over the period of 6 weeks from pre-treatment to post-treatment and at two-months follow-up are determined. Comparisons are made between group CBT therapy, group CPS therapy, and the control group for each dependent variable of depression in general and cognitive and somatic factors as well as and mood and feelings. Comparisons are made of scores before and after each intervention and at two-month follow up. Additionally, comparisons were made between participants in CBT and CPS groups to determine whether or not the participants have reached a level of improvement to below the threshold of 13 and under for depression, and 7 and under for mood and feelings. The results are presented in two sections presenting the analysis of quantitative and qualitative data. The quantitative data are presented first; initially descriptively and then the inferential statistics are presented in three subsequent parts. The chapter concludes with a summary of the chapter and a preview of chapter five.

4.2 Quantitative data analysis

The characteristics of participants in the three groups are presented in (Table 1). Those in the CPS and CBT groups had a lower proportion of loss of significant parents of 1: 32 and 1: 32 respectively, compared to the control group of 2: 27. The three groups were more or less the same with regards to family problems, except for the four pupils who had lost a significant family member and two more pupils in the control and CBT groups whose parents were separated. The rest of the pupils lived with both parents, there were also no significant differences found between the academic backgrounds of the pupils of in the three groups, who were mainly at an average level or below.

Table 1 Characteristics of pupils in the three groups

Groups	Number of pupils attending the interventions	Mean of academic performance	Parents lived separately	Loss of significant parents	Mean age of pupils
CBT	32	12.53	1	1	13.56
CPS	32	11.95	1	0	13.98
Control	27	13.16	2	0	14.19
Total	91	12.3	4	1	13.91

Initial analyses were applied using one way ANOVA and multivariate analysis of variance MANOVA using SPSSS version 19. ANOVA is a method used to identify and test for statistically significant variances, where the total amount of variance in dependent variables includes some which could be due to the experimental treatment, some to error, and some to other causes. ANOVA estimates with these different types and sources of variance and is appropriate for experimental data. Multivariate analysis of variance (MANOVA) is the most powerful and appropriate in scientific behavioural research, and is categorised as a family of analytical methods whose chief characteristic is the simultaneous analysis of *k* independent variables and *m* dependent variables, which

presupposes more than one independent variable or more than one dependent variable or both (Kerlinger and Lee 2000, p. 209).

The parametric statistical analysis of variance was checked and confirmed the normality of the distribution of data. The results of this are shown in (Table 2) shows more than 0.05 which means data is normal.

Table 2 Test of normality of distribution of data

	Treatment CBT, CPS, Control	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Pre-test Mood & Feelings	CBT	.133	32	.158	.945	32	.105
	CPS	.138	32	.129	.949	32	.132
	Control	.137	27	.200*	.941	27	.132

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

Table 3 shows the distribution of scores at the baseline for the two measures. It shows the baseline information at pre-study in both depression and mood and feelings measurements in the study samples in different groups for a total number of 91 pupils in the study: CPS 32, CBT 32and 27 in the control group. The depression scores range from 16 to 28, with a total mean of 24.37 across three groups. The range of scores depression is 10 to 19 and the total mean is 24.37 across three groups and the BDI-II consists of 21 questions with a score value of 0 to 3 per question so that scores of 0 to 63 are possible.

The range of scores for mood and feelings is 10 to 19 and the total mean is 14.74 across three groups and the SMFQ consists of 13 questions with a score value of 0 to 2 per question so that scores of 0 to 26 are possible.

Table 3 Baseline scores for measurement of BDI-II and SMFQ

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Pre-test Mood & Feelings	CBT	32	14.59	1.478	.261	14.06	15.13	12	18
	CPS	32	15.06	1.983	.351	14.35	15.78	12	19
	Control	27	14.52	2.026	.390	13.72	15.32	10	18
	Total	91	14.74	1.831	.192	14.35	15.12	10	19
Pre-test Depression	CBT	32	24.34	3.924	.694	22.93	25.76	16	28
	CPS	32	24.88	3.280	.580	23.69	26.06	16	28
	Control	27	23.81	3.487	.671	22.44	25.19	17	28
	Total	91	24.37	3.564	.374	23.63	25.12	16	28

In order to test the variance of the pre-test data so as to understand significance level at baseline and also whether or not the pupils were the same across groups before the start of interventions, the One-Way ANOVA was conducted. Table 4 shows that the P value for between groups-within groups for mood and feelings and depression are $P = 0.456 > 0.05$ and $P = 0.527 > 0.05$ respectively. This means that the groups were the same in both depression and mood and feelings scores. This suggests that the random assignment conducted that was conducted prior to the study was effective.

Table 4 Between groups-within groups for mood and feelings and depression

ANOVA

		Sum of Squares	df	Mean Squared	F	Sig.
Pre-test Mood & Feelings	Between groups	5.336	2	2.668	.792	.456
	Within groups	296.334	88	3.367		
	Total	301.670	90			
Pre-test Depression	Between group	16.504	2	8.252	.644	.527
	Within groups	1126.793	88	12.804		
	Total	1143.297	90			

A Pearson correlation of the results of the two tests also was conducted, to compare the two measurements at pre-treatment. The results in Table 5 show that $P = 0.001 < 0.05$ which means that the measurements of depression, mood and feelings are significantly correlated which suggests that both BDI-II and SMFQ are measuring the same variables.

Table 5 Pearson correlations of the two measures at pre-test

		Depression Pre-test	Mood &Feeling Pre-test
Depression Pre-test	Pearson Correlation	1	.388**
	Sig. (2-tailed)		.000
	N	91	91
Mood & Feeling Pre	Pearson Correlation	.388**	1
	Sig. (2-tailed)	.000	
	N	91	91

**. Correlation is significant at the 0.01 level (2-tailed).

4.3 Testing Hypotheses

The main research purpose of inferential statistics is to test substantive hypotheses. However, substantive hypotheses are not themselves testable and therefore have to be tested through statistical hypotheses which are conjectural statements in quantitative and statistical terms. The hypotheses must, however, be tested against an alternative proposition or null hypothesis which states that there is no relationship between the variables. If the result is statistically significant, or the null hypothesis is rejected, then the substantive hypothesis is supported (Kerlinger and Lee 2000, p. 280). Therefore, in this study two types of hypotheses are considered as substantive and statistical hypotheses, as follows:

A: CPS and CBT groups and depression scores (BDI-II)

In order to test the research hypotheses the research needs to compare three means from the same participants and determine if there is a significant difference between the three conditions in improvement of depression during three consecutive times, before, after treatments and in follow up as assessed by BDI-II

1. Substantive Hypothesis: Group CPS Therapy (independent variable) in school will improve an individual's level of overall depression (dependent variable) among pupils by reducing their depression at the end of the therapy, based on the DSM-IV criteria as measured by BDI-II.

   Statistical hypothesis: H1: $\mu A - \mu B > 0$

   Null hypothesis: H0: $\mu A - \mu B = 0$

2. Substantive Hypothesis: The same level of overall depression as that achieved post-test will be maintained in the CPS group at two-month follow-up

   Statistical hypothesis: H1: $\mu A - \mu B - \mu C > 0$

   Null hypothesis: H0: $\mu A - \mu B - \mu C = 0$

3. Substantive Hypothesis: Group CBT (independent variable) in school will improve an individual's level of overall depression (dependent variable) among pupils by reducing their overall level of depression at the end of therapy.

   Statistical hypothesis: H1: $\mu A - \mu B > 0$

   Null hypothesis: H0: $\mu A - \mu B = 0$

4. Substantive Hypothesis: The same level of overall depression, as that achieved post-test will be maintained in the CBT group at two-month follow-up.

Statistical hypothesis: H1: $\mu A - \mu B - \mu C > 0$

Null hypothesis: H0: $\mu A - \mu B - \mu C = 0$

To compare the three mean scores from the same participants and determine if there is a significant difference between the three conditions in improvements in depression at the three successive times of before and after treatments and at follow-up, a mixed between-within design of multivariate analysis was carried out to test hypotheses 1-4 on the effects of treatment on pupils' depression assessment at the three different times. This test has one within-subjects or repeated measure variable at different times.

The results show there is a significant effect $P = 0.001 < 0.05$ of the interaction between treatment and time, showing changes between the pre-and the post-treatment scores in the first dependent variable of depression, as indicated in the results shown in Table 6 and 6.1 and Figure 2.

If we look at the means of the patients' pre-test and post-test depression scores in Table 6 and Figure 1, we can see that the levels of improvement shown by the three groups of participants differs. The least improvement occurred in the group receiving no treatment (23.81 - 21.11 = 2.7), while pupils administered the CPS treatment exhibit the most improvement (24.87 - 7.37 = 17.7). The pupils administrated the CBT treatment exhibit the second higher most improvement after CPS (24.34 – 10.78 = 13.56).

Research of the multivariate tests are presented in Table 6.1**.** Four multivariate tests of Pillai's criterion, Hotelling's trace criterion, Wilks's Lambda, and Roy's gcr criterion

were conducted to assess the significance of the repeated measures effect and for all four tests the results are significant at P= 0.001 < 0.05.

Table 6 Descriptive statistics, mean, and standard deviations of depression scores in pre-test and post-tests of 3 interventions

	Treatment CBT, CPS, Control	Mean	Std. Deviation	N
Pre-test Depression	CBT	24.34	3.924	32
	CPS	24.87	3.280	32
	Control	23.81	3.487	27
	Total	24.37	3.564	91
Post-test Depression	CBT	10.78	1.809	32
	CPS	7.37	1.980	32
	Control	21.11	2.913	27
	Total	12.65	6.127	91

Figure 2 Estimated marginal means of measurements

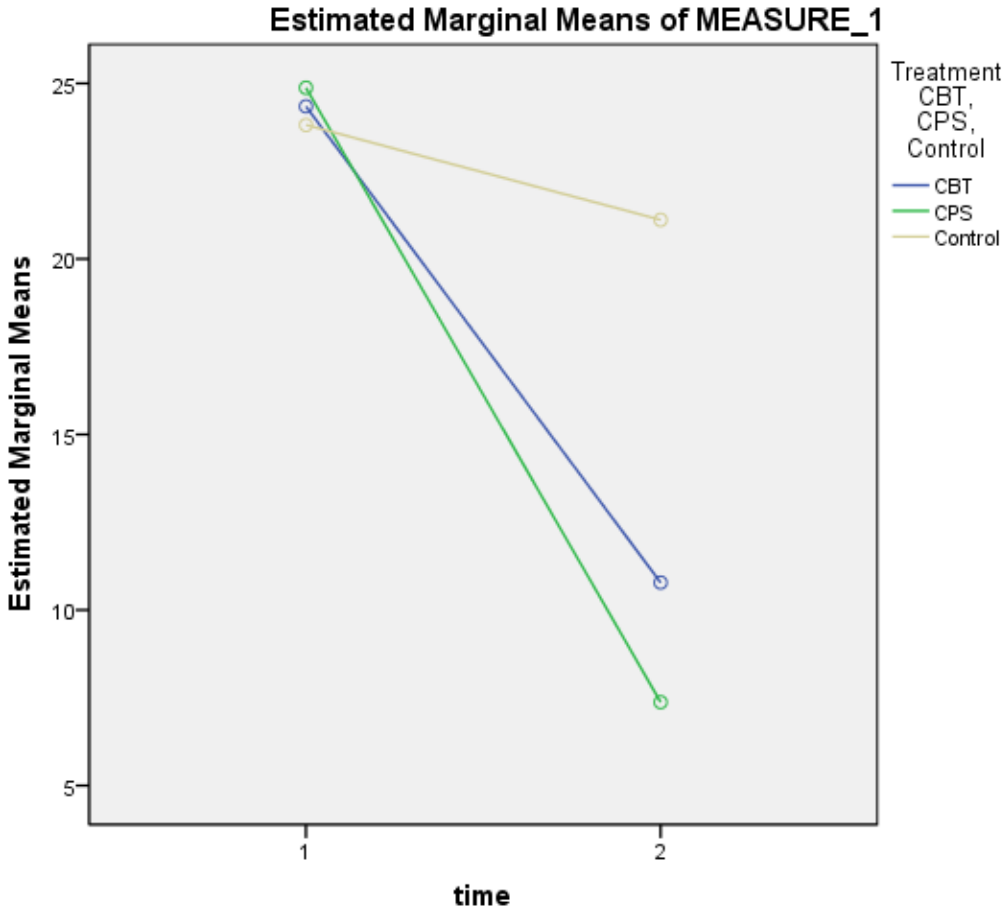


Table 6.1 Repeated measures, multivariate tests of interaction between treatment and time or the changes between the pre-and the post-treatment scores

Multivariate Tests[b]

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.929	1153.977[a]	1.000	88.000	.000
	Wilks' Lambda	.071	1153.977[a]	1.000	88.000	.000
	Hotelling's Trace	13.113	1153.977[a]	1.000	88.000	.000
	Roy's Largest Root	13.113	1153.977[a]	1.000	88.000	.000
time * Treatment	Pillai's Trace	.794	169.885[a]	2.000	88.000	.000
	Wilks' Lambda	.206	169.885[a]	2.000	88.000	.000
	Hotelling's Trace	3.861	169.885[a]	2.000	88.000	.000
	Roy's Largest Root	3.861	169.885[a]	2.000	88.000	.000

a. Exact statistic

b. Design: Intercept + Treatment

Within Subjects Design: time

The output for Mauchly's test of sphericity is presented in Table 6.2. This test does not show significant effect, and therefore sphericity is assumed. The significance level of the *F* ratio thus needs to be adjusted with one of the three adjustments offered, which shows a significant level of $P = 0.001 < 0.05$.

Table 6.2 Repeated measure Mauchly's test of sphericity[b]

Mauchly's Test of Sphericityb

Measure:MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[a]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Time	1.000	.000	0	.	1.000	1.000	1.000

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the tests of within-subjects effects table.

b. Design: intercept + treatment

Within subjects design: time

Table 6.3 Repeated measured average test of significance

Tests of Within-Subjects Effects

Measure:MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Time	Sphericity Assumed	5727.298	1	5727.298	1153.977	.000
	Greenhouse-Geisser	5727.298	1.000	5727.298	1153.977	.000
	Huynh-Feldt	5727.298	1.000	5727.298	1153.977	.000
	Lower-bound	5727.298	1.000	5727.298	1153.977	.000
time * Treatment	Sphericity Assumed	1686.314	2	843.157	169.885	.000
	Greenhouse-Geisser	1686.314	2.000	843.157	169.885	.000
	Huynh-Feldt	1686.314	2.000	843.157	169.885	.000
	Lower-bound	1686.314	2.000	843.157	169.885	.000
Error(time)	Sphericity Assumed	436.752	88	4.963		
	Greenhouse-Geisser	436.752	88.000	4.963		
	Huynh-Feldt	436.752	88.000	4.963		
	Lower-bound	436.752	88.000	4.963		

There is a significant effect of the interaction between treatment and time or change between the pre-test, post-test and follow-up treatment scores. The univariate tests are for the transformed variables time 2 shown in Table 6.4, and the values for both multivariate and univariate tests are significant. Thus this shows that there are differences in mean depression scores over time pre-test and post-treatment amongst the groups.

Table 6.4 Repeated measures univariate tests of significance for transformed variables

Tests of Within-Subjects Contrasts

Measure:MEASURE_1

Source	time	Type III Sum of Squares	Df	Mean Square	F	Sig.
Time	Linear	5727.298	1	5727.298	1153.977	.000
time * Treatment	Linear	1686.314	2	843.157	169.885	.000
Error(time)	Linear	436.752	88	4.963		

Furthermore, another mixed between-within design multivariate analysis was carried out to test the improvement of depression at two-months follow-up. The results show a significant effects $P = 0.001 < 0.05$ for the interaction between treatment and time or the changes between the pre-test, post-test and two-months follow-up treatment scores for the first dependent variable of depression, as indicated in the output in Table 7.1.

The means and standard deviations are shown in Table 7. The standard error of the differences between means is calculated and the difference obtained is compared to this standard error.

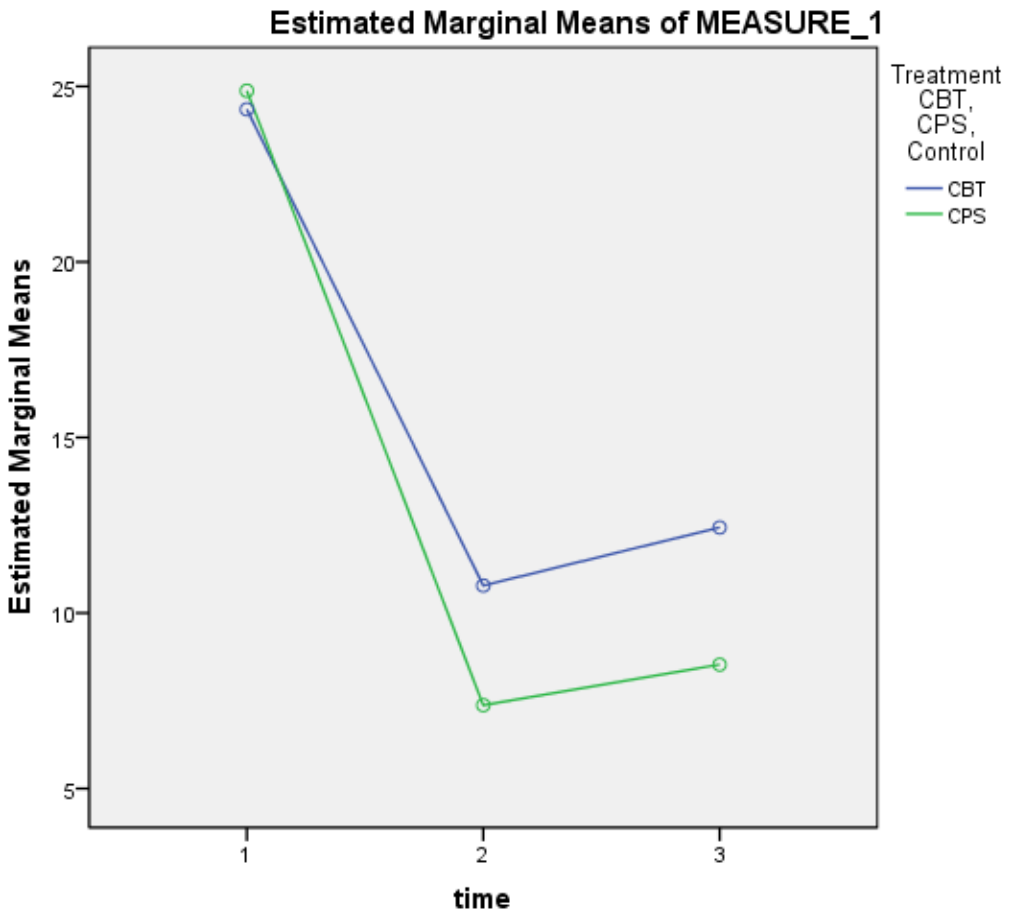
Looking at the means of the pupils' pre-test, post-test and follow up depression scores in Table 6 and Figure 3, it is evident that the amount of improvement shown by the three groups of pupils is not the same. The lowest improvement occurred in the group receiving no treatment (24.34 – 10.78 = 13.56 and 13.56 - 12.22 = 1.34) whilst pupils being administered the CPS treatment exhibited the most improvement (24.87 - 7.37 = 17.7 and 17.7 – 8.5 = 5.06).

Table 7 Repeated measures means and standard deviations for depression

Descriptive Statistics

	Treatment CBT, CPS, Control	Mean	Std. Deviation	N
DepressionPre	CBT	24.34	3.924	32
	CPS	24.87	3.280	32
	Total	24.61	3.597	64
DepressionPost	CBT	10.78	1.809	32
	CPS	7.37	1.980	32
	Total	9.08	2.547	64
DepressionFollowUp	CBT	12.22	1.601	32
	CPS	8.50	2.048	32
	Total	10.36	2.615	64

Figure 3 Estimated marginal means of depression



Four multivariate tests of Pillai's criterion, Hotelling's trace criterion, Wilks's Lambda, and Roy's gcr criterion were conducted. Table 7.1 shows all results used to assess the significance of the repeated measures effect, and for all four tests the results are significant of P= 0.001 < 0.05.

Table 7.1 Repeated measures multivariate tests

Multivariate Tests[b]

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.953	615.411[a]	2.000	61.000	.000
	Wilks' Lambda	.047	615.411[a]	2.000	61.000	.000
	Hotelling's Trace	20.177	615.411[a]	2.000	61.000	.000
	Roy's Largest Root	20.177	615.411[a]	2.000	61.000	.000
time * Treatment	Pillai's Trace	.281	11.908[a]	2.000	61.000	.000
	Wilks' Lambda	.719	11.908[a]	2.000	61.000	.000
	Hotelling's Trace	.390	11.908[a]	2.000	61.000	.000
	Roy's Largest Root	.390	11.908[a]	2.000	61.000	.000

a. Exact statistic

b. Design: Intercept + Treatment

Within Subjects Design: time

The results of output for Mauchly's test of sphericity as presented in Table 7.2, show that there is a significant effect at $P = 0.001 < 0.05$ and that there is difference in mean scores over the time in pre-test, post-test and follow-up.

Table 7.2 Repeated measures Mauchly's test for sphericity

Mauchly's Test of Sphericity[b]

Measure:MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[a]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Time	.307	72.131	2	.000	.590	.605	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

b. Design: Intercept + Treatment

Within Subjects Design: time

The univariate tests for the transformed variables at time 3 are shown in Table 7.3, and the values for both multivariate and univariate tests are significant. Thus there are differences in mean depression scores over time at pre-test, post-test and follow-up amongst the groups.

Therefore the null hypotheses 1-4 are rejected, and the statistical hypothesis is accepted meaning that the substantive research hypothesis is also accepted in this case.

Table 7.3 Repeated measures univariate tests of significance for transformed variables, tests of Within-Subjects Contrasts

Source	time	Type III Sum of Squares	df	Mean Square	F	Sig.
Time	Linear	6498.000	1	6498.000	1081.546	.000
	Quadratic	3015.042	1	3015.042	1161.673	.000
time * Treatment	Linear	144.500	1	144.500	24.051	.000
	Quadratic	35.042	1	35.042	13.501	.000
Error(time)	Linear	372.500	62	6.008		
	Quadratic	160.917	62	2.595		

B. Group CPS and CBT therapy in mood and feelings

In order to test the research hypotheses three means from the same participants need to be compared to determine if there is a significant difference between the three conditions in the improvement of mood and feelings scores during the three consecutive times of before and after treatments and at follow-up.

5. Substantive hypotheses: Group CPS (independent variable) in school will improve an individual's level of mood and feelings (dependent variable) among pupils in school by reducing their negative mood and feelings at the end of therapy in terms of the DSM-IV criteria as measured by SMFQ.

Statistical hypothesis: H1: $\mu A - \mu B > 0$

Null h hypothesis: H0: $\mu A - \mu B = 0$

6. Substantive hypothesis: The same level of overall mood and feelings as that achieved post-test will be maintained by the CPS group at two-month follow-up.

   Statistical hypothesis: H1: $\mu A - \mu B - \mu C > 0$

   Null hypothesis: H0: $\mu A - \mu B - \mu C = 0$

7. Substantive hypothesis: Group CBT (independent variable) in school will improve an individual's level of mood and feelings (dependent variable) among pupils by reducing their negative mood and feelings at the end of therapy.

   Statistical hypothesis: H1: $\mu A > \mu B$

   Null hypothesis: H0: $\mu A - \mu B = 0$

8. Substantive hypothesis: The same level of overall mood and feelings, as that achieved post-test will be maintained by the CBT group at two-month follow-up.

   Statistical hypothesis: H1: $\mu A - \mu B - \mu C > 0$

   Null hypothesis: H0: $\mu A - \mu B - \mu C = 0$

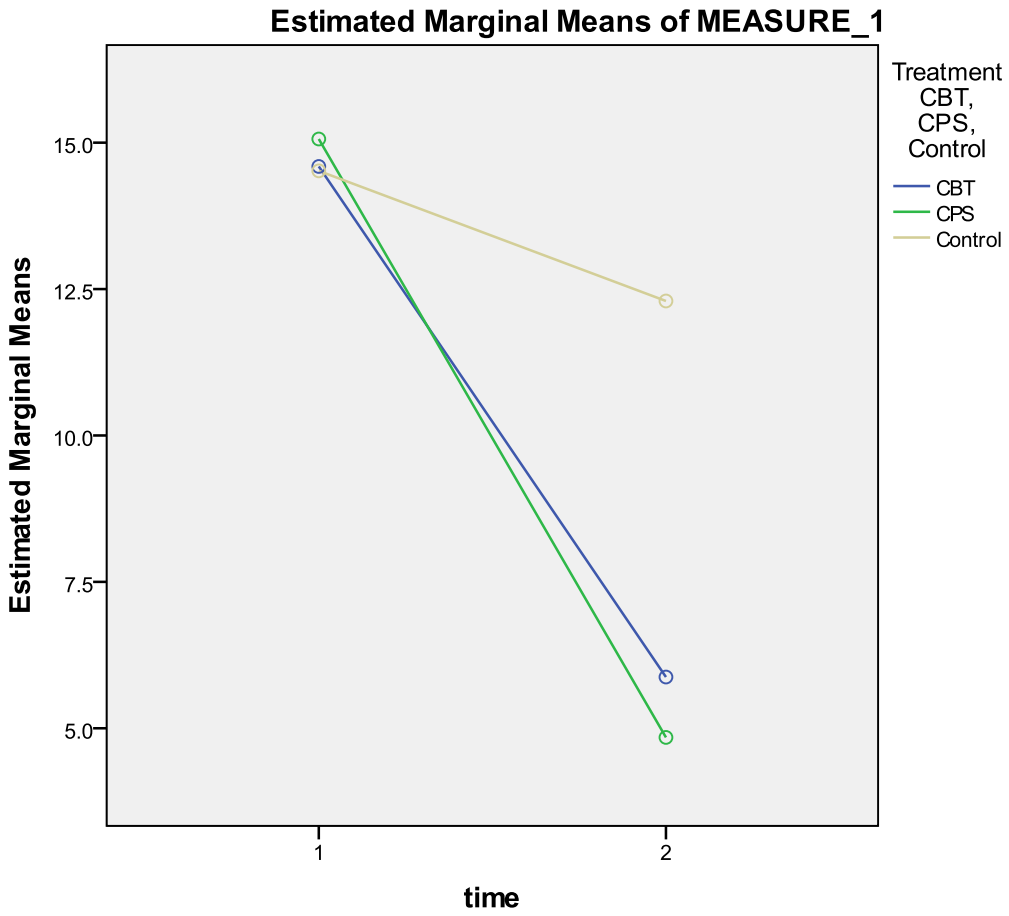
Looking at the means of the pupils' pre-test and post-test mood and feelings scores in Table 8 and Figure 4, is it apparent that the amounts of improvement shown by each of the three groups of pupils is not the same. The least improvement occurred in the group receiving no treatment (14.52- 12.30 = 2.22), while pupils being administered the CPS treatment exhibited the most improvement (15.6 – 4.84 = 10.76) and the pupils being administered CBT treatment exhibited the second highest improvement (14.59 – 5.88 = 8.71).

Table 8 Means and standard deviations of pupils pre-test and post-test in mood and feelings in the three treatments

Descriptive Statistics

	Treatment CBT, CPS, Control	Mean	Std. Deviation	N
MoodFeelingPre	CBT	14.59	1.478	32
	CPS	15.06	1.983	32
	Control	14.52	2.026	27
	Total	14.74	1.831	91
MoodFeelingPost	CBT	5.88	1.641	32
	CPS	4.84	1.505	32
	Control	12.30	1.683	27
	Total	7.42	3.587	91

Figure 4: Estimated marginal means of depression in three groups



Four multivariate tests of Pillai's criterion, Hotelling's trace criterion, Wilks's Lambda, and Roy's gcr criterion were conducted to assess the significance of the repeated measures effect. The results are presented in Table 8.1, which for all four tests are significant at P= 0.001 < 0.05.

Table 8.1 Repeated measures multivariate tests

Multivariate Tests[b]

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.921	1023.885[a]	1.000	88.000	.000
	Wilks' Lambda	.079	1023.885[a]	1.000	88.000	.000
	Hotelling's Trace	11.635	1023.885[a]	1.000	88.000	.000
	Roy's Largest Root	11.635	1023.885[a]	1.000	88.000	.000
time * Treatment	Pillai's Trace	.728	117.585[a]	2.000	88.000	.000
	Wilks' Lambda	.272	117.585[a]	2.000	88.000	.000
	Hotelling's Trace	2.672	117.585[a]	2.000	88.000	.000
	Roy's Largest Root	2.672	117.585[a]	2.000	88.000	.000

a. Exact statistic

b. Design: Intercept + Treatment

Within Subjects Design: time

The output for Mauchly's test of sphericity is presented in Table 8.2. Because this test does not demonstrate a significant effect, the sphericity is assumed from the output in the first line of Table 8.3. Therefore, the significance of the *F* ratio needs to be adjusted with one of the three adjustments offered, which yields a significance of $P = 0.001 < 0.05$.

Table 8.2 Repeated measures Mauchly's test for sphericity

Mauchly's Test of Sphericity[b]

Measure:MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.
Time	1.000	.000	0	.

Mauchly's Test of Sphericity[b]

Measure:MEASURE_1

Within Subjects Effect	Epsilon[a]		
	Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Time	1.000	1.000	1.000

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

b. Design: Intercept + Treatment

Within Subjects Design: time

Table 8.3 Tests of within-subjects effects repeated measures averaged test of significance

Tests of Within-Subjects Effects

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Time	Sphericity Assumed	2249.082	1	2249.082	1023.885	.000
	Greenhouse-Geisser	2249.082	1.000	2249.082	1023.885	.000
	Huynh-Feldt	2249.082	1.000	2249.082	1023.885	.000
	Lower-bound	2249.082	1.000	2249.082	1023.885	.000
time * Treatment	Sphericity Assumed	516.577	2	258.289	117.585	.000
	Greenhouse-Geisser	516.577	2.000	258.289	117.585	.000
	Huynh-Feldt	516.577	2.000	258.289	117.585	.000
	Lower-bound	516.577	2.000	258.289	117.585	.000
Error(time)	Sphericity Assumed	193.302	88	2.197		
	Greenhouse-Geisser	193.302	88.000	2.197		
	Huynh-Feldt	193.302	88.000	2.197		
	Lower-bound	193.302	88.000	2.197		

The univariate tests are for the transformed variables at time 2 shown in Table 8.4, and the values for both multivariate and univariate tests are significant. Therefore there are differences in mean mood and feelings scores over time pre-test and post-treatments within the three groups.

Table 8.4 Repeated measures univariate tests of significance for transformed variables

Tests of Within-Subjects Contrasts

Measure:MEASURE_1

Source	time	Type III Sum of Squares	Df	Mean Square	F	Sig.
Time	Linear	2249.082	1	2249.082	1023.885	.000
time * Treatment	Linear	516.577	2	258.289	117.585	.000
Error(time)	Linear	193.302	88	2.197		

In order to determine if there is a significant effect of the interaction between treatment and time, or the change between the pre-test and post-treatment scores, another mixed between-within design multivariate analysis was carried out to determine the differences between the three conditions in terms of improvements in mood and feelings and before and after treatments and at two months follow-up.

The results in Table 9 show a significant effect of P = 0.001 < 0.05 for the interaction between treatment and time, or the changes between the pre-test, post-test and the two-months follow-up scores for the first dependent variable of mood and feelings. The means and standard deviations for mood and feelings for the three different times of pre-test, post-test and two-months follow-up treatment are shown in Table 9.

Looking at the means of the pupils' pre-test, post-test and follow-up scores for mood and feelings in Table 9 and Figure 5, it is evident that the amount of improvement shown by the CBT and CPS groups of pupils is not the same. The lower level of improvement occurred in the group receiving CBT treatment (14.59 – 5.88 = 8.71 and 8.71 – 7.34 =

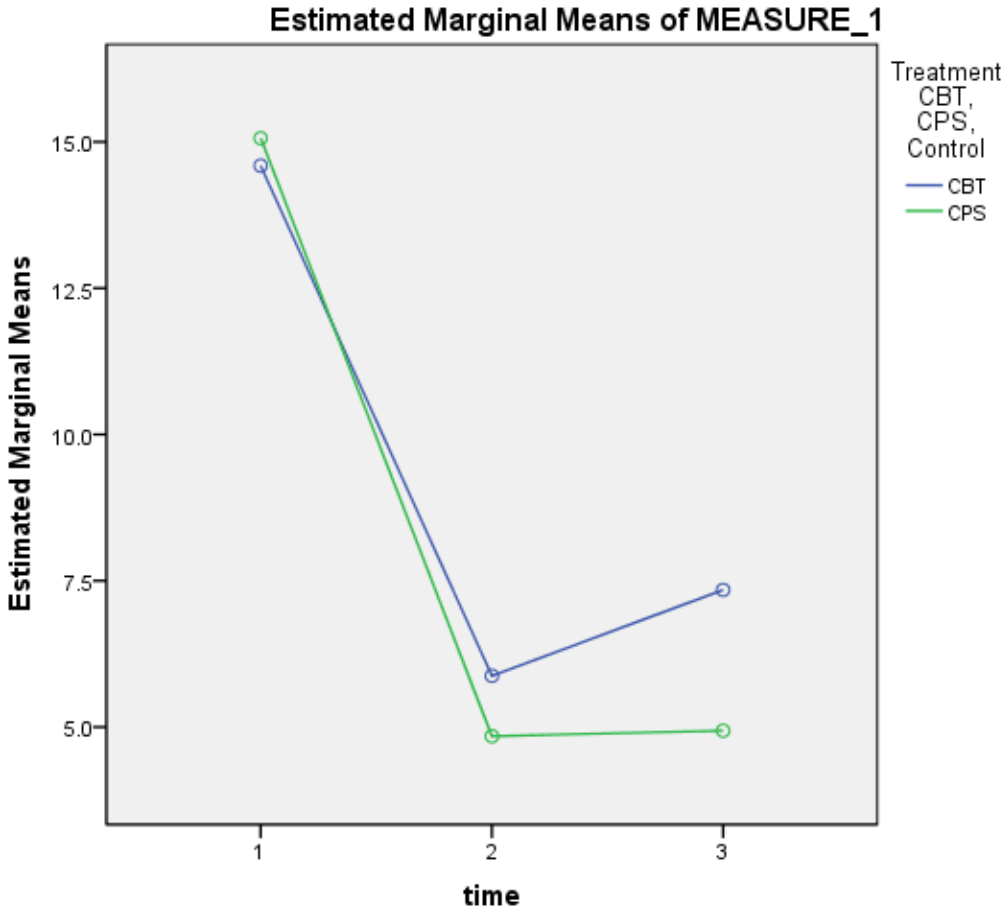
1.37), while pupils being administered the CPS treatment exhibited more improvement (15.6 – 4.84 = 10.22 and 10.22 – 4.94 = 5.28).

Table 9 Means and standard deviations of patient pre-test post-test mood and feelings scores in the three treatments

Descriptive Statistics

	Treatment CBT, CPS, Control	Mean	Std. Deviation	N
MoodFeelingPre	CBT	14.59	1.478	32
	CPS	15.06	1.983	32
	Total	14.83	1.751	64
MoodFeelingPost	CBT	5.88	1.641	32
	CPS	4.84	1.505	32
	Total	5.36	1.646	64
MoodFeelingFollowUp	CBT	7.34	2.026	32
	CPS	4.94	1.413	32
	Total	6.14	2.115	64

Figure 5 Estimated marginal means of mood and feelings



The results of the four multivariate tests Pillai's criterion, Hotelling's trace criterion, Wilks's Lambda, and Roy's gcr criterion are presented in Table 9.1. In all four tests the results are significant at P= 0.001 < 0.05, demonstrating a significant repeated measures effect.

Table 9.1 Repeated measures multivariate tests

Multivariate Tests[b]

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.948	555.319[a]	2.000	61.000	.000
	Wilks' Lambda	.052	555.319[a]	2.000	61.000	.000
	Hotelling's Trace	18.207	555.319[a]	2.000	61.000	.000
	Roy's Largest Root	18.207	555.319[a]	2.000	61.000	.000
time * Treatment	Pillai's Trace	.256	10.475[a]	2.000	61.000	.000
	Wilks' Lambda	.744	10.475[a]	2.000	61.000	.000
	Hotelling's Trace	.343	10.475[a]	2.000	61.000	.000
	Roy's Largest Root	.343	10.475[a]	2.000	61.000	.000

a. Exact statistic

b. Design: Intercept + Treatment

Within Subjects Design: time

The output for Mauchly's test of sphericity is presented in Table 9.2, and the results show a significant effect at $P = 0.001 < 0.05$, demonstrating a difference in mean mood and feelings over time in the pre-test, post-test and in two-months follow-up.

Table 9.2 Mauchly's test of sphericity[b]

Mauchly's Test of Sphericity[b]

Measure:MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[a]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Time	.784	14.870	2	.001	.822	.855	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

b. Design: Intercept + Treatment

Within Subjects Design: time

The univariate tests for the transformed variables at time 3 are shown in Table 9.3, and the values for both multivariate and univariate tests are significant. Therefore there is difference in mean mood and feelings and depression scores over time in pre-test, post-test and follow-up between groups.

Table 9.3 Repeated measures univariate tests of significance for transformed variables

Tests of Within-Subjects Contrasts

Measure:MEASURE_1

Source	time	Type III Sum of Squares	df	Mean Square	F	Sig.
Time	Linear	2415.125	1	2415.125	724.245	.000
	Quadratic	1120.667	1	1120.667	739.491	.000
time * Treatment	Linear	66.125	1	66.125	19.830	.000
	Quadratic	.042	1	.042	.027	.869
Error(time)	Linear	206.750	62	3.335		
	Quadratic	93.958	62	1.515		

D. differences between CPS, CBT and Control group

In order to compare the two intervention groups and also with those in the control group to the mean scores of these groups need to be compared and thus a one-way analysis of variance was conducted.

9. Substantive hypothesis: Group CPS and Group CBT (independent variables) will improve an individual's level of overall depression (dependent variable) more than the control group at the end of the therapy in DSM-IV criteria as measured in terms of the BDI-II.

   Statistical hypothesis: $\mu 1 - \mu 2 > 0$ $\mu 2 - \mu 3 > 0$

   Null hypothesis: $\mu 1 - \mu 2 = 0$ $\mu 2 - \mu 3 = 0$

10. Substantive hypothesis: Group CPS and group CBT (independent variables) will improve an individual's level of mood and feelings (dependent variable) more than in the control group, at the end of the therapy in terms of the DSM-IV criteria as measured by the SMFQ.

    Statistical hypothesis: $\mu 1 - \mu 3 > 0$ $\mu 2 - \mu 3 > 0$

    Null hypothesis: $\mu 1 - \mu 2 = 0$ $\mu 2 - \mu 3 = 0$

11. Substantive hypothesis: The CPS group therapy will enhance the individual's level of overall depression and mood and feelings more than CBT with regards to the:

(a) number of students achieving a good depression outcome < 14 in BDI-II scores, and

(b) number of students achieving a good mood and feelings outcome < 8 in SMFQ scores

    Statistical hypothesis: $\mu 1 > \mu 2$

    Null hypothesis: $\mu 1 = \mu 2$

12. Substantive hypothesis: Group CPS therapy will enhance an individual's level of overall depression and mood and feelings more than CBT at the end of the therapy.

    Statistical hypothesis: $\mu 1 > \mu 2$

    Null hypothesis: $\mu 1 = \mu 2$

13. Substantive hypothesis: Group CPS therapy will enhance an individual's level of overall depression and mood and feelings more than CBT at two month follow up.

Statistical hypothesis: $\mu 1 > \mu 2$

Null hypothesis: $\mu 1 = \mu 2$

At the end of the therapy a clinically significant improvement was found on the basis of improvement in overall depression and mood and feeling scores. Those receiving CPS (24.81 – 7.37 = 17.7) had grater a clinically significant improvement over the control group, and those receiving CBT (24.34 – 10. 78 = 13. 56) also achieved significant improvement over the control group. However, the group that received no therapy (control group) achieved little improvement or recovery by the end of the therapy (23.81 – 21.11 = 2.7).

To compare the means of the three groups, a one-way analysis of variance was conducted and the results are shown in Table 10. The *F* values for depression is $F = 291.106$ $P = 0.001 < 0.05$ and for mood and feelings, $F = 180.140$ $P = 0.001 < 0.05$, which indicates that there are significant differences across the three groups.

Although the *F* value informs the study of significant differences somewhere in the process of comparing the groups, but it does not indicate where these differences lay. Therefore, further MANOVA analysis using post hoc tests was carried out. A significance level (p-value) is calculated for each test, which allows us to see which differences are statistically significantly different and which are not.

MANOVA uses the F test to determine whether there are significant differences between the means of the three groups, by calculating the F test statistics we can calculate a p-value, which tells us how likely it is for us to find differences between the means of our three groups that are this large in our sample if there were no difference between the three groups in the population (Bryman and Cramer 2004).

Table10. One way ANOVA comparing the means of the three groups

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
DepressionPost	Between Groups	2935.112	2	1467.556	291.106	.000
	Within Groups	443.635	88	5.041		
	Total	3378.747	90			
MoodFeelingPost	Between Groups	930.783	2	465.392	180.140	.000
	Within Groups	227.348	88	2.584		
	Total	1158.132	90			

The first box in Table 10.1 labelled 'Between-Subject Factors' lists the number of respondents in the three groups.

Table 10.1Between-subject factors number of respondents in the three groups

		Value Label	N
Treatment CBT, CPS, Control	1	CBT	32
	2	CPS	32
	3	Control	27

The test of between-subject effects shown in Table 10.2 informs us about whether or not the independent variables are related to the dependent variables of (pupils' improvement

in depression and mood and feelings. The significance column shows the significance of the p-value to be < 0.000. If the p-value is below 0.05, it is regarded as significant which means that it is unlikely to occur in the sample if there is no effect in the population. It can be also seen from Table 10.2 that the within-group sum of squares or intercept, respectively individual variance within the groups, is highly significant. This means that pupils have different scores in both dependent measures of depression and mood and feelings. In other words there are significant differences between the groups. Additional information is given below Table 10.2 of value of R squared, and adjusted R squared for the model. This is interpreted in the same way as regression statistics and the values of 0.87 and 0.80 for depression and mood and feelings respectively suggest that the variables model modestly predicts improvements in depression and mood and feelings. However, as mentioned before, it is not known from this which groups performed significantly better among the CPS, CBT or control groups.

The values for the total, called 'Corrected Model' are the same as for our variable, because our model only contains that variable. Once we have more than one predictor, that will no longer be the case.

In order to determine which group performed better and significantly differed from others, as indicated by levels of depression and mood and feelings, post hoc comparisons such as using the Scheffe test were carried out to compare the mean scores for each group in relation to each of the measures before and after intervention and at follow-up. Scheffe test conducts individual comparisons between the independent variable groups and compares the mean score on the outcome variable for each group with that of each other group.

As the multiple comparisons results in Table 10.3 demonstrate, the mean depression and mean mood and feelings scores for pupils taught in the CPS group were compared to those of those of pupils taught in the CBT group and to those of the control group. The

CBT group mean score is also compared with the control group mean. It is seen that the mean difference in depression between CBT and CPS groups is 3.41, and for mood and feelings is 1.03. This means that the mean score for depression of pupils with CBT is higher than that of CPS with a difference of 3.41 and for mood and feelings the mean is higher 1.3. A lower mean score represents a grater improvement in the level of depression and mood and feelings in this study.

These differences can be interpreted as in favouring the CPS over CBT and the control group, with a significance level of $P = 0.001 < 0.05$ and $P = 0.042 < 0.05$ for depression and mood and feelings respectively. Similarly, as the difference between the mean scores for depression and mood and feelings in the comparison of CBT and control group are -10.33 and -6.42 respectively, the higher mean scores for depression and mood and feelings in the control groups suggests the effectiveness of CBT over control treatment with a significance level of $P = 0.001 < 0.05$.

The results of tests of between-subject effects shown in Table 10.2 explain the effect size as well as statistical significance of the findings. The effect size index in MANOVA is the value of partial eta squared, which is calculated by dividing the within-groups sum of squares by the total sum of squares. This compares the strengths of the effects of different variables and across different studies. An eta squared value can be between 0 and 1, and if it is higher than 0.5 t is interpreted as having a strong effect.

The eta values for this study's variables are, for treatment for depression 0.869 and for mood and feelings 0.804, which can both be interpreted as strong effect sizes. The values for within-groups sum of squares (intercept) are 0.97 for depression and 0.96 for mood and feelings, which means that there is considerable variance in pupil's depression and mood and feelings scores.

In order to test this study's eleventh hypothesis, the number of pupils receiving treatment and failing to reach the recovery thresholds for depression and mood and feelings were taken into account. The results of the analysis are represented in the Tables 10.2 and 10.3:

Table 10.2 Tests of between-subjects effects in pupils' improvement in depression and mood and feeling

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	DepressionPost	2935.112[a]	2	1467.556	291.106	.000	.869
	MoodFeelingPost	930.783[b]	2	465.392	180.140	.000	.804
Intercept	DepressionPost	15490.974	1	15490.974	3072.806	.000	.972
	MoodFeelingPost	5321.560	1	5321.560	2059.823	.000	.959
Treatment	DepressionPost	2935.112	2	1467.556	291.106	.000	.869
	MoodFeelingPost	930.783	2	465.392	180.140	.000	.804
Error	DepressionPost	443.635	88	5.041			
	MoodFeelingPost	227.348	88	2.584			
Total	DepressionPost	17937.000	91				
	MoodFeelingPost	6165.000	91				
Corrected Total	DepressionPost	3378.747	90				
	MoodFeelingPost	1158.132	90				

a. R Squared = .869 (Adjusted R Squared = .866)

b. R Squared = .804 (Adjusted R Squared = .799)

Table 10.3 Scheffe multiple comparisons post hoc tests

Multiple Comparisons

Dependent Variable	(I) Treatment CBT, CPS, Control	(J) Treatment CBT, CPS, Control	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
DepressionPost	CBT	CPS	3.41	.561	.000	2.01	4.80
		Control	-10.33	.587	.000	-11.79	-8.87
	CPS	CBT	-3.41	.561	.000	-4.80	-2.01
		Control	-13.74	.587	.000	-15.20	-12.28
	Control	CBT	10.33	.587	.000	8.87	11.79
		CPS	13.74	.587	.000	12.28	15.20
MoodFeelingPost	CBT	CPS	1.03	.402	.042	.03	2.03
		Control	-6.42	.420	.000	-7.47	-5.38
	CPS	CBT	-1.03	.402	.042	-2.03	-.03
		Control	-7.45	.420	.000	-8.50	-6.41
	Control	CBT	6.42	.420	.000	5.38	7.47
		CPS	7.45	.420	.000	6.41	8.50

Out of the group of pupils receiving CPS therapy, no one failed to reach the recovery thresholds. Out of the group of people receiving CBT, one pupil did not reach the recovery threshold of below 14. However despite not reaching the threshold, a post treatment score of 14 still indicates improvement and puts the pupil on the borderline of reaching the recovery threshold (Table 11).

Table 11 Number of pupils not reaching the recovery threshold for depression

Number of Pupils not reaching the recovery threshold for depression through CBT		Number of Pupils not reaching the recovery threshold for depression through CPS	
1		0	
Score Before	Score After	Score Before	Score After
28	14	-	-

In the group of people receiving CPS treatment, the results indicate that 2 pupils did not reach the recovery threshold for mood and feelings, although despite not reaching the threshold, their recovery level were significant but not quite enough to put them over the threshold of below 8.

In the group of pupils receiving CBT, the results indicate that 4 pupils did not achieve recovery levels, although again, despite not reaching the threshold, the recovery levels were significant while still and slightly above the threshold (Table 12)

Table 12 Pupils' score of depression at before and after the therapies

	Number of pupils failing to achieve recovery threshold for mood and feelings through CBT		Number of pupils failing to achieve recovery threshold for mood and feelings through CPS	
	4		2	
	Score before	Score After	Score Before	Score After
P 1	12	9	15	8
P 2	16	12	19	8
P 3	15	8		
P4	15	8		

F. CPS versus CBT in cognitive and somatic factors in depression

It is also possible that change in cognitive and somatic factors may have helped to produce a better outcome in the CPS.

16. Substantive hypothesis: Group CPS therapy will enhance an individual's score for depression more than CBT after therapy with regards to:

(a) Reducing their cognitive level of depression

(b) Reducing their somatic level of depression

Statistical Hypothesis: $\mu 1 - \mu 2 > 0$

Null Hypothesis: $\mu 1 - \mu 2 = 0$

Small but not statistically significant differences were found between the CBT and CPS groups in somatic factors; however, significant differences were found in the cognitive factors scores of BDI-II between CBT and CPS groups in favour of the latter.

Results of the test of between-subject effects shown in Table 13 and figure 6 inform us whether or not the independent variables are related to the dependent variables of scores in cognitive and somatic factors in depression. The significance column shows a value of $P = 0.001 < 0.05$. It can be also seen from Table 13 that the within-group sum of squares or intercept (the individual variance within the groups) is highly significant. This means that the pupils in two groups had different scores in both cognitive and somatic factors in depression between the groups. The values of R-squared for cognitive and somatic factors in Table 13 are 0.825 and 0.497 respectively, which suggest that the variables model predicts improvement in the cognitive and somatic factors of depression.

As the multiple comparisons results in Table 12.1 demonstrate, the mean scores for cognitive and somatic factors of depression among those in the CPS group were

compared with those of pupils in the CBT group and to the mean scores of the control group. The CBT group mean score was also been compared to that of control group.

It can be seen that the mean difference in scores for cognitive factors between the CBT and CPS groups is 3.03, and for somatic factors it is 0.038. The mean score for cognitive factors of pupils with CBT is higher than those with CPS with a difference of 3.03. The value of P = 0.001< 0.05 and therefore this difference between scores for cognitive factors in the CBT and CPS groups is significant, in favour of CPS.

Comparing the scores for somatic factors; however, suggests that although the mean score for CBT is higher than that of CPS by 0.038 this is not statistically significant since P = 0.429 > 0.05. This means that there are no significant differences in scores for the somatic factors of depression between the CBT and CPS groups.

The tests of between-subject effects results shown in Table 12.1 and figure 7 explain effect size as well as statistical significance. The effect size index in MANOVA of partial eta squared is calculated by dividing the within-groups sum of squares by the total sum of squares, in order to compare the strengths of the effects of different variables and across different studies. Eta squared values are between 0 and 1, and if it is higher than 0.5 it is interpreted as a strong effect.

The value for this study's variables of the effect of treatment on cognitive factor scores is 0.825, which interpreted as a strong effect size, and for the somatic factors it is 0.497 which is interpreted as a modest effect size. The value for the within-groups sum of squares (intercept) is 0.96 for cognitive factors and 0.85 for somatic factors, which again means that there is considerable variance in cognitive and somatic scores between pupils.

For somatic factors, there were not found significant difference between CBT and CPS groups. Group one contains pupils in the CPS, whose somatic mean score is 1.75,

whereas the mean score for pupils in the CBT group is 2.13 and the mean score for control group is 4.37. The Mauchys test tells us which test to use here. If the statistics is greater than 0.05 we use the assumptions of spherisity; however, if it is below 0.05 greenhouse is used. The test of within-subject effects gives a significant result, which means there are differences across pre-test post-test and follow-up, however we do not know where these differences are. Thus the test of within subject contrast is used to determine where the differences lie; the result of this test is shown in Table 13.

Table 13 Tests of between-subjects effects cognitive and somatic factors

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	CognitivePost	1897.085	2	948.543	207.691	.000
	SomaticPost	114.643	2	57.322	43.562	.000
Intercept	CognitivePost	9668.400	1	9668.400	2116.972	.000
	SomaticPost	683.023	1	683.023	519.067	.000
Treatment	CognitivePost	1897.085	2	948.543	207.691	.000
	SomaticPost	114.643	2	57.322	43.562	.000
Error	CognitivePost	401.904	88	4.567		
	SomaticPost	115.796	88	1.316		
Total	CognitivePost	11379.000	91			
	SomaticPost	874.000	91			
Corrected Total	CognitivePost	2298.989	90			
	SomaticPost	230.440	90			

a. R Squared = .825 (Adjusted R Squared = .821)

b. R Squared = .497 (Adjusted R Squared = .486)

Table 13.1 Scheffe test of multiple comparison cognitive and somatic factors

Multiple Comparisons

Dependent Variable	(I) Treatment CBT, CPS, Control	(J) Treatment CBT, CPS, Control	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
CognitivePost	CBT	CPS	3.03	.534	.000	1.70	4.36
		Control	-8.08	.558	.000	-9.48	-6.69
	CPS	CBT	-3.03	.534	.000	-4.36	-1.70
		Control	-11.12	.558	.000	-12.51	-9.73
	Control	CBT	8.08	.558	.000	6.69	9.48
		CPS	11.12	.558	.000	9.73	12.51
SomaticPost	CBT	CPS	.38	.287	.429	-.34	1.09
		Control	-2.25	.300	.000	-2.99	-1.50
	CPS	CBT	-.38	.287	.429	-1.09	.34
		Control	-2.62	.300	.000	-3.37	-1.87
	Control	CBT	2.25	.300	.000	1.50	2.99
		CPS	2.62	.300	.000	1.87	3.37

Based on observed means.

The error term is Mean Square(Error) = 1.316.

*. The mean difference is significant at the .05 level.

Figure 6 Estimated marginal means of cognitive factors

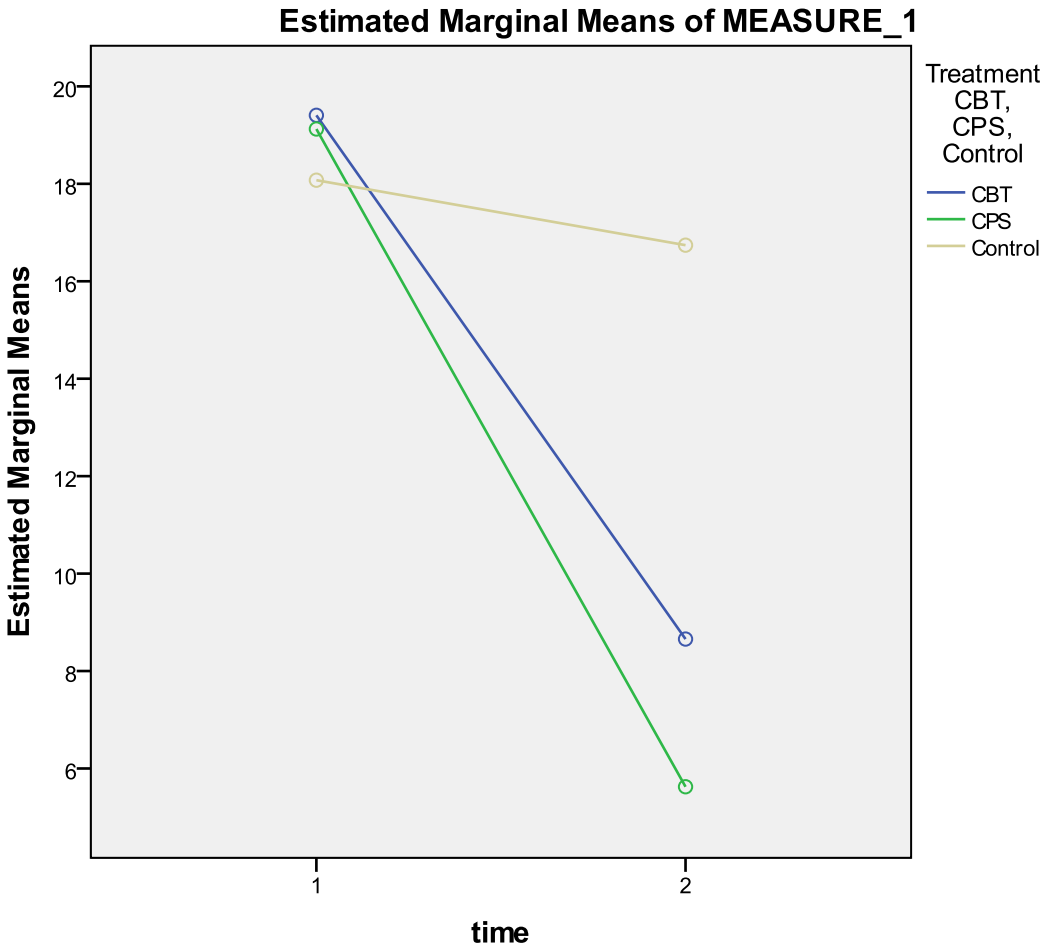
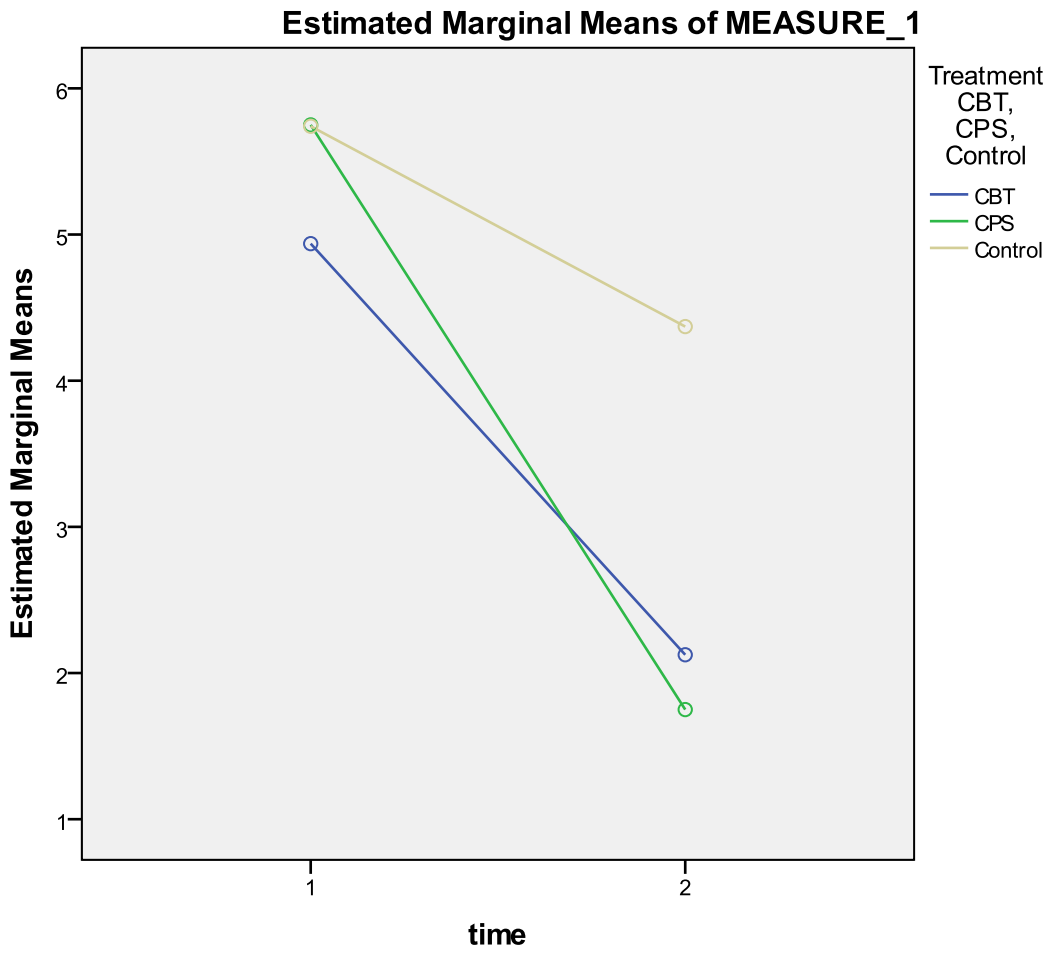


Figure 7 Estimated marginal means for somatic factors

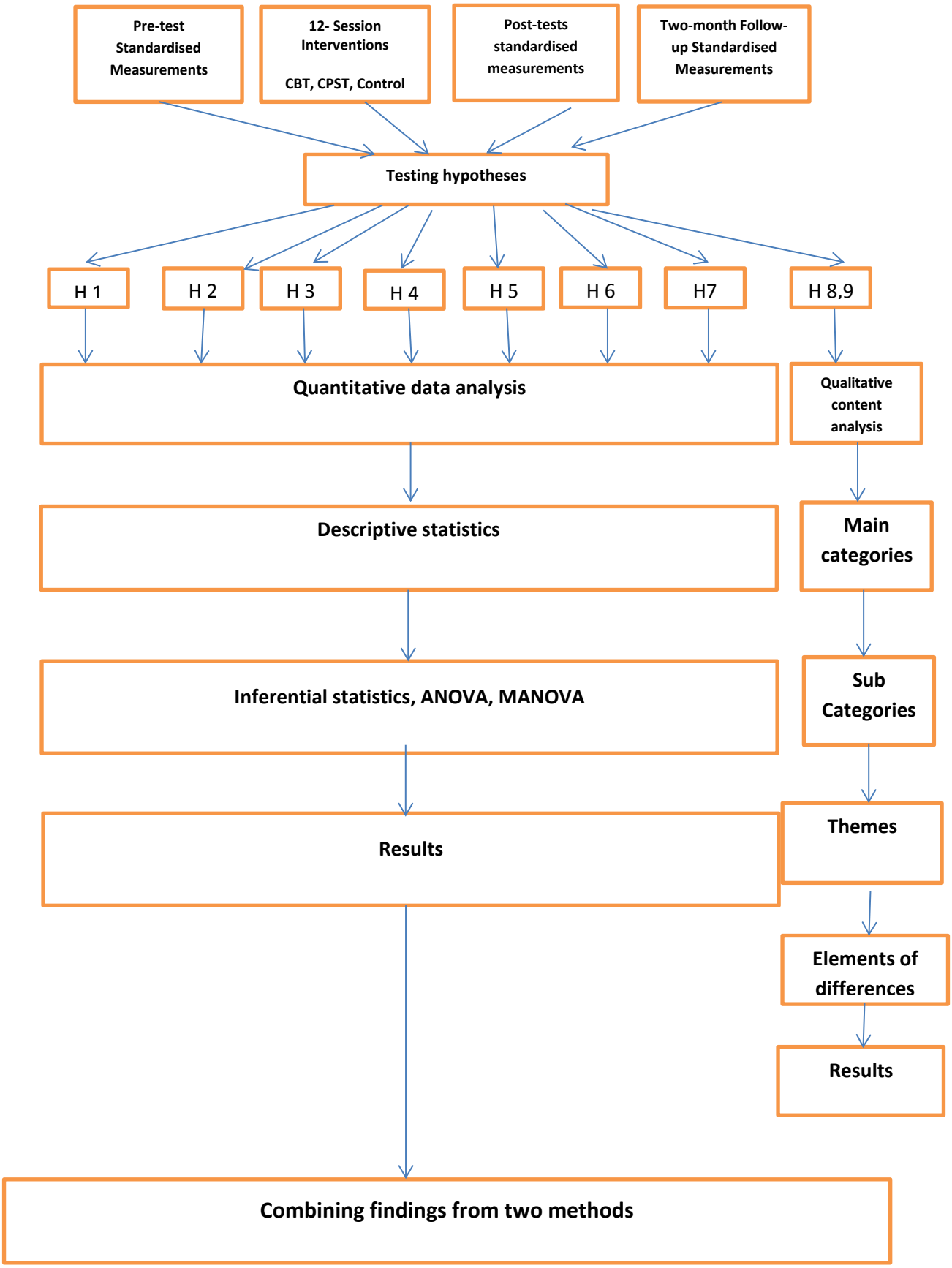


4.4 Presentation and function of qualitative data

4.4.1 *Introduction*

The main aim of the current study is to apply a quantitative approach (RCT) to investigate the efficacy of interventions (Ellis, 2000), followed by the use of qualitative approach using semi-structured interviews to elaborate the findings from quantitative data, understanding pupils' attitudes and perception. The findings gathered from the standardised quantitative tools extended through the use of semi-structured interviews where pupils explained in their own words the extent to which the independent variables affected their perceptions and how these changes occurred. Using interviews for the purpose of elaboration can also explain how the changes occur (Woodhouse 1998) and can assist in explaining and interpreting empirical findings and therefore can validate the findings of the study (see figure 8). Also any potential differences between the groups may be identified from the answers given since another one of the research aims was to understand how these interventions differed from one another as Baker (2000) shows that qualitative research should be a vital component of RCT trials. Furthermore following RCT with semi-structured interviews can help the researcher to check the validity of the quantitative data (Tashakkori and Teddlie 1998).

Figure 8: The process of the research



4.4.2 *The qualitative content analysis process*

After the end of the therapy sessions a total of eight individuals who had overcome their depression, (i.e. four pupils out of each intervention) were selected at random. The selection process applied randomisation using the Random Library of Python Programming Language in which the names of all relevant participants were numbered and coded and then the shuffle function was applied and choice functions and 8 individuals were selected randomly from the list. The pupils attended interviews were asked questions such as "what was your feeling?", "what was your perception?" and "what did you learn?" in order to encourage them to speak and to open up and talk about their feelings and understandings about the therapies they received to enable the researcher to draw out a sense of their own wellbeing, since one of the aims of the study was to see whether findings which indicated improvement in depression, are reflected in what the pupils say about themselves. Transcriptions of all of the interviews were prepared and typed. Interview transcriptions can be found in Appendix 16.

The next stage was to analyse and interpret the qualitative data; the qualitative content method applied to the data, which was in the format of the text. 'Bottom-up' approaches such as grounded theory were not considered to be used for this research, since the intention was not to develop any theories (Perry, Lennie & Humphrey et al. 2008). Therefore, in view of the fact that content analysis is more concerned with meanings, intentions, consequences and context (Downe-Wamboldt 1992), a qualitative content analysis was conducted of the words and sentences produced by pupils in a manner which has also been used in mental health care (Latvala et al. 2000). Findings from two methods were then combined during the interpretation phase of the study (Creswell 2007). The qualitative analysis followed a process based on preparation, organising and reporting phases (Burns and Grove 2005) as described in the sections that follows:

Preparation

In the first step, the data was prepared and transformed into written text. The text was read thoroughly several times so that the researcher could become familiar with and immersed in the data and for a sense of whole to be achieved from the entire text. The intention here was to analyse interview transcripts in order to reveal pupils' thoughts, perceptions and attitudes towards the interventions.

Next, decisions were made to clarify what to analyse in terms of what details to stress after reading the entire text several times. In the semi-structured interviews the researcher asked pupils questions in order to allow them to say what they had learned, and their feelings, and perceptions. This enabled the researcher to identify their sense of wellbeing in their own words and to understand if the improvement in depression shown in the quantitative results was reflected in what the pupils said about themselves. The texts were read thoroughly in order to obtain an overall sense of the data and to define the elements for further analysis (De Wever et al. 2006). Also any potential differences between pupils in the two groups in discussing their perceptions and feelings might be determined.

Organising phase

Four key stages were considered to the answers had given to those questions. First the text was divided into the two groups of CPS and CBT. Next, with taking into consideration the Mood and Feelings questionnaires and those cognitive factors and also those symptoms that have been regarded as signs of depression such as feelings of failure, and hopelessness, every sentence which in some way was linked to describing any of these symptoms or feelings (be it positive or negative) was highlighted.

If the pupil had given a long story as an example that was constructed of several long sentences (whether it was describing a change in mood and feelings, or a change in attitude and cognition or even no noticeable change), the block of text was given a short code phrase that briefly described the text.

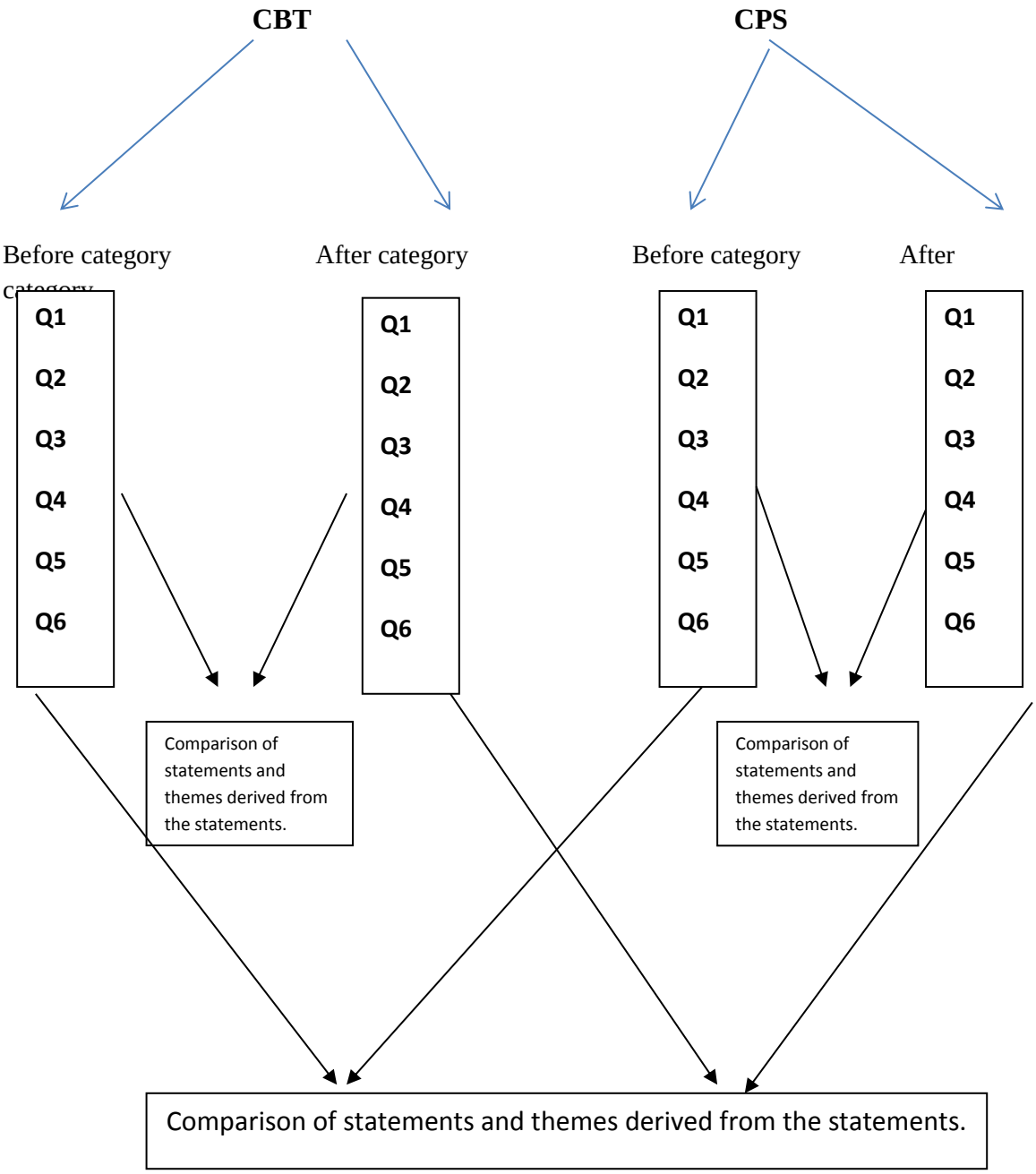
The pupils of each group had the tendency to compare themselves as how they are now with how they used to be before the therapy. The texts were segmented based on each question, and comments were written for each segment and coding key points. These comparisons were analysed separately and categorised under the title of 'before and after'. Therefore each group of CBT and CPS was divided into the two categories of Before and After and what they said about their state before the therapy belonged to the before category and what they said about their state as it is now (i.e. after the therapy) belonged to the after category which were used to answer the research questions.

The research aim is to compare the two interventions of CPS and CBT in terms of how they have affected the perceptions of those who have received them. After the initial analysis of the text and categories of before and after, the text was once again read thoroughly and as a whole in order to spot potential differences or similarities between the form of answers given by the two main therapy groups and to see whether the fact that they have received different therapies has had an impact on how they answer these questions and how they have experienced changes in their symptoms, cognition, behaviour and feelings. The 6 specific interview questions again assisted in shaping our angle of view when it comes to spotting those differences. The themes from the categories of 'CPS before' and 'CBT before' were compared and the same process repeated for the categories of 'CPS after' and 'CBT after'.

The text as an entirety was read and segmented based on each question. Relative words that best describe and answer each question were coded. The similar codes were then

grouped together and refined and themes were derived from the grouping of these codes. Two tables were also made to show the already established CPS vs. CBT division. The tables contain the two main groups of “CPS” and “CBT” and each group then leads to two categories of “Before” and “After”. The gathered phrases were then put into their relevant category. For instance if the participant is describing something (a feeling, perception, behaviour etc.) that relates to how they were ‘before’ they received the ’CPS’ intervention, the derived phrase was put into the ‘CPS Before’ category. A similar process repeats until as many themes as possible and appropriate were categorised. In analysing the answers given by the participants from the two categories of before and after therapy in each group, elements of difference could be found between the CBT and CPS groups in how they have described how they feel and what they have learnt, the research therefore, followed to report the findings; the process is shown on the figure 9 bellow:

Figure 9: CBT versus CPS



4.4.3 *Results of the qualitative content analysis (CPS and CPT participants answer to interviews' questions after the therapy)*

4.4.3.1 *The participants in the CPS and CBT groups answer to question 1*

The majority of the answers given to question 1 (How did you feel about the therapy sessions) are related to descriptions of how beneficial and helpful these sessions have been. Here are some extracts and quotes which give an essence of what the participants had to say about CPS therapy sessions during the interviews:

"I really enjoyed every session and I learned a lot too", "The sessions were helpful and were really valuable", "I feel like I have benefited from all the sessions". In addition to these, some pupils gave examples of how they have 'benefited' from the therapy: "Especially teaching us about how to think properly and how to capture what's going on in my head. A way of doing it is to, as soon as we think about it, write it down on a piece of paper."

Similarly, the majority of the answers given to question 1 by participants in the CBT group relates to describing the therapy and how it has affected them which are all in a positive light. Here are some quotes that give an essence of what the overall perception of the therapy is:

"It [therapy] was really good… Since I've taken part in your sessions I feel like the way I think has changed." "This intervention has helped me have a more positive evaluation of others, my surroundings and myself and overall helped me feel less like a failure." "It was really beneficial and great. It taught us a lot and all of us are very happy" "The sessions were great. They really had a lot of benefits to them and I think all of us agree on that."

Codes given to answers related to Question 1: a lot of benefits, therapy taught a lot, good, beneficial, helpful, valuable, and good.

Themes: positive respondent to the therapies and acceptance of the therapies. The table14list the phrases from all participants' responses in CPS group and CBT group to question 1. It can be interpreted from the answers given by the participants in both groups of therapies that they have all responded positively to the treatment and have accepted this intervention.

Table 14 CPS and CBT participant's answers to question 1: What was your perception of this therapy?

Common themes and phrases gathered from the answers which CPS participants gave to question 1.	**Common themes and phrases gathered from the answers which CBT participants gave to question 1.**
• Really enjoyed every session • It was a great opportunity • There has never been something like this in our curriculum • Sessions were helpful • Sessions were valuable • I benefited from each session • Sessions were effective • It was a great course • It was very beneficial	• It was really good • Therapy helped me • reduce my problems with other people • It was beneficial and great • It taught us a lot • I am very happy • I am satisfied • The sessions were great • The therapy had a lot of benefits

4.4.3.2 *The participants in the CPS and CBT groups answer to question 2*

Most participants answered question 2 (how do you feel right now?) by comparing how they used to feel before they started the session and how they feel right now and all reported significant positive changes. Some statements in the CPS group are as such:

"I feel more positive now in general and I feel more self-assured", "I have a bit more faith in myself now", "With practice I can see my problems better and more clearly", "I feel more capable of producing good quality ideas and so I'm proud of that." "I can say that I am a different person with a new point of view. I feel like I'm much more able than I used to think I am", "The way I feel right now can't be compared to the way I felt when I started. Before the course started I was always feeling bad and negative but right now I feel much better and much more positive about everything." Codes given to answers

related to question 2 for the CPS group are positive feeling, more faith in self, more able than before.

Themes given for CPS group are: Sense of improvement and enhanced mood. Table 15 lists phrases out of each CPS and CBT participant's responses to question 2. It can be interpreted from these phrases that they generally experienced positive feelings since the end of the CPS therapy. Amongst the responses, the most common achievements are "positive feelings" and "enhanced mood".

In the same way, the participants in the CBT group answered question 2 mainly by comparing how they felt before and after the therapy. All of them reported positive changes that have occurred since they have undertaken the course. These quotes give a general idea about what these positive changes are:

"I mean I feel like a huge weight has been lifted from my shoulder and you might not believe it but I feel like I'm floating in air…I used to hold a lot of grudge and now that I've let go of them all I feel much better." "I feel positive and good. I feel hopeful. I know how bad and destructive my negative thoughts have been for me. I have always thoughts negatively and useless thoughts" "I feel good. I used to constantly feel guilty before and I've always lived with that. Now those feelings of self-blame I had is getting much better." "I feel happier …I think less about the problems I have and I have become much more positive"

Table 15 also lists phrases out of each participant's responses in CBT group to question 2. It can be interpreted from these phrases that they had generally experienced positive feelings since the end of the CBT. Amongst the responses the most common achievements cited are "positive feelings" and "enhanced mood". Codes given to answers related to Question 2 for the CBT group: feel good, feel positive, feel hopeful, feel happier. Themes for CBT: Sense of improvement and enhanced mood.

Table 15 CPS and CBT participants' answers to question 2: What are your feelings now?

Common themes and phrases gathered from the answers which CPS participants gave to question 2.	Common themes and phrases gathered from the answers which CBT participants gave to question 2.
• It can't be compared to the way I was feeling when I started • Before I felt bad and negative, now I feel better and positive • I feel great • I haven't felt this good in a long time • I was looking forward to the sessions • We have been excited to have taken part • I feel like a different person • I feel more able • I am lucky • I have reduced some of my stress • I feel more positive • I feel more self-assured • I have faith in myself now • I feel more capable • I'm proud	• I feel the way I think has changed • I feel like a huge weight has been lifted from my shoulders • I feel much better • I feel more positive and active • I feel less like a failure • I feel positive • I feel hopeful • I feel good • Feelings guilt and self-blaming are getting better • I feel happier • I have become much more positive • I am happy

4.4.3.3 *The participants in the CPS and CBT groups answer to question 3*

The participants in the CPS answered to question 3 (what did you learn from the therapy?), by reviewing the list of things they thought were useful and how they have implemented them in real life. Generally they touched upon most of the skills they were taught throughout the sessions. Some examples are given follow:

"These sessions taught me to look at my problems better and phrase them in a better way, how to deal with the right issue…problem." "I used to only look at my problems from a negative angle and sometimes I had not understood my problem well. But now I've learnt I need to look at a problem from 6 different angles." "Well I learned a lot of things that I can put into practice and solve my own problems rather than expecting them to be resolved on their own." "I try to write it [problem] down immediately on a piece of paper and use the skills I've learned to drag out ideas from my head that I can turn into solutions and then use the best one out of the list I create."

Codes given to answers related to Question 3 are as follow: think about problem, gather facts about the problem, deal with the right problem, using 6 different angles, create ideas for solutions, and delay judgement.

Themes for CPS: understanding creative problem solving stages (problem finding, fact finding, idea finding, solution finding, use of divergent and convergent thinking and brainstorming). Table 16 lists phrases out of the answers given by each participant to question 3. It can be deduced from the answers, which stages of the CPS they were referring to. Participants have learned about the five stages of CPS which involve: fact finding, problem finding, idea finding, solution finding and alongside learning the necessary skills of brainstorming, and divergent and convergent thinking.

Similarly, participants in the CBT group answered question 3 (what did you learn from the therapy?) by recollecting a list of the skills they were taught throughout the sessions and giving examples of how they have implemented them in real life practical situations, however, their set of skills differed from those of the participants of CPS Therapy:

“I learned how our bad and negative thoughts could lead to us having negative and bad feelings about things which can all affect the way we act and behave in our lives.” “I’m aware of the damage that those negative thoughts can have. So once I’ve identified them I can change them. So at least I prevent wrong and unhelpful thoughts being produced.” “I used to underestimate myself and undermine my abilities and ignored my good points and played down my achievements. I always criticized myself even for the smallest things. Now I know how unhelpful those thoughts have been and I’m aware of them now using the practices we did.” “I realized that I had made the situation much worse than it actually was, in my own head and had everything blown out of proportion.

Codes given to answers related to Questions 3 for CBT group are as follow: identify negative and unhelpful thoughts, turning negative thoughts to positive ones, prevent

negatives thoughts from forming, assertiveness. Themes is identifying dysfunctional beliefs and changing them to positive thinking.

Table 16 lists phrases put of each participant's response to question 3. From the answers given to question 3, participants have understood the basic principles of CBT which involve, "identifying, stopping and evaluating negative/unhelpful thoughts", "turning them to alternative positive thoughts", "link between thoughts, feelings and actions", alongside understanding the importance of "assertiveness" and the effects of "pleasant activities".

Table 16 CPS and CBT participants' answer to question 3: What did you learn from this therapy?

Common themes and phrases gathered from the answers which CPS participants gave to question 3.	**Common themes and phrases gathered from the answers which CBT participants gave to question 3.**
• Thinking about the problem • Know what my problem was • Modify problem • How to deal with the right problem • Look at a problem from 6 angles • Make limitless ideas • Not to judge and kill off ideas • If one didn't work practice other solutions • Define and express the problem • Investigate our problem • Use my creativity to create as many ideas as possible • Not judge them • Evaluate all created ideas • Generate a lot of ideas and turn them into workable solutions. • Having all the facts and information • Delay our judgment • See potential in ideas	• Focus on the way I think and identify bad thoughts • Think more optimistically • Looking at things positively • Positive judgment • Pleasant activities can help lift up our mood • Be assertive • Identify my own negative beliefs • Be positive, think positive • Negative thoughts affect mood • Identify dysfunctional beliefs • Stop negative thoughts and turn them to positive • Have control over negative thoughts • negative thoughts have to be stopped • Aware of the damage that those negative thoughts can have • Prevent wrong and unhelpful thoughts be • I don't think as negatively as before Seeing the positive in what happens

4.4.3.4 *The participants in the CPS and CBT groups answers to question 4 and 5*

The answers which the participants gave to Questions 4 (what things could help you deal with your depression?) and Question 5 (what are the most important things affecting you from the therapy) revolved around examples the pupils gave about what they had learned and how they have implemented them in practical real life situations. For example:

"I used to think I was an unfortunate person considering all my family problems but now I can really voice my problems and state them in my family because I'm part of it. I think I can be helpful to them now." "I only considered one angle, I saw the negative things. I thought my mother hated me and loved my brother instead and I always thought it was all my fault. After doing the course I try to look at the problem deeper and review the problem in my head with a different point of view" "I've always been a stressful person and now I have managed to reduce some of my stress. I learned through problem solving when I get stressed, for example when I havened revised enough and it is getting closer to the exams, or especially during the exam… Now with all this information I can manage to control my stress."

Similarly, participants in the CBT group answered question 4 (what things helped you deal with your depression?) and Question 5 (what was the most important thing you learned?) by recollecting a list of the skills they were taught throughout the sessions and giving examples of how they have implemented them in real life practical situations:

"I'm aware of the damage that those negative thoughts can have. So once I've identified them I can change them. So at least I prevent wrong and unhelpful thoughts being produced." "I learned how our bad and negative thoughts could lead to us having negative and bad feelings about things which can all affect the way we act and behave in our lives." "I used to underestimate myself and undermine my abilities and ignored my good points and played down my achievements. I always criticized myself even for the smallest

things. Now I know how unhelpful those thoughts have been and I'm aware of them now using the practices we did." "I realized that I had made the situation much worse than it actually was, in my own head and had everything blown out of proportion. I had become really negative and sensitive to everything. I tried seeing positives in what happened rather than focusing on the negative things and that really helped me feel better about things."

Table 17 lists phrases out of each CPS and CBT participant's answer to question 4. It can be gathered from the answers given that all participants regard what they have learned to be useful in various and different ways when dealing with their depression and they are able to put them into practice in everyday life situations.

Table 18 lists phrases put of each CPS and CBT participant's response to question 5. From the responses given to this question it can be determined that they considered a various range of things learned from the CPS therapy as important, amongst which could be included "self-efficacy", "self-confidence" "various perspective" and "delaying judgement".

On the other hand, it can be gathered from the responses given by participants in the CBT that a variety of skills were achieved thorough CBT, which the participants regard as being valuable and important amongst which could be included to "identifying thoughts", "stopping and evaluating thoughts" and "thinking positively".

Codes given to answers related to questions 4 and 5 for the CBT group are as follow: identifying negative and unhelpful thoughts, turning negative thoughts to positive ones, prevent negatives thoughts from forming. Themes: understanding therapy skills

Codes given to answers related to Questions 4 and 5: better understanding of self and abilities, solve problem, relying on self, considering different angles self-efficacy

enhanced, self-confidence, and delaying judgement. Themes for CPS: understanding creative problem solving stages.

Table 17 CPS and CBT Participants' answer to question 4: What things could help you deal with your depression?

Common themes and phrases gathered from the answers which CPS participants gave to question 4.	**Common themes and phrases gathered from the answers which CPS participants gave to question 4.**
• Having a better understanding of myself and my abilities • Having ideas I can use to improve my life, my situation • Voice my problems and state them • Solving my biggest problems and worries • Feelings worthy and confident • I can stand on my feet now • Having more confidence • I've told myself I'm lucky • I have reduced some of my stress • I have managed to control my stress • I can give value to things I didn't care about before • More hopeful for the future • I would be a more successful person • I've got skills to solve problems • Be successful in the future	• All sessions have been great and have had a positive effect on me, • I changes my way of thinking, on my mind, my behaviour. • Seeing positives in what happened and that helped me feel better • I feel more active and positive • I understand when I am thinking negatively, • I can stop them and change them to positive • I'm aware of the damage negative thoughts can have so once I've identified them I can change them. • The least is I prevent wrong and unhelpful thoughts being produced • Using the investigation worksheet I can identify my negative thought. • I recognize my anxiety and try to stop and change my negative thoughts to positive

Table 18 CPS and CBT Participants' answers to question 5: What are the most important things affecting you from the therapy?

Common themes and phrases gathered from the answers which CPS participants gave to question 5.	Common themes and phrases gathered from the answers which CBT participants gave to question 5.
• I can solve my own problems • Knowing that helps with self- confidence and mood • Relying on myself • The exercise in which we wrote our problems down • "6 hats" exercise • View something, a situation, a decision or anything else from different angles • Not judging things immediately before giving them a chance	• Identify my wrong and negative thoughts • Turning them from negative to positive • Be assertive • Knowing our unhelpful negative thoughts • Evaluating my thoughts and feelings immediately • Learning to think positively and also though investigation and daily mood exercises

4.4.3.5 *The participants in the CPS and CBT groups answers to question 6*

Answers to question 6 (how did you feel about working in a group?) were all positive and mostly contained the phrase 'helped each other'. Below are examples from what the participants had to say about working in a group:

"The atmosphere was very friendly and useful… we all learned a lot from each other and inspired each other." "Everyone helped each other without conflicts and we kept each other's secrets. Everyone respected the ground rules." "The group atmosphere was great…In the sessions we all listened to each other and respected each other's opinions."

Codes given to answers related to Question 6: Great group atmosphere, Friendly, learned from each other, helped each other, respected each other, inspired each other. Themes: found working in the group was beneficial and positive response to working in the group. Table 19 lists phrases out of participant's response to question 6. It can be gathered from

the answers, that all of them had a positive experience of working in the group and receiving CPS therapy as a member of a group.

Participants in the CBT group also answered Question 6 (how did you feel about working in the group) all positively:

"It was great and I was really comfortable in the group. Working in the group made me feel like I wasn't alone in this and we all helped each other along." "It was easy and I felt comfortable and learned a lot. We all respected each other and didn't talk over each other or cut each other off… We all listened to each other and no one made fun of another person because of what they said." "It was really good and I was fine working in the group. Everyone was so understanding"

Codes given to answers related to question 6: comfortable working in the group, helped each other, listened to each other, respected each other. Themes: positive group atmosphere. Table 19 lists phrases out of each participant's response to question 6. It can be gathered from the answers given by each participant that all had a positive experience working in the group and receiving CBT as a member of a group.

Table 19 CPS and CBT Participants' answers to question 6: How did you feel about working in the group?

Common themes and phrases gathered from the answers which CPS participants gave to question 6.	Common themes and phrases gathered from the answers which CBT participants gave to question 6.
• Friendly and useful • All cooperated with each other and learned a lot from each other • Everyone helped each other without conflicts • Everyone respected the ground rules and kept each other's secrets • The group atmosphere was great • We all listened to each other • Respected each other's point of view • It was very productive • There were no arguments or conflicts between the girls • Beneficial	• The group atmosphere was really good and everyone respected each other, allowed each other to speak and listened. • It was really good and I was fine working in the group • Everyone was so understanding • The group was great and educational • It was easy and I felt comfortable • We all respected each other and didn't talk over each other • We all listened to each other and no one made fun of another person because of what they said • Working in the group made me feel like I wasn't alone in this and we all helped each other along

4.4.3.6 *The differences between pre-therapy and post-therapy in each group*

Table 20.1 and 20.2 list phrases the participants in CBT and CPS therapy used during the interviews, to describe themselves both before and after the therapy. As the table shows, there are many contrasting phrases used. This indicates that the participants recognised positive improvements within themselves through receiving the therapy. For example, before the therapy they "only looked at the negative points" of something but after the therapy they "consider the positive points" as well. They used to be "overwhelmed with emotions" and now they have learned to "be in control of emotions".

Table 20.1: Overall lists of the CPS therapy participants' views of themselves before and after the therapy taken from their own words during interviews

Before the Therapy	After the Therapy
• Lack of control over problems • Didn't consider the problem • Didn't identify problems • Scared of problems • Looked at problems negatively • Unable to solve the problem • Gave up on solving a problem • Had feelings of guilt • Had feelings of sadness • Low self-worth • Low self confidence • Closed minded • Negative view of self • Negative view of others • Negative view of situation • Negative view of life • Negative view of future • Dependant • Negative point of view • Judgemental • Unaware of abilities • Emotion orientated • Self-critical • Stressed • Exaggerated their problems • Biased point of view	• Control over problems • Aware of problems • Understand problem better • Not scared of problems • Consider other perspectives • Regard problems as solvable • Able to find solutions • Enhanced perspective • Enhanced mood • Higher self-worth • Higher self confidence • Open minded • Positive view of self • Positive view of others • Positive view of situation • Positive view of life • Positive view of future • Independent • Positive perspective • Delay judgment • Self-efficacy • Problem orientated • Able to help themselves • Reduced stress

Table 20.2: An overall list of the CBT therapy participants' views of themselves before and after the therapy (taken from their own words during the interviews)

Before the therapy	After the therapy
• Negative person • Overwhelmed with emotions • Paranoid • Only looked at negative points • Negative thoughts • Negative attitude • Negative behaviour • Inactive • Isolated • Passive • Didn't enjoy life • Hopeless • Felt like failure • Felt sad and unhappy • Self-critical • Low self-worth • Low self confidence • Self-blaming • Negative view of self • Negative view of others • Negative view of life • Negative view of future • Feelings of guilt • Judgmental • Anxious • Exaggeration of situation	• Positive person • control over emotions • Feeling optimistic • See the positive points • Positive thoughts • Positive attitude • Positive behaviour • Active • Socializing more • Assertive • Enjoy life • Hopeful • Feel less like failure • Enhanced mood • Less self-critical • Higher self-worth • Higher self confidence • Less self-blaming • Positive view of self • Positive view of others • Positive view of life • Positive view of future • Less feelings of guilt • Positive judgment • Feeling good and positive

4.5 Conclusion

This chapter has focused on presenting the quantitative and qualitative data. The quantitative results that gathered after the end of the therapy and at two-months follow-up indicates that the scores on BDI-II and SMFQ scales showed significant improvements in both CBT and CPS groups by the end of the therapy sessions and also in the two-months follow-up.

However, pupils in CPS therapy had significantly greater benefits compared to the application of CBT on pupils with mild and moderate depression and also compared to control group. In the group receiving CPS, the results of the post-treatment test of BDI-II and SMFQ indicate that most pupils reached the recovery threshold with scores of below 14 and 8 respectively. In this group all pupils reached the recovery threshold for depression but 2 pupils did not reach the threshold for mood and feelings. However, the scores of those pupils not reaching the threshold were fairly close to the recovery level.

In the group receiving CBT, all pupils reached the recovery threshold for depression and mood and feelings except for 1 pupil who did not reach the former threshold and 4 pupils who did not reach the latter. Those pupils, however, were all fairly close to the recovery levels despite not reaching it. With regards to the cognitive factors of depression, pupils receiving CPS showed more improvement compared to those receiving CBT at the end of the intervention, which indicates there is a significant difference between the application of CPS and CBT with regards to scores in the cognitive factors of depression. However, scores in the somatic factors of depression in both CBT and CPS groups improved similarly. The next chapter discusses and interprets both the quantitative and qualitative findings. The qualitative data also showed similar findings which validated the results from quantitative data.

Chapter 5: Discussion and implications for further study

5.1 Introduction

The purpose of this chapter is to discuss and interpret the findings. The aim of the study was to use beneficial effects of CPS therapy and embedded creativity techniques to improve depression among youth. This was accomplished through an increased emphasis on creative processes and techniques such as brainstorming, idea generating, problem finding, divergent thinking, delaying judgment, convergent thinking and decision-making, fluency, flexibility and originality, in order to arrive at a structurally systematic and a more useful approach to be used for pupils with minor and moderate depression in the school context. Thus, this study contributes added values to the literature and extends previous research on problem solving therapy by applying Osborn and Parnes's (1992) theory of creative problem solving. Moreover, this research applied in a new population of youth as well as applying it in the new context of schools in Iran. The study investigated the effectiveness of creative problem solving therapy (CPS) compared with cognitive behavioural therapy (CBT) and a control group in helping secondary school pupils to improve depression. The results are most discussed in relation to existing research and literature will be discussed. The limitations of the study and the implications of this research for theory, policy and practice are then considered. Finally, suggestions and recommendations for further research in this area are presented.

5.2. Interpretation and discussion of the main findings (quantitative and qualitative)

The study was developed in response to the researcher's concerns about the inconsistencies in the literature on the aetiology of depression and the interventions used for youth. This was also developed in response to concerns about adolescent depression around the world and especially in schools in Iran, and the need for a useful, feasible and effective psychological intervention within schools to prevent depression in advance. The present study is the first to directly compare the effectiveness of creative problem solving therapy with CBT in an RCT design. The study evaluated and examined the differences between the creative problem solving therapy (CPS), cognitive behavioural therapy (CBT) and a control group in a sample of pupils in the context with mild and moderate depression which are of two secondary schools in Tehran. Secondly, this is the first time that any of these interventions have been applied among young people in schools within this context.

The main findings clearly indicate that pupils' symptom of depression and mood and feelings were improved by the CBT and CPS interventions; however, the CPS pupils performed significantly better. Moreover, statistically significant differences were found between the outcomes in follow-up for the CPS and CBT groups favouring the former. In addition to the positive outcomes, the attendance rates of 100% suggest that both treatments appeared to be very effective in the context of Iran. On the other hand, participants in the control group showed a rather low attendance rate, leaving sessions early and showing minimal signs of improvement.

The main findings show that pupils who were given the two interventions performed better than in previous research with regards to lowering individual scores for depression and negative mood and feelings, bringing them below or close to the recovery threshold.

5.2.1 *Positive outcomes of applying CPS and CBT on depressed youth*

One aim of this research was to examine the effectiveness of the two interventions for pupils with minor and moderate depression and at risk of developing severe depression. The quantitative finding showed significant improvement in reducing depression in both groups after therapy.

The findings of the research are in line with those of previous research. Nezu et al (2004) found that social problem solving reduces stress, and negative feelings among adolescents with depression. Nezu and Ronan (1988) found that problem solving can be considered as a moderator of stress-related depressive symptoms. Nezu et al. (1987) found a link between problem-solving, stress and depression and Nezu et al. (2009) identified relationship link between social problem solving and depression among patients. Nezu and Nezu (2010) also found that problem-solving skills improve depression among adolescents. In general the findings of this research are consistent with those of cumulative previous research (such as Billings and Moos 1981; Nezu et al 1986; Sadowski & Kelly 1993; Warshofsky 1999; Becker-Weidman et al. 2009; Grover et al. 2009) which have shown a link between problem-solving skills and psychopathology.

The findings of this research are also consistent with those studies that have found CPS to play a significant role in the improvement of young people's mental health. Estrada et al. (1987) found that the CPS procedures have a positive effect on mood and can increase ideation and creative problem solving, whilst Toplyn and Maguire (1991) showed that negative mood and anxiety can have a negative effect on ideation and creativity. It has also been shown that creative problem solving increases the motivation of participants, which will in turn affect their mood for the better as was shown by Clapham (1997) which indicates participants in a creativity training programme gained ideational skills, enhanced mood, self-perceptions and motivation, and reduced anxiety. Warshofsky (1999) also indicated that creative thinking skills promote well-being and good mental

health. On the other hand, based on earlier work by Beck and colleagues (1979), Brent and Poling (1997) developed a CBT protocol emphasising rational disputation of maladaptive beliefs. The effectiveness of this treatment was examined in a randomised controlled trial comparing CBT, systemic behavioural family therapy (SBFT), and nondirective supportive therapy (NST) for treating clinically depressed adolescents (Brent et al., 1997). Adolescents who received CBT demonstrated higher rates of remission from depression than did youth who received either SBFT or NST (60% versus 38% or 39%, respectively). Moreover, youth who received CBT evidenced a more rapid response than those in the other two groups.

5.2.1.1 *The function of qualitative data in elaborating the findings of the quantitative data*

Consistent with the quantitative data results, the findings of the qualitative data also showed many improvements in the way participants in the CPS group described themselves. One pupil in the CPS group said:

"The way I feel right now can't be compared to the way I felt when I started. Before the course started I was always feeling bad and negative but right now I feel much better and much more positive about everything."

Similarly another pupil from the CBT group said:

"I mean I feel like a huge weight has been lifted from my shoulder and you might not believe it but I feel like I'm floating in air…I used to hold a lot of grudge and now that I've let go of them all I feel much better."

According to the statements of the participants of both interventions before the therapies, it could be interpreted that they viewed themselves as "being hopeless towards solving problems, having negative perspectives, being emotional, giving up at solving problems,

having low self- worth and self-confidence, being unhappy and unsatisfied with life, being self- critical and exaggerated situations and problems. However, after the therapies, the participants of both groups acknowledged that the therapy had positive effects and that their social interactions increased and had gained higher self-worth and self-confidence after therapy. This result helps in validating the positive results gathered from the quantitative data.

Whilst the findings of the quantitative data only showed improvements in the reduction of depression in the CPS group, the findings of qualitative data expanded upon this improvement. One of the most interesting observations from the interview results was that, despite the fact that leading questions were not asked, the participants in both groups intended to compare and contrast themselves as they are now with how they used to be before the therapy. The participants gained an overall degree of self-awareness to the point where they were able to identify their improvements after the therapy. For instance, from responses of participants in CPS therapy it could be interpreted that they lacked control over problems and were unable to solve them before therapy, whereas after therapy they were able to understand the problems better, be more aware of them and regard them as solvable. It could also be observed from many different phrases used by the participants in CPS that their descriptions of themselves before and after the therapy mainly related to how they viewed problems. In effect phrases such as “becoming more aware of problems” they being more equipped with skills in solving problems, which implies that they have achieved problem orientation. Phrases such as “I had never even considered thinking about a problem and didn’t really know what my problem was. But now I’ve learnt how to deal with my problems” demonstrate how participants felt able to solve problems in contrast to how they felt in the past.

Consistent with quantitative data, the qualitative data also showed many improvements in the way participants in the CBT group described themselves. Similar to the participants in

the CPS therapy, according the statements of the participants of CBT before the therapies, it could be interpreted that they viewed themselves as "being hopeless towards life, having negative perspectives, being emotional, having low self- worth and self-confidence, being unhappy and unsatisfied with life, being self- critical and exaggerated situations and problems. However, after the therapy they acknowledged that the therapy had positive effects and that their social interactions increased and gained higher self-worth and self-confidence after therapy.

The findings of qualitative data elaborated this improvement. For example, similar to the participants in the CPS therapy, those in the CBT group also had a tendency to compare aspects of themselves before and after the therapy. They revolved mostly around how they felt before and after the therapy and whether there was anything negative before which had turned into something positive now. In effect, the CBT participants had developed more positive views towards many things, as reflected in phrases such as "Now I think much more positively and optimistically." Other quotation such as "I used to be a bitter and a very negative person" "I used to only look at the empty half of the glass" and "Now these sessions have helped me to focus on the way I think and be able to identify my bad thoughts", reflect the participants' ability to be aware of their own negative feelings and thoughts, and to identify and modify them.

5.2.2 *Participants in the CPS group performed better than the CBT group in reducing depression*

The main findings clearly indicate that pupils' symptom of depression and mood and feelings were improved by the CBT and CPS interventions; however, the CPS pupils performed significantly better. First, the results of this study confirm the 2004 National Institute for Clinical Excellence guidelines for the management of depression. These recommendations suggest the use of problem solving therapy in both mild or minor and moderate depression (NICE 2004). The results of this study highlight the importance of

including CPS skills and practising such skills during the course of intervention. Ignoring the symptoms of depression in individuals to the point of them reaching severe levels, and referring them on long waiting lists, before being seen by a specialist and being offered any individual therapy or medication, is not as beneficial and cost effective as providing CPS training in schools and therefore preventing the further development of depression in pupils. Based on NICE (2004) it may also be considered against ethical recommendation if the symptoms of mild depression are ignored.

The findings is in line with RCT study carried out by Laurence et al., (2000) compared three methods: problem solving treatment, person centre therapy and antidepressant medication over twelve weeks and found that problem solving treatment as more effective treatment than person centre therapy for depressive disorders in primary care. He then concluded that problem-solving therapy is a goal oriented, collaborative treatment.

5.2.2.1 *The function of quantitative data as providing elaboration and explanation*

Although in the literature the research found that this therapy is more relevant to the aetiology of depression in youth, and therefore the research hypothesised that this therapy may have positive effects, they do not explain this results in details. One aim of this study was to find out the participants' perceptions about the interventions and the way they describe themselves. The results of interviews indicate specific yet fundamental differences in the learning outcomes among participants in each group. The participants answered question 3 (what did you learn from the therapy?) by reviewing the list of things they thought were useful and how they have implemented them in real life. Generally they touched upon most of the skills thought throughout the sessions. Some examples are given below:

One pupil in the CPS group said: "These sessions taught me to look at my problems better and phrase them in a better way, how to deal with the right issue…problem." Another

pupil said: “I used to only look at my problems from a negative angle and sometimes I had not understood my problem well. But now I’ve learnt I need to look at a problem from 6 different angles.”

It can be generally interpreted that the participants in the CPS learned the five stages of CPS of fact finding, problem finding, idea finding, and solution finding. They also learned skills such as brainstorming, and divergent and convergent thinking. They learned to become aware of problems and to use the systematic and structured CPS programme to solve them and as a result gained a sense of self-efficacy and perceived ability. On the other hand, the participants in CBT learned to identify, stop and adapt negative and unhelpful thoughts as they have understood the links between their thoughts, feelings and actions. These participants also learned the importance of being assertive and increase including pleasant activities in their daily life.

However their learning differed in nature from those among the CPS participants. It can be gathered from other phrases, such as “I think the way I see things now is different from the past. “I know now how to get to the root of the problem and deal with the real one” and “I can now modify and adapt the problem and at least help myself a little bit” “now I’ve learnt I need to look at a problem from 6 different angles.” that participants gained the ability to look at a problem from different angles, and get to the root or the underlying issue, which itself reflects mastery over problems and their willingness to recognise their own abilities.

On the other hand the pupils in the CBT group learned different skills and described them differently. One pupil in the CBT group said: “I used to underestimate myself and undermine my abilities and ignored my good points and played down my achievements. I always criticised myself even for the smallest things. Now I know how unhelpful those thoughts have been and I’m aware of them now using the practices we did.” Another

pupils said: “I realized that I had made the situation much worse than it actually was, in my own head and had everything blown out of proportion. I had become really negative and sensitive to everything. I tried seeing positives in what happened rather than focusing on the negative things and that really helped me feel better about things.”

The quantitative results showed that in terms of cognitive factors, those receiving the CPS therapy showed more improvement compared to those receiving CBT. This could possibly be due to the fact that participants were involved in two different interventions where they learned different set of skills and concepts from one another and that was apparent in the qualitative data analysis from the way the participants answered similar questions differently. But even the qualitative data doesn’t provide much information about why the CPS therapy participants improved more compared to those of CBT.

5.2.3. Participants in the CPS group maintained better results than the CBT group in two-month follow-up

Interestingly, the participants in the CPS group maintained better outcomes than the CBT group in the two-month follow-up. Another key finding to emerge is that although participants in both intervention groups experienced significant decreases in depression and negative mood and feelings scores compared to the control group, these improvements were maintained better in the CPS group at two-month follow-up. These findings are consistent with and better than the study conducted by Nezu (1986), which compared problem solving therapy with problem-focused therapy and found problem solving therapy performed better than later and this difference was maintained at follow-up. A previous research (Wood et al. 1996) also studied the effectiveness of CBT compared with relaxation training on clinically depressed adolescents. It concluded that those receiving CBT, despite the initial improvement straight after therapy compared to those in the control group, showed signs of regression and the difference of improvement between the CBT group and the control group were not apparent at the 3-month follow

up. In contrast those who received relaxation training continued to improve and reported so at the 3-month follow up. Although the acute treatment effect sizes reported in all but one of the published outcome studies are statistically significant, it appears that a substantial percentage of youth who receive CBT continue to experience significant depressive symptomatology and functional impairment after 12–18 weeks of treatment.

This may suggest that the effects of CBT are short lasting compared to those therapies during which the participants are taught more tangible skills such as the ones taught in CPS therapy.

5.2.4 *Key contrasts in the way participants described themselves and the therapy among two groups in qualitative data*

While the findings of quantitative data showed the participants in the CPS group were improved to a greater extent than the CBT group in the reduction of depression, the findings of qualitative data expanded upon this improvement in greater detail.

The other difference in perception found between the CBT and CPS participants concerned the nature of how they viewed situations after the interventions. Both groups described their attitudes and points of view before the therapy as negative. However, after therapy the CBT participants mainly used the word ‘positive' to describe their perspective, in contrast to the CPS participants who used the phrase ‘different angles’.

To demonstrate this, one CBT participant said that “When people have a positive view, they are much more active and they behave better towards other people as well”, which reflects the importance of positive attitudes and points of view. On the other hand one CPS participant explained that “now with the “six hats” exercise I’ve learned to view something, a situation, a decision or anything else from different angles.” This demonstrates that the participant has learned to view the problem through the six hats’

exercises of positively, negatively, neutral facts, creatively, feelings and control. Overall this allows the individual to have a more holistic wholesome view of a given situation and to be able to look at it from a more unbiased and realistic perspective.

The same principle can also be applied to the way the participants in both groups viewed the concept of 'judgment'. The CBT participants described their judgements or evaluations to have become more positive, whereas the CPS participants now understood how to delay their judgment until they gather facts by divergent and convergent thinking. Convergent and divergent thinking allows them to be able to make decisions more comfortably and to critically choose appropriate ideas or solutions from a list of already generated ideas or solutions through brainstorming. Overall it equips participants with decision-making skills which will assist them with solving problems.

It could be observed from each of the four interviews with the CPS participants that they all recognised within themselves a newly-found but important sense of ability to solve problems, which has benefited them in various ways. They expressed the importance of this in sentences such as, "I've realised I'm not alone and I have myself to rely on. I'm my own best friend because I can manage my own problems", "I learned a lot of things that I can put into practice and solve my own problems rather than expecting them to be resolved on their own. "That's why I said I can stand on my feet now", "Now I'm able to find the solutions to my own problems" I know I have control over my decision", and "I feel more capable of producing good quality ideas and so I'm proud of that."

5.2.5 *Consistency with the research literature regarding the results of qualitative data and quantitative findings*

This result can corresponds to the social cognitive theory (Bandura 1977; 1997) which illustrates that behavioural change is made possible by a personal sense of control. When people believe that they are able to take action to resolve a problem, it becomes more

likely for them to try and do so and as a result they feel more committed to the decisions they have made. Perceived self-efficacy pertains to control over personal actions control or agency (Bandura 1977; 1997). People who believe that their actions are meaningful and helpful are encouraged to lead more active and self-determined lives. This 'I can do' attitude and cognition will also be reflected in the individual's life through the sense of control over the environment and a belief about being able to master and deal with challenging problems using adaptive actions. Self-efficacy makes a difference in how people feel, think and act (Bandura 1977, 1997). A low sense of self-efficacy is associated with depression, anxiety and helplessness. It has been found that a strong sense of personal efficacy is related to better social integration. In terms of thinking, a strong sense of competence assists cognitive processes and performance in a variety of settings, including in the quality of decision-making, goal setting and academic achievement (Maddux 1995; Bandura 1997; 2001; Bandura et al. 2002). In practice, with an individual's increasing sense of achievement and ability to solve problems using the CPS process, self-confidence, self-motivation, self-worth and self-efficacy will also increase, which will result in the reduction of symptoms associated with depression and therefore enhanced performance in a variety of settings.

The findings of the present qualitative research data acted as elaboration and explained the findings of quantitative data more in depth. For example, consistent with the Mynors-Wallis's (2005) conclusion that patients gain a sense of mastery and self-control over their difficulties through problem solving therapy. The theoretical assumption of this view is that social and practical everyday life problems are often the cause of the psychological symptoms of depression. Learning problem solving skills, individuals learn how to resolve their own problems and play an active part in the recovery process, which results in them feeling independent and developing a sense of mastery and self-efficacy. They will not associate their improvement with either a therapist or medication but rather

regard themselves as the person who is responsible, thereby increasing their self-confidence, self- worth and feelings of self-control during problematic situations. For example, patients with highly positive problem orientation appear to have less doubt regarding their problem-solving ability, have realistic perceptions about threat to their well-being, are optimistic about outcomes, and have higher frustration tolerance (D'Zurilla et al. 1996).

The findings of this study are consistent with D'Zurilla & Nezu (2007) and Bell & D'Zurilla's (2009) about the power of positive problem solving orientation in resolving real life situations. For example, the pupils attending the CPS intervention learned skills and applied them to their own real life problems, and their senses of self-efficacy, self-control and mastery were strengthened at the end of therapy as illustrated in the interviews in statements such as "I'm much more able", "I would be a more successful person", "Realising I have myself to rely on", "I can solve my own problems" and "I can now delay my judgement".

The findings of the qualitative research confirms Mynors-Wallis's (2005) conclusion that CPS is a feasible and effective treatment since problem solving is acceptable to individuals, readily accessible to those who might benefit from it, and can also be taught be any counsellor with no need for clinical or psychological qualifications.

Furthermore, Scott (1998) stated that a feasible psychological treatment have some characteristics such as being well structured and understandable to individuals, encourage the use of skills, change to be attributed to the individual rather than the therapist's skilfulness and develop a greater sense of self-efficacy within the individuals. For instance, when pupils were asked about their views of themselves after receiving the interventions, those who had received CPS treatment responded by focusing the ability within themselves to understand their problems and being inspired to deal with them, for example saying that "[I] didn't really know what my problem was but now I've learnt to

deal with them", "I'm not scared of my problems and I want to deal with them instead". Another pupil commented on feeling confident and independent after the intervention by saying "I can say I have never felt this confident in my life before and I have never been more aware of my capabilities in the past, I feel good about knowing that I can stand on my own feet now"

Those who had received the CBT treatment commented on their feelings that the way they thought had changed. One pupil said "I really think that I am a completely different person, since I have taken part in your sessions I feel like the way I think has changed". Another pupil commented on being able to identify negative thoughts and beliefs: "I can now identify my own and other people's negative beliefs and not to think negatively about others and myself".

When pupils were asked about how they felt, those receiving the CPS treatment focused more on their enhanced mood and feeling good, confident and proud, for example stating that "I feel more positive now in general and I feel more self-assured, I have a bit more faith in myself now". Another pupil said that "I feel more capable of producing good quality ideas and I'm proud of that". In contrast those who had received CBT described their positive feeling such as "I feel like a huge weight has been lifted from my shoulders, like I'm floating on air". Another pupil said, "I feel positive and good, I feel hopeful"

In response to the question of what have you learnt from this therapy, those who had received the CPS treatment focused on the CPS stages and their general comments involved deferring judgement, brainstorming, and viewing a problem from different angles. "I used to look at something in one specific way either very good or bad, now with the 6 hats exercise I've learned to view a decision or anything else from different angles".

Those who had received CBT spoke about identifying negative and dysfunctional beliefs and changing them, for example: “I also know to identify my dysfunctional beliefs and know that socialising with others can really help improve our mood as long as we know how to treat each other well”. Another pupil said that “I immediately try to change my thinking to a more positive one and see something positive in what happens or relate it to something positive at least”.

In response to being asked what helped them deal with depression, one pupil who received CPS mentioned that “I have managed to reduce my stress when I get stresses”. Another pupil said that “I was really hopeless and negative about things. I didn’t have a good relationship with my mother, I know I have lots of ways to try and improve my relationship with my mum, really think about my problems now and try and find solutions for them”.

Those receiving CBT responded to the same question with general comments concerning of identifying negative thoughts and beliefs and changing them, saying that, for example, “I’m aware of the damage those negative thoughts can have, so once I’ve identified them I can change them, I’ve always had problems with feeling guilty and blaming myself for things. Now I have identified that”.

5.2.6 *Participants in CPS group performed better than previous research in problem solving therapy*

It is notably important to consider that the findings of this research demonstrate most effect size 0.86 in BDI-II and 0.80 in SMFQ compare to the previous research 0.51. This may highlight the importance of CPS and the creativity techniques added to the therapy compared with previous research which has applied problem solving alone. Generally the findings of this research show much better improvement compared with previous research (Becker-Weidman et al. 2009) which suggest deficits in problem-solving may be

associated with the increased risk of depression in children and adolescents. The findings also show better results compared with research (Grover et al. 2009) who found that adolescents with poor problem solving skills experienced amount of depressive ideation and that problem solving skills moderated the effects of life events and stress and depressive behaviour. The observations also demonstrate a better results compared with Nezu et al's (1986) and Billings and Moos's (1981) findings that weak problem-solving ability is linked to the maintenance of psychological distress where those individuals who focused more on problems in their coping responses displayed fewer depressive symptoms when confronted with major negative life problems. The amount of improvement are also better than the research by Wallis et al (1995) on major depression which compared problem-solving treatment, with antidepressant and drug placebo and overall found that problem-solving treatment was as effective as amitriptyline which is a drug used for reducing depression in pharmacology therapy for major depression. This may highlight the importance of CPS and the creativity techniques added to the therapy compared with previous research which has applied problem solving alone.

5.3 Limitations of methodology and recommendations

When looking at the findings, certain limitations of this study should be acknowledged and noted. Although this study provides important information, there are certain issues which would need to be considered before generalising these findings to other groups.

Firstly, the study acknowledges the RCT used in this study can be considered to be robust, but it could perhaps be made even more robust. The application of two different interventions needs to be taken into consideration. The researcher was aware about the threat to internal and external validity and that the procedure of CONSRT guideline was followed. For example, all sessions of therapy were applied by the researcher, who is a qualified psychologist and has participated in several training sessions and has 10 years of

experience with interventions. The researcher used standard interventions for both groups using guidelines, structure and exercises. Participants were also given handbooks and introduced to the interventions using a Power-point presentation during the period of therapy. Furthermore, the hypotheses must be tested against an alternative proposition or null hypothesis which states that there are no differences between the variables which is a guard against bias (Kerlinger and Lee 2000, p. 280).

However, the challenge termed 'therapist effects' which refers to the way the researcher carry out two different interventions may still be considered as a limitation for the study which may affect independent variables and ultimately affect dependent variables and also may have an effect on the superiority of one intervention over the other. The recommendation for future research is therefore to consider the therapist effects by applying the interventions through using several therapists which are blind to the aims of the study in which the therapists are randomly assigned to one of the interventions. Thus the subjects and the therapists are unaware as to whether a participant is taking the standard treatment or the new treatment being tested. Only the researcher knows the complete information in order to prevent bias in treatment studies.

Secondly, other concerns in this research are over applying interventions known as independent variables within the secondary state schools in Iranian context and another was related to the standard measurements used in the study. The cultural context in state secondary girl schools in this society was found to be very controversial. Firstly, the most vulnerable pupils study in these schools, where the majority of them not only belong to a family with considerable problems, but also the school atmosphere is not supportive for them and thus the vulnerable students usually receive little psychological and educational support. Furthermore, the school itself is problematic and prejudicial for students and creates a strict academically competitive atmosphere which in turn affects students' behaviour and relationships. The competitive atmosphere has also been created by the

families and schools and the expectations of strict parents have placed the lives of many adolescents in danger. Therefore, the application of an intervention in such context needs to be taken into consideration. The level of complexity in human research in state schools in the context of Iran was regarded as problematic due to the fact that the emotions and feelings of vulnerable pupils are ignored. In such a situation, a little attention given to pupils could improve their symptoms of depression. The standard measurements showed that pupils in the CBT and CPS groups exhibited reduced symptoms of depression; meanwhile the symptom reduction was found to be less in the control group. However, in such context one may assume that this is due to the fact that more attention was paid to the participants in the CBT and CPS groups. This calls into question whether or not the changes and improvements found were due to the treatment and interventions or resulted from simply paying attention to the participants. All mentioned above may imply that due to the levels of complexity in human research context could influence the independent variables or infidelity of treatment. Interestingly, the importance of context has also been considered by the developers of RCT approach where Campbell et al. (2007) illustrate that 'context is all important' (p. 455). The context effects may affect interventions which are supposed to be the fundamental assumption in the cause and effects notions.

In this situation understanding pupils' attitudes and perceptions may be important when addressing these concerns. For establishing more validity, the research was therefore followed by applying semi-structure interviews as elaboration or explanatory section to RCT exploring pupils' attitudes and perceptions after the course of intervention. The research also recommends that future research needs to consider this limitation by gathering data from diverse sources such as interview by teachers, parents and peers. Following research by semi-structured interviews could help the validity and credibility of the independent measures. The results of the RCT showed that the pupils exhibited

significant differences before and after the therapies in the two groups. The results from semi-structured interviews also supported these results and showed many improvements in the way the participants expressed themselves regarding their depression. This improved the validity and credibility of the findings of quantitative methods.

Thirdly, using opposite methodologies in this research could be regarded as controversial. Based on the main aim of the research the manner of data gathering in present study is RCT, the quantitative approach which belongs to the positivist philosophy and objectivist ontology. The notion that believes the real causes of educational and psychological outcomes can be discovered objectively and reliably.

In favour of RCT many researchers (Kaptchuk 2001; Stolberg et al. 2004; Rothwell 2005; Feneck 2009; Nystrom et al. 1993) acknowledged that RCT is the most powerful objective research method for assessing the efficacy of interventions in modern clinical research. However, other researchers have criticised it for not being able to uncover what is really happening below the surface of effects (Blackwood et al. 2010).

On the other hand, semi-structured interviews were also applied following the RCT for the purpose of elaboration to explore participants' attitudes and perceptions to interventions. This also could help to explain the understanding of interventions, the meaning of an intervention to participants, and their beliefs about the treatment. However, this is the method used in the idealism which belongs to an interpretivist epistemology. A constructionist ontology which believes reality is subjective and that meaning is created through social interaction and is therefore constantly being revised.

There is a belief that the findings of such opposite ontology are incompatible because they are based on fundamentally opposing philosophical assumptions regarding epistemology. The epistemological hypothesis surrounding RCT is based on Humean point of view (Hume, 1969) on presenting a constant concurrence between cause and effects. The philosophy of establishing RCT is to unnaturally create a situation thereby

the researcher can be certain that it is the supposed causal method or independent variable which in this research are CPS, CBT and control that are causing any changes identified on dependent variable which are depression, mood and feelings, rather than any other factors. In fact, the traditional quantitative developer (Ayer, 1959; Maxwell & Delaney, 2004; Popper, 1959; Schrag, 1992) consistent with positivist philosophy, believes that the real cause of social, educational and psychological outcomes similar to physical phenomena can be determined objectively, reliably and validly. Meanwhile, traditional qualitative approaches argue for the superiority of constructivism, interpretivism, idealism, relativism and humanism (Guba & Lincoln, 1989; Lincoln & Guba, 2000; Schwandt, 2000; Smith, 1983, 1984). For example, in the interviews, the researcher is a core tool in the research process and actively engages with those being researched to create data grounded in context which is reduced through coding, categorising and comparison and thus the results cannot be compared to RCT results.

However, Bryman (2001, cited in), accepts that there are certainly differences between qualitative and quantitative research approaches but he suggests that such differences should not be exaggerated to the point where the methods may not be combined or used to complement one another. Moreover, some researchers must not treat epistemology and method as being synonymous (Bryman, 1984; Howe, 1992) as the logic of justification as an important aspect of epistemology does not dictate what specific data collection and data analytical methods researchers must use (Johnson and Onwuegbuzie, 2004). This suggests future study is needed in order to gather data from diverse resources for the complementary purposes. Using such methods in uncontrolled conditions may determine the sustainability of an intervention in uncontrolled settings (Blackwood et al. 2010). In this study the interviews were employed with the aim of seeking elaboration, illustration or clarification of the RCT results. RCT as a quantitative method of data gathering is well suited to answering questions such as whether or not an intervention works for a group of

individuals or how one intervention compares to another intervention. When RCT is followed with the interviews as a qualitative method of data gathering, the research can explore participants' experiences, the meanings an intervention has for participants (Aldridge 2007). It increases the interpretability, meaningfulness and validity of findings (Sandelowski 2000), and therefore, it increases validity of dependent and independent measures. Also data from the interviews helps in recognising the factors in each intervention which were most effective and had a bigger impact on the pupils, whereas results of the standardised tests are unable to clarify the reasons for such differences.

Fourthly, although interviews supported and elaborated the RCT results and the participants had learned the appropriate terminology and were enthusiastic, and that the study acknowledges that the qualitative results are suggestive; however, the results from semi-structured interviews may also do not tell us very much. They indicated that the participants were able to explain the sentences and words used by the therapist during interventions. The differences in the words used in semi-structured interviews by participants through their own statement after therapy simply shows that students had at least learned the concepts of their therapies. But future research needs to develop this in more depth to find out whether the concepts and words used by participants are applied in their real life situations such as home, schools and relationship with others. For instance, can participants in the CBT group change their dysfunctional attitudes and beliefs towards themselves and others in real life situations? Did participants in CBT group really learn to be assertive rather than aggressive? Can participants in the CPS group apply the skills learned in the therapy in dealing effectively with their own problems in real life situations? Can pupils in the CPS group apply the skills of coping with challenges learned in the therapy in their life, for example, when confronted with a peer relationship problem can they delay their judgement, and define the problem and produce different ideas by convergent and divergent and brainstorming skills? Can they see the problem from

different angles and use ‘WH questions’ technique and find a solution before producing any involuntary responses?

Thus, the study recommends that future research needs to consider other methods of data gathering such as longitudinal and observational methods using well-designed practical tasks in which the participants are confronted with a problematic situation or peer conflicts. Moreover, gathering data from diverse sources such as interview with teachers, peers and parents can also help to make methods more rigorous and allow more specific analysis in future studies.

Fifthly, another limitation of this research is the generalisability of the findings. Although the process of randomisation and sampling are the most important features of RCT, future research need to consider the context in order for the results to be generalised to all secondary state schools and prevent any potential bias. The research (Weiss et al., 2008; Rothwell, 2005) shows evidence that the effects of interventions can be different in diverse cultures such as the settings for the intervention, characteristics of participants and the way in which it is applied. Although using semi-structure interviews as a complementary section to RCT for expressing pupils’ attitudes and perception about the interventions could improve validity and credibility of the independent and dependent variables used; however, future studies need to apply the interventions in variety populations, schools with different status, different school age groups, different genders and different culture in this context.

Sixthly, the length of the follow-up period is also a limitation. Ending evaluations at 18 weeks prevented any exploration of the longer term effects of CPS and CBT as well as an investigation of the quality of dealing with conflicts and problems in real life situations. Future studies could consider a longer follow-up period in order to assess the effects of these interventions in the longer the term.

Seventhly, some concepts used by participants through the semi-structured interviews such as self-efficacy, self-control, mastery over problems have emerged from the qualitative analysis which may imply a link between creative problem solving theory and social cognitive theory, so future research should address this and develop extreme methodology to compare the individual perceptions before and after the intervention. The RCT design in this study did not set out to test self-efficacy, self-control or sense of mastery. Therefore, the interpretation of the results needs to be understood within the limitations of the depression tools used. The study also recommends that future research consider this point and possible relationship to expand research in interventions for depressed youths.

Eighthly, future unstructured interviews with diverse sources, longitudinal and observational research is needed to determine the relationships between CPS skills and the development of perceived problem solving ability, and the senses of mastery, self-control and self-efficacy. Evaluating the effects of factors such as problems surrounding pupils at home and school along with other environmental features will be an important feature in understanding how these concepts are applied in real life situations.

Finally, the quality of students' perception found through their own statement imply that policy makers in the system of education need to rethink the intervention programmes which are applied for depression among youths in school, this suggests CPS should be integrated into the school programme and curricula. CBT, IPT and individual psychotherapy are amongst the interventions for depressive disorders with proven value, however those interventions don't involve a clearly structured and outlined process, nor do they implicate a sense of self control over problems to the individual receiving the therapy. Furthermore, the application of such therapies depends heavily on the availability of professionally trained therapists. However, the lack of availability of

suitably trained therapists means that these treatments might not be available in particular areas or, if they are, there may be lengthy waiting lists.

Furthermore, the research emphasises the importance of CPS in youth as being able to tackle their problems independently at an early age. The best place to apply such a method, especially in the context of Iran, would be counselling settings in schools. Thus, this method of intervention needs to be deemed as a normal practice integrated in the school curricula and regularly taking place to equip children and young people with skills and encourage them to think creatively and teach them ways by which they could find solutions to their own problems, themselves. Ideally, adolescents in every school should be screened for signs of depression and so should receive a brief and structured psychosocial intervention (CPS) and be helped in problem solving approaches and problems arising from negative life events. Any trained school counsellor could easily deliver this and not specifically anyone related to mental health care services.

5.5 Conclusion

This study was undertaken to fill the gap within the literature and that there is a need to consider aetiology of depression in youth and interventions. The current findings of quantitative data provided reliable general supports for the effectiveness of CPS for improving depression among minor to moderate depression. In addition, the results of qualitative data supported and complemented the results by providing elaboration to the quantitative results and gave more validity and credibility for the findings of RCT. The research suggests thus CPS for youth in this context is effective.

Future research needs to consider the context in which the research is applied. This implies that when RCT is used to evaluate the efficacy of interventions in social context due to the levels of complexity and number of factors which may be regarded as treat to the both independent and dependent variables, there is a need also to consider the effectiveness of interventions in social context which is an uncontrolled conditions where the interventions implemented. The implications of these findings for theory and practice, and the limitations of the research and recommendation for future research were discussed in this chapter.

Chapter six: Conclusion

The main purpose of this thesis is to examine creative problem solving therapy (CPST) as an effective treatment and intervention for the prevention of depression in adolescents in schools. The research desires first to emphasise the effects of depression on youth and the role of the creative skills in coping with challenges, stress and relationship with others among depressed youth. Adolescence has been considered as a critical period of life, starting from the age of 12 or 13 with puberty, during which major changes occur at varying rates in sexual characteristics and interest, body image, intellectual development and ending with completed growth and physical maturity (Corsini 2002). Depression has also been conceptualised as a transient mood or affective state, a syndrome of related symptoms, and a clinical disorder (Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV), American Psychiatric Association (APA) 1994; International Classification of Diseases, (ICD) tenth edition, (World Health Organization, (WHO) 1993.

This is also a period in which clinical depression occurs (Kessler et al. 2001); 50% of those suffering from depression are estimated to spontaneously recover, for the remaining half, symptoms may persist and significantly impair functioning (National Institute for Health and Clinical Excellence (NICE) 2005) which may be maintained throughout life (Kim-Cohen et al. 2003). The epidemiological findings in adolescents (Costello et al. 1996) have shown that a significant number of young people up to 18 years have modest symptoms, up to 8.3% of adolescents suffer from a depressive disorder (Birhamer, et al. 1996) and up to 20% will suffer at least one clinically depressive episode by the age of 18 (Merry et al. 2004).

Depression is also common among adolescents in Iran with a point-prevalence around 10% in the general population and higher levels among those with low-income parents (Department of Education 2005).

Second the study concentrated in the effects of depression in youth and found that despite depression having tangible effects on adolescents; it is likely that many to this day still suffer unnecessarily. The symptoms associated with depression can lower and impair the personal and social functioning of youth. In clinical terms and according to NICE (2005), a depressed patient experiences several changes in mood, thinking and activity during the occurrence of depression. Therefore, the World Health Organisation (WHO) (2007) has concluded that depression is the second leading cause of disability for youth in late adolescence through to mid-adulthood.

Despite aforementioned various studies (such as Logan et al. 2002; Moor et al. 2007) suggest that depression in youth often remains unrecognised and untreated. For instance, only one in four depressed people receive pharmacological treatment and less than 10% a talking therapy (Singleton et al. 2001).

Next the study focussed on the psychopathology and aetiology of depression in adolescents and found that there are some specific characters in depression among youth. For example, a recent study (Rudolph 2009) shows that presence of negative life events along with maladaptive relationships and challenges in life have been considered as contributing vulnerability to depression. In fact, experiencing negative life events, when individuals have few social skills to manage those obstacles may lead to the development of such ways of thinking.

Reviewing the theories of the aetiology of depression within youth it was found that the three core factors in the aetiology of depression in youth are facing negative life challenges, experiencing interpersonal problems and having deficiencies in skills in coping with challenges which lead to experiencing and developing negative moods and depression. Vulnerable youth have also insufficient social skills in managing problems which in turn leads to the development of negative thinking. The stressful life events experienced by young people (Kendler et al. 2001) who have poor regulation and

deficiencies in responses to stressful life events (Caspi et al. 2003), or who have deficiencies in interpersonal problem solving skills and maladaptive responses to stress (Gazelle and Rudolph 2004) can lead then to develop inaccurate and negative cognitive interpretations of life (Gladstone and Kaslow 1995).

The main point in the literature was found to be the therapeutic approach for youth. Although several factors have been recognised in the aetiology of depression in youth, therapeutic approaches seem to focus mainly on one aspect, such as dysfunctional beliefs. This has previously been assumed to be the cause of symptoms of depression in adults and thus therapeutic approach in youth fail to consider other aspects of aetiology. Many interventions have been applied in the past decade based on various different models of cognitive behaviour therapy (CBT). In this method negative thoughts and dysfunctional beliefs are identified and are targeted using behavioural and verbal methods in order to reduce negative cognition and dysfunctional beliefs (Beck et al., 1979). However, the psychopathology of depression in adolescents may be considered to lie in the stressful life events experienced by young people (Kendler et al., 2001), poor regulation in response to such life events (Caspi et al. 2003) and deficiencies in interpersonal problem solving skills and maladaptive responses to stress (Gazelle and Rudolph 2004). Therefore focusing treatment only on the dysfunctional beliefs seems to effectively underestimate several features of the aetiology of depression in youth.

Thus the study found that there is still uncertainty as to which interventions are most effective and feasible. Reviewing the effectiveness of three currently supported interventions for the prevention of depression known as CBT, interpersonal psychotherapy (IPT) and medication, Weersing et al. (2009) suggest that the treatments frequently do not work well and that they may perform poorly in those groups of adolescents most in need of intervention. A meta-analysis study (Merry et al. 2004), and empirical research (Raiff 1982; Redburn and Juretich 1989; Powell 1994;) found some

limitations of the approach in working with youngsters. Other studies (such as Hollon et al., 1992; Golaguen et al 1998) found CBT effective for symptom reduction. In a meta-analysis, Merry et al. (2004) reviewed the efficiency of intervention programmes and found several deficiencies. They argue that there was inconsistency in the content of several programmes based on cognitive behavioural therapies (CBT), and that these did not identify the criteria for changing and improving mood. Based on the data on treatment response and effectiveness in practice they suggested that there is a need to develop strong and more robust interventions for depressed adolescents.

The study also found several other aspects of the nature of interventions which lead to develop more appropriate interventions for adolescents. The literature British Psychological Society (BPS) 2005, p.30) on the causes of depression among youth which shows that depression is more commonly encountered in a number of particular settings and groups of individuals; previous study (Kelly 1982) which shows that emotional disturbance may be produced as a result of lack of social and interpersonal capabilities; the lack of social efficacy and thereby inappropriate problem resolution or ineffective response to social problems (Platt et al. 1974 and Siegel and Platt 1976) and the role of problem solving and interaction. Consistent with previous research the conclusions of the BPS (2005), current studies have suggested that specific components of problem solving ability may be more strongly related to depression than others (Nezu et al. 2004; D'Zurilla and Nezu 2007). For example, some studies have shown that depressed individuals have a more difficult time generating alternative solutions to their problems that non-depressed peers (Nezu and Ronan 1987; Marx et al. 1992). Other studies have shown that depressed persons have poorer decision making ability as compared to their non-depressed peers (Nezu and Ronan 1987). A number of studies have also found that depressive symptom severity is more highly related to negative problem orientation than any other component of social problem-solving ability (Kant et al. 1997).

The study also reviewed the universal and selective prevention programmes for depression in schools. The aetiology of depression emphasises the role of negative life events and interpersonal conflicts in creating depression, and so schools could be problematic places which may give rise to various interpersonal problems among friends, peers and where conflicts occur that could worsen depression. Two types of preventative intervention known as universal or selective have been applied in schools. Universal interventions apply to the whole population irrespective of risk status (Mrazek and Haggarty 1994), while selective or targeted programmes target those who show subclinical signs of disorder (Garber et al. 2009). However, the study found that the outcomes of such programmes seem rather disappointing. This could be due to failure to match the aetiology of depression with the content of interventions used in these programmes. Furthermore, the evidence to show the efficacy of psychological interventions in preventing adolescent depression in prevention programmes in schools is less reliable. It is likely that the CBT approaches used in prevention programmes tend to mostly modify cognitive and behavioural features through the development of positive thinking, however, only in few studies other skills such as self-regulation, problem-solving, social and coping skills have been considered in some of the programmes (Merry et al. 2004). The majority of prevention programmes focussing on CBT are likely to pay less attention to improving skills in coping with life challenges and promoting healthy relationships among adolescents. Secondly, the outcomes of prevention selected and universal studies using CBT have obtained varying results. For instance, McLaughlin (2009) reviewed universal preventive interventions for adolescent depression and concluded that there is ambiguity about the benefits of current interventions and proposed that researchers must develop innovative and effective strategies for designing and testing preventive interventions that are sustainable in communities.

The theoretical perspective of the study therefore was identified. Studies of the aetiology and psychopathology of depression in adolescents have recognised that maladaptive relationships, social and behavioural deficits and social disengagement are factors in vulnerability to depression when adolescents encounter challenges in their lives (Rudolph 2009). These increase the probability of engaging in negative thought processes following the occurrence of negative and stressful life events (Abela 2009). On the other hand, the theory of creative problem solving defines a set of capacities enabling a person to behave in new and adaptive ways in given contexts (Gardner 1993; Lubart 1994; Lautrey and Lubart 1998) and for coping with the challenges of life (Torrance 1974) and surviving and thriving in a complex world (Puccio and Murdock 2001). Therefore, this theory may be viewed as the basis of effective intervention for overcoming depression in adolescents.

The theory of creative problem solving was initiated by Osborn (1956; 1979) and was later applied by others to develop creative thinking skills in ways which emphasise improving social life skills. Osborn's findings encouraged other researchers (Parnes 1967; Noller et al. 1976; Noller 1977; Parnes et al. 1977) to describe rules for divergent and convergent thinking, problem finding, acceptance finding and to discover how an idea or option will succeed or fail. The process of CPS includes various structural skills such as fact finding, problem finding and defining, idea generation, and solution development and implementation.This approach has been applied to a wide range of behavioural and cognitive features using only the general process known as problem solving. The improvement of young people's mental health (Laurence et al. 2000), the relationship between mood and ideation skills (Estrada et al. 1987) and creativity-stimulation and ability, class interaction and deferred judgment (Parnes and Noller 1972) and self-confidence, reducing stress, and control over life (Neilson 1990) are some examples of behaviour and cognitive studies considered in applying the actual process of PS.

The research also found inconsistencies in the methods, instruments and the process of CPS in different contexts. Therefore, the study emphasised that there is a need to examine the whole process of CPS among depressed youth. It was found that the studies are poor in applying the whole process of CPS thus there is a need to concentrate on a variety of creativity techniques such as delaying judgement, brainstorming and approaching problems in a creative manner. Regardless of limitations in methodology such as issues of random assignment, sample size and clarity of intervention, efficient treatments, using CPS may play a significant role in the improvement of young people's mental health.

The research also explained the rational for conducting CPS among youth in the context of Iran. In CPS proposes creative techniques such as problem finding, problem defining, idea generating based a brainstorming, delaying judgment, decision making and reasoning which are likely to be essential for life. The studies have shown that depressed individuals have a more difficult time generating alternative solutions to their problems that their non-depressed peers (Nezu and Ronan 1987; Marx et al. 1992) and have poorer decision making ability as compared to their non-depressed peers (Nezu and Ronan 1987) while depressive symptom severity is highly related to negative problem solving orientation (Kant et al. 1997). Since these are skills for facing challenges in life, it seems logical that vulnerable youth need to acquire these essential skills for their life rather than merely learning skills in recognising negative beliefs and how to modify them.

The experience gathered throughout the years of working with people of different age groups the researcher that adolescents mostly lacked skills in coping with the problems and challenges they faced, and these problems often created feelings of hopelessness and disappointment within them, resulting in depression. Depression was amongst one of the conditions these people were repeatedly diagnosed with in that interpersonal issues seemed to be at the heart of all of those problems. Their coping mechanisms seemed to be

mainly emotional when they were in need of cognitive skills to override their emotional coping mechanisms.

Moreover, It is notably important that adolescence has been considered as a critical period of life during which major changes occur (Corsini 2002) when clinical depression occurs (Kessler et al. 2001) it may significantly impair personal and social functioning, and the experience of changes in mood, thinking and activity during adolescence (National Institute for Health and Clinical Excellence (NICE) 2005). However, despite the fact that vulnerable youth who have experienced negative life events are in need of appropriate support, the majority of schools and parents in Iran seem to cause further problems rather than being supportive.

Difficulties such as exam failure, emotional disturbances such as problem with peers in school are common problems in secondary state schools in Iran, which may lead to being mistreated by parents and these affect some level of self-harm. Emotional disturbance is produced as a result of lack of social and interpersonal problem solving capabilities in interpersonal situations (Kelly 1982, p. 5). Moreover, due to the competitive atmosphere around academic achievement, this may create significant impairment in cognition and behaviour. Moreover, the considerable number of pupils at risk of major depression, time constraints, the restricted availability of trained psychologists and limited access to psychological treatments are good reasons for evaluating the efficacy of creative problem-solving treatment for adolescents with depression in the counselling setting.

The research then described the debates regarding the application of CPS to depression research and explained that in the two past decades, problem solving techniques have been integrated with cognitive behavioural skills. Therefore, this research was based on the idea that neither the addition of extra sessions of problem solving to CBT, nor the application of problem solving therapy that place no emphasis on the details of CPS skills

such as problem finding, brainstorming, convergent and divergent thinking and delaying judgement can reflect the potential effects of CPS in solving real life problems such as on those variables that collectively lead to depression. Therefore, to date there has been little application of full creative problem solving therapy (CPST) for depression.

There are several gaps and deficiencies in research into the use of creativity for improving mood and depression, especially in the educational and counselling contexts and among the adolescent population. Few ethical researches and a need for adolescent mental health interventions, few comparisons exist between CBT and CPS, and no randomised controlled trials or any application of this type of intervention has been conducted with the young population of Iran. Therefore, the present research is intended to fill these gaps within the literature in order to understand whether creative problem solving could really be as effective as CBT, in counselling settings. Moreover, one important factor regarding the efficiency of intervention could be how it affects individuals' perceptions concerning the intervention and how effective it is. Little evidence exists of the effects of students' perceptions on the course of intervention or of how understanding the quality of these changes in pupils' thinking may develop insight into applying effective intervention in youth depression. This research thus seeks to propose creative problem solving (CPS) as an effective intervention for depression especially in counselling contexts and among the adolescent population. Furthermore, this study investigates the actual effects of creative problem solving skills rather than problem solving therapy amongst depressed adolescents. Studies in clinical settings have investigated the procedures of problem-solving without using creativity techniques, and there is no information about these applied in the adolescent's population or in real life contexts. Also, no information is available on the differential efficacy of CBT in comparison with creative problem solving therapy and no clinical, pragmatic and control trials have been undertaken so far in counselling settings with this population.

Other rational for conducting this research also was recognised as emphasising the core factors in aetiology of depression among youth, helping to improve practice as well as policy for decision makers, psychological and educational staff, counsellors and researchers, provides a unique contribution to the knowledge base by applying the CPS approach within school counselling settings in Tehran and also by comparing CPS with cognitive behaviour therapy (CBT) and a control group. Therefore, this research will also be valuable for future CPS research and in leading to a deeper understanding of the dynamics of the CPS process and relevant tools.

Several aims of conducting this research also were identified. The main aim of this study was to examine the effectiveness of CPS as an intervention for depression as measured by Beck's Depression Inventory (BDI) and mood and feelings as measured by the Short Mood and Feeling Questionnaire (SMFQ). Secondly, this research examines the effectiveness of group CPS in comparison with group CBT and a control group in improving symptoms of depression, in mildly and moderately depressed adolescent girls aged 13-15 as assessed by the BDI-II and short MFQ, both before and after completing the intervention, as well as in follow-up 2 months after completing the interventions. The third aim of this study is to investigate the nature of the participants' perceptions about the course of intervention and the degree to which they applied the skills in the various problems they were confronted with.

Several research questions and hypotheses also guided the study in addressing the research problem. The main questions found to be whether or not creative problem solving (CPS) could be as effective intervention as cognitive behaviour therapy (CBT) in improving depression, mood and feelings and whether or not CPS could improve the symptoms of depression and mood and feelings more than CBT as well as to investigate the pupils' perceptions of these interventions among adolescent girls in counselling

settings in schools in Tehran. Based on prior research and theory, therefore, several hypotheses in the study were addressed.

Based on the main aim of the research the manner of data gathering in present study is RCT, the quantitative approach which belongs to the positivist philosophy, the notion that believes real causes of educational and psychological outcomes can be discovered objectively and reliably. To ensure credibility the present research followed the guidelines of the Consolidated Standards of Reporting Trials (CONSORT) for the statement, design and reporting of the intervention for the research in this study and on the efficacy of its interventions. The CONSORT was originally developed to aid researchers in reporting RCTs clearly and comprehensively, and it can also be a helpful tool in the design and conduct of RCTs (Altman 1996). However, RCT is not able to uncover what is really happening below the surface of these effects (Blakwood et al. 2010). Thus, the research also involved to gather data based on the method used in the idealism and constructivism notion using semi-structured interviews following the RCT to explore participants' attitudes and perceptions. The study followed by conducting semi-structured interviews to explore below the surface of these effects such as participants' attitudes and perceptions that may influence effectiveness and how pupils in schools in Iran understand the interventions.

The study also outlined the rationale for applying RCT and validity of design. The study's intention was to compare the means not only of three different groups of conditions in pre-and post-tests, but also to determine the differences between the means and variances of three groups, in order to understand whether or not the subjects achieve a good mood outcome. The experimental manipulation of CBT, CPS and control groups was carried out, after which the groups were again tested on the aforementioned measures. The differences between the three groups were then tested statistically. Experimental designs

such as RCT have been found to be effective in answering questions about causal relationships (Kerlinger and Lee 2008).

However, several disadvantages of applying an experimental design were recognised. It was argued that RCT design can provide answers to research questions as validly, objectively and accurately as possible. The researcher was aware of the potential disadvantages of experimental design. The internal and external threats to validity which involve the degree to which the conclusions are sound, and correct with regard to causal statements, Internal validity emphasises whether or not a given stimulus made a significant difference in a given situation, while external validity refers to the degree to which such an effect can be generalised to other populations, settings, and variables. Having a comparison group (CBT) as well as a control group in this study was also considered to be another method of reducing threats to internal validity (Shadish et al. 2002, cited in Nezu and Nezu 2008). The randomisation is also the only powerful method of controlling for all possible extraneous variables (Kelinger and Lee 2000). The study numbered participants from one to ninety-six and randomly assigned them in the three experimental conditions using a software programe discussed below. This process also helps to minimise measurement error and, in turn, the reliability of data is increased. For the aforementioned reasons the study chose a RCT pre-test post-test follow-up design to compare the effectiveness of the two different interventions of CPS and CBT as well as a control group design. Two parallel measurements valid in the treatment of depression in mildly and moderately depressed adolescents aged 13 were used. The efficiency of the different interventions can be evaluated by comparing the means and standard deviations resulting from the three conditions. The research design intimately links to analysis of variance paradigms, which eliminate the amount of error variance.

Using semi-structured interviews as explanatory to the quantitative data also were discussed in the study. The research first collected quantitative data and analysed them

and followed to collect qualitative data using interviews and analysed second in the sequence to help explain, or elaborate on, the quantitative results obtained in the first phase. The interviews build on the data gathered through questionnaires and the two data were connected in the intermediate stage in the study. The qualitative data and their analysis refine and explain those statistical results by exploring participants' views in more depth (Rossman and Wilson 1985; Tashakkori and Teddlie 1998; Creswell 2003).

The study also determined the independent and dependent variables. The kinds of intervention made in the CBT, CPS and control groups of depressed adolescent are regarded as independent variables which are cognitive behavioural therapy (CBT) delivered to one group, creative problem solving therapy (CPS) delivered to other group, and no specific therapy (control group) delivered to a third group. The effects of these different interventions are examined through the measurement of dependent variables which are assumed to be the consequence of changes made to the independent variable by the researcher. The dependent variables in this study are depression scores at pre-test, post-test and follow-up all groups and mood and feeling scores at pre-test, post-test and follow-up in all groups.

The study also conducted a pilot study. The pilot study was carried out in order to improve the design of the study and to give the researcher a better idea of how to prevent and control unwanted variables. It was also conducted in order to test the effectiveness of the questionnaire and the application of the interventions and to test the reactions of pupils assigned to the control group. All stages of the pilot study followed the same ethical procedures as those used in the main study as discussed below. Decisions were made as a result of the pilot study findings. Based on the experience of the pilot study, the decision was made to limit the size of the group for each intervention in the main study. Larger groups of 28, and 29 proved to be more difficult to handle and the interventions could be delivered more effectively to smaller groups. If large numbers of pupils were

identified as falling within the study criteria, they would have to be split into smaller groups, for example in 2 groups per intervention in each school. It was deemed appropriate to spend less time on giving direct instructions and to allow pupils more time to work on their problems and utilise skills and techniques introduced in the intervention, either individually or in groups, in order to gain a better understanding of the intervention.

The study also conducted the main study design. Permission was sought from the education authority in the city of Tehran. The targeted population included all state secondary schools for girls in year 6, 7 and 8 (aged 13-15) registered comprehensive state secondary schools in the academic year 2008-2009 in Tehran, Iran. The two schools were collected randomly based on two-stage cluster sampling. All pupils within these two schools were tested after consent obtained. The mean age of participants was 13.4 among those who scored 14-28 on the Beck's Depression Inventory and 8 or greater in the Short Mood and Feeling Questionnaire as required participants in the study. The results of pre-tests show16 to 28 (mean 24.37) and 10 to 19 (mean 14.74) in BDI-II and SMFQ respectively indicating mildly to moderately depression. In the second stage the testing procedure was conducted in each school in the counsellor's designated room. The study was conducted in a step by step process often distributing information sheets and consent forms for both students and parents (Appendixes 6-9). The initial BDI-II measurements were applied inside the classrooms; however the second measurement (SMFQ), the initial interviews and also the post-test and follow-up measurements and the semi-structured interviews in the study were carried out in the counsellor's room.

The study also explained the randomisation and sampling process. Two-stage cluster sampling identified each school district as a cluster and a random sample of the school districts was taken. The Random Library of Python Programming Language (2008) as discussed below was used for the generation of random numbers. Therefore, two school districts were collected randomly from the list of 22 in the presence of a representative

from the Tehran Educational Organisation. Then, from these two schools districts, another random sample of schools within the districts was taken (Kerlinger and Lee 2000, p. 180). In the next stage the lists of all secondary schools within the school districts were then provided by the representative of the educational authority. In order to exert more control over extraneous variables such as gender, academic background, social class and financial position, male schools, private schools, gifted schools and those government schools which had entrance examinations were excluded, and therefore the study included schools which were as homogeneous as possible (Shadish et al. 2002, cited in Nezu and Nezu 2008). The names of the remaining 17 schools in both districts were numbered and coded from 0-16. The Random Library of Python Programming Language (2009) was used for the generation of random numbers and for the Shuffle Function, and finally for the choice function. Each school in the list was given a number starting from zero to 16. The shuffle function then arranges these numbers at random, which means that every school has an equal chance of being chosen. Next an index of one number between 0-16 was chosen at random, which means that any school could be selected randomly from the whole list.

The tools used in this study were the BDI-II and SMFQ, which have been validated for use with youth depression around the world and are used in many different treatment studies of depression. These two measurements are particularly suitable for rating the severity of the symptoms of depression. The SMFQ and BDI-II were chosen for this study because both its items correspond closely to those of the DSM-IV criterion (American Psychiatric Association 1994). In addition, Farsi versions of both scales are available and have previously been used in student and adolescent populations in Iran, and modified translations of both in Farsi to suit Iranian culture are readily available.

Data collection procedures were also discussed in the study. The study utilised randomised control trials RCT at pre-test, post-test and follow-up, including a control

group to assess the effectiveness of CBT and CPS therapy in a sample of pupils with minor and moderate depression where the researcher had control over the independent variables of each type of therapy intervention. The independent variables of the type of therapy were: group therapy involving creative problem solving therapy (CPST), group therapy involving cognitive behaviour therapy (CBT), and control groups involving no specific therapy but several leisure activities such as puzzles and drawing. Participants were tested on each of the dependent variables before and after intervention and at a two-month follow-up.

The inclusion and exclusion criteria for screening those with minor to moderate depression were discussed in the study. Participating students were required to be in the 13-15 years age range and to have symptoms of the mild or moderate depression according to DSM-IV criteria based on the BDI-II which had lasted for at least two weeks. They should have specific levels of mood and feelings and want to improve their mood**,** be considered capable of deciding for themselves that they would take part in the study**,** attended school fairly regularly**,** were not at significant risk of hurting themselves or others**,** were not involved with other mental health services for young people, including the school's counselling service**,** were not likely to move schools, and finally were considered capable of maintaining confidentiality about the intervention sessions of intervention and the problems discussed by other pupils.

The results identified 52 individuals with minor to moderate depression from one school, and 46 from the second school which altogether gave a total of 98 pupils recognised as part of the target population.

The random assignment of participants and the process of applying the intervention also were discussed in the study. Randomisation is a suitable method used to generate a random allocation sequence, such as using tables of random numbers or computer-generated random sequences. Therefore, the participants were randomly assigned to one

out of the three groups. In total, 32 were randomly assigned 32 to the CBT group, 32 to the CPS group and 32 to the control group where the study obtained a randomisation as follow: school “P” the first school: CPS = 18, CBT = 17, Control = 16 and school “B” the second school: CPS = 14, CBT = 15, Control = 16.

The study also explained about the interventions and the role and previous experiences of intervention leader. Several knowledge and experience acquired by the researcher since 1991, from working in pre-school, primary, secondary and high schools in Tehran, Iran, with various psychological and educational duties as a teacher and researcher testing intelligence traits, counsellor and finally as university lecturer were discussed and that researcher had applied CBT and IP with clients**.** All participants in the two intervention groups cooperated well with the study and showed great interest in participating; however, 5 students each in the control groups in the two schools did not complete the sessions and withdrew from the study and therefore had to be excluded. The cognitive, behavioural, therapy (CBT) intervention was based on group manuals (Munoz and Miranda 2000) which consist of behaviour and cognitive modification techniques. The manual contains detailed operational guidelines with checklists for the researcher’s actions which seem to guarantee the integrity of treatment when applying the intervention to groups. The creative problem solving (CPS) is based on the group format and consisted of the whole process of CPS and several creativity techniques such as problem solving, divergent and convergent thinking, and brainstorming. The manual was built on the work of Osborn and Parnes (1979) and was applied first in the pilot research to make sure of its applicability in the groups within this age range of the study. The control group however, was provided with six sessions at the same length as those in the treatment groups, the 6 sessions in similar structure (40 + 10 + 40 = 90 minutes) as the CBT and CPS groups as well as the same leader; however, no specific interventions were delivered in the sessions. The participants were asked to work on a range of leisure activities, such as word

searches and other activities. . Finally, the risks, benefits and potential ethical issues of the study were discussed and the strategies employed to protect the validity and credibility of the research was explained.

The study also described the individual semi structured interviews. The semi-structured interviews were conducted among four participants in each of the experimental groups in week 10. The intention was to obtain information about pupil's perceptions, concerning how pupils felt, perceived and expressed their own thoughts, attitudes, and experience in their own words. All interviews were recorded and transcribed.

Data analysis of the research also was discussed. The study examines differences in more than one dependent variable, and so in other words the aim was to assess the effect of treatments using more than one measurement. The study employed the multivariable analysis of variance (MANOVA) to compare the two interventions versus the control group, adjusting for stratification variables and baseline SMFQ and BDI-II scores and taking appropriate account of the hierarchical nature of the data. To compare pre- and post-therapy and follow-up mean scores while adjusting for observed mean differences between two treatments groups, a baseline analysis of variance was undertaken using the SPSS19 software. Depression scores at 7 weeks using ANOVA and MANOVA between the CPS and CBT groups and the control group were compared. To determine how training conditions differed from one another in affecting the dependent variables (depression scores) comparison tests using ANOVA were carried out. The present study is the first to directly compared effectiveness of creative problem solving therapy with CBT in an RCT design. The study evaluated and examined the differences between the creative problem solving therapy (CPS), cognitive behavioural therapy (CBT) and a control group in a sample of pupils in the context with mild and moderate depression

which of two secondary schools in Tehran. Secondly, this is the first time that any of these interventions have been applied among young people in schools within this context.

The main findings clearly indicate that pupils' symptom of depression and mood and feelings were improved by the CBT and CPS interventions; however, the CPS pupils performed significantly better. Statistically significant differences were found between the outcomes for the CPS and CBT groups favouring the former.

In addition to the positive outcomes, the attendance rates of 100% suggest that both treatments appeared to be very effective in the context of Iran. On the other hand, participants in the control group showed a rather low attendance rate, leaving sessions early and showing minimal signs of improvement. The findings of the research are in line with those of previous research. Nezu et al (2004) found that problem solving reduces stress, and negative feelings among adolescents with depression. Nezu and Nezu (2010) also found that problem-solving skills improve depression among adolescents. The CPS and CBT groups were compared with a non-intervention control group, and so according to the results it is possible to determine how much improvement could be attributed to the nature of the interventions. The current results clearly indicate several useful sessions of psychological intervention are effective in mild and moderate cases in this context in symptom reduction in terms of improving depression and mood and feelings. However it is notably important to consider that the findings of this research demonstrate most effect size compare to the previous research. This may highlight the importance of CPS and the creativity techniques added to the therapy compared with previous research which has applied problem solving alone.

Another key finding to emerge is that although participants in both intervention groups experienced significant decreases in depression and negative mood and feelings scores compared to the control group, these improvements were maintained better in the CPS

group at two-month follow-up. This suggests that CPS may be regarded as a successful and effective method in enhancing a participant's degree of psychological wellbeing and improving depression. The aforementioned facts and findings of the present research fulfils the main aim of this research, which is to examine the effectiveness of CPS compare with CBT, and answers the first two questions of this study which are whether or not CPS and CBT are successful in treating depression in comparison to a control group.

Furthermore, another aim of this study was to investigate the participants' perceptions about the interventions and also to identify differences in these perceptions between the two groups. The results indicated specific yet fundamental differences in the learning outcomes among participants in each group. According the statements of the participants of both interventions before the therapies, it could be interpreted that they viewed themselves as "being hopeless towards solving problems, having negative perspectives, being emotional, giving up at solving problems, having low self- worth and self-confidence, being unhappy and unsatisfied with life, being self- critical and exaggerated situations and problems. However, after the therapies, the participants of both groups accepted that the therapy had positive effects and that their social interactions increased and gained higher self-worth and self-confidence after therapy.

Nevertheless, there were a number of differences in learning outcomes between participants in the two treatments. The participants in CPS learned the five stages of CPS of fact finding, problem finding, idea finding, and solution finding. They also learned skills such as brainstorming, and divergent and convergent thinking. They learned to become aware of problems and to use the systematic and structured CPS programme to solve them and as a result gained a sense of self-efficacy and perceived ability. On the other hand, the participants in CBT learned to identify, stop and adapt negative and unhelpful thoughts as they have understood the links between their thoughts, feelings and actions. These participants also learned the importance of being assertive and

Bibliographic References

Abela, J. R. Z., 2001, The hopelessness theory of depression: A test of the diathesis-stress and causal mediation components in third and seventh grade children. Journal of Abnormal Child Psychology, 29 (3), 241–254.

Abela, J. R. Z., Brozina, K., and Haigh, E. P., 2002, An examination of the response styles theory of depression in third and seventh grade children: A short-term longitudinal study. Journal of Abnormal Child Psychology, 30 (5), 513–525.

Abela, J. R. Z., and D'Alessandro, D. U., 2002, Beck's cognitive theory of depression: A test of the diathesis-stress and causal mediation components. British Journal of Clinical Psychology, 41(2), 111–128.

Abela, J. R. Z., and Sarin, S., 2002, Cognitive vulnerability to hopelessness depression: A chain is only as strong as its weakest link. Cognitive Therapy and Research, 26 (6), 811–829.

Abela, J. R. Z., and Taylor, G., 2003, Specific vulnerability to depressive mood reactions in children: The moderating role of self-esteem. Journal of Clinical Child and Adolescents Psychology, 32 (3), 408–418.

Abela, J. R. Z., Hankin, B. L., Haigh, E. A. P., Adams, P., Vinokuroff, T., and Trayhern, L., 2005, Interpersonal vulnerability to depression in high-risk children: The role of insecure attachment and reassurance seeking. Journal of Clinical Child and Adolescent Psychology, 34 (1), 182–192.

Abela, J. R. Z., Sakellaropoulo, M., and Taxel, E., 2007, Integrating two subtypes of depression: Psychodynamic theory and its relation to hopelessness depression in schoolchildren. Journal of Early Adolescence, 27 (3), 363–385

Abela, J. R. Z., and Hankin, B. L., 2008a. Depression in children and adolescents: Causes, treatment, and prevention. *In*. J. R. Z. Abela and B. L. Hankin, eds. Handbook of Depression in Children and Adolescents. New York: Guilford Press, 3-6.

Abela, J. R. Z., and Hankin, B. L., 2008b. Cognitive vulnerability to depression in children and adolescents: developmental psychopathology perspective. *In*. J. R. Z. Abela and B. L. Hankin, eds. Handbook of Depression in Children and Adolescents. New York: Guilford Press, 35-78.

Abela, J. R. Z., and Hankin, B. L., 2009. Cognitive vulnerability to depression in children and adolescents: developmental psychopathology Perspective. *In*. S., Nolen-Hoeksema and L. M., Hilt, eds. Handbook of Depression in Adolescents. New York: Routledge.

Abramson, L. Y., Seligman, M. E. P., and Teasdale, J., 1978, Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 87, 49–74.

Abramson, L. Y., Alloy, L. B., and Metalsky, G. I., 1988. The cognitive diathesisstress theories of depression: Toward an adequate evaluation of the theories' validities. *In*. L. B. Alloy ed., Cognitive Processes in Depression New York: Guilford Press, 3–30.

Abramson, L. Y., Metalsky, G. I., and Alloy, L. B., 1989, Hopelessness depression: A theory-based subtype of depression. Psychological Review, 96 (2), 358–372.

Ainsworth, M. D., Blehar, M., Waters, E., and Wall, S., 1978. Patterns of Attachment: A Psychological Study of the Strange Situation. Hillsdale, NJ: Lawrence Erlbaum.

Aldridge D. 2007. Qualitative methods in CAM research. London: Routledge.

Alloy, L. B., Hartlage, S., and Abramson, L. Y., 1988. Testing the cognitive diathesis-stress theories of depression: Issues of research design, conceptualization, and assessment. *In*. L. B. Alloy ed. Cognitive Processes in Depression. New York: Guilford Press, 31–73.

American Psychiatric Association., 1994. Diagnostic and Statistical Manual of Mental Disorders 4nd ed. Washington DC: American Psychiatric Association Press.

American Psychiatric Association., 2004. Practice Guideline for the Treatment of Patients with Schizophrenia, 2nd edn. American Psychiatric Association, Arlington, VA.

Angold, A., Costello, E. J., and Erkanli, A., 1999, Comorbidity. Journal of Child Psychology and Psychiatry and Allied Disciplines, 40 (1), 57–87.

Angold, A., Costello, E.J., and Worthman, C.M., 1999, Pubertal changes in hormone levels and depression in girls. Psychological Medicine, 29, 1043–1053.

Angold, A., Erkanli, A., Farmer, E. M., Fairbank, J. A., Burns, B. J., Keeler, G., and Costello E. J., 2002, Psychiatric disorder, impairment, and service use in rural African American and white youth. Archives of General Psychiatry, 59 (10), 893–901.

Angst, J. (1988) Clinical course of affective disorders. In Depressive Illness: Prediction of Course and Outcome (eds T. Helgason & R. J. Daly), pp. 10 -11. Berlin: Springer.

Araya, R, Hu K, Heron J, et al. Effects of stressful life events, maternal depression and 5-HTTLPR genotype on emotional symptoms in pre-adolescent children [published online ahead of print November 14, 2008]. Am J Med Genet B Neuropsychiatr Genetdoi:10.1002/ajmg.b.30888

Arbisi, P.A. (2001). Review of the Beck Depression Inventory-II, in Plake, B. S., & Impara,
J. C. (Eds.). (2001). The Fourteenth Mental Measurements Yearbook. Lincoln, NE: Buros Institute of Mental Measurements.

Arean, P. A., Perri, M. G., Nezu, A. M., Schein, R. L., Christopher, F., and Joseph, T. X., 1993, Comparative effectiveness of social problem solving therapy and reminiscence therapy as treatments for depression in older adults. Journal of Consulting and Clinical Psychology, 61 (6), 1003–1010.

Avenevoli, S., & Steinberg, L. (2001). The continuity of depression across the adolescent transition. In H. W. Reese & R. Kail (Eds.). Advances in Child Development (pp. 139–173). San Diego: Academic Press.

Baker, J. L., 2000, Evaluating the Impact of Development Projects on Poverty: A Handbook for Practitioners. Directions in Development series. Washington, DC: World Bank.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. Psychological Review, 84 (2), 191-215.

Bandura, A. (1997). Self-Efficacy: The Exercise of Control. New York: W.H. Freeman.
Basadur, M., and Thompson, R., 1986, Usefulness of the ideation principle of extended effort in real world professional and managerial creative problem solving. Journal of Creative Behaviour, 20 (1), 23–34.

Beck, A.T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961) An inventory for measuring depression. Archives of General Psychiatry, 4, 561-571.

Beck, A. T., 1967. Depression: Clinical, Experimental, and Theoretical Aspects. New York: Haper & Row.

Beck, A. T., Rush, A. J., Shaw, B. F., and Emery, G., 1979. Cognitive Therapy of Depression. New York: Guilford Press.

Beck, A. T., 1983. Cognitive therapy of depression: New perspectives. *In*. P. J. Clayton and J. E. Barrett eds. Treatment of depression: Old controversies and new approaches. New York: Raven Press, 265-290.

Beck, A.T., 1993, Cognitive therapy: past, present, and future. Journal of consulting and clinical psychology, 61 (2), 194–198.

Beck, A. T., Steer, R. A., Brown, G., 1996. Beck Depression Inventory. 2nd . San Antonio: The Psychological Corporation, Harcourt Brace & Company.

Becker-Weidman, E. G., Jacobs, R. H., Reinecke, M. A., Silva, S. G. and March, J. S, 2010, Social problem-solving among adolescents treated for depression. Journal of Behaviour Research and Therapy, 48, 11–18.

Bell, A. C., and D'Zurilla, T. J., 2009, Problem-solving therapy for depression: A meta-analysis. Clinical Psychology Review, 29 (4) 348–353.

Bennett, D. S., and Bates, J. E., 1995, Prospective models of depressive symptoms in early adolescence: Attributional style, stress, and support. Journal of Early Adolescence, 15 (3), 299–315.

Billings, A. G., and Moos, R. H., 1981, The role of coping responses and social resources in attenuating the impact of stressful life events. Journal of Behavioural Medicine, 4 (2), 139-157.

Birmaher, B., Ryan, N. D., Williamson, D. E., Brent, D. A., Kaufman, J., Dahl, R. E., Perel, J. and Nelson, B., 1996, Childhood and adolescent depression: A review of the past 10 years. Part I. Journal of the American Academy of Child and Adolescent Psychiatry, 35(11), 1427–1439.

Blackwood B, Alderdice F, Burns-Karen EA et al. (2010) Protocolized versus non-protocolized weaning for reducing the duration of mechanical ventilation in critically ill adult patients.

Blatt, S. J., and Zuroff, D. C., 1992, Interpersonal relatedness and self-definition: Two prototypes for depression. Clinical Psychology Review, 12, 527–562.

Blatt, S. J., and Homann, E., 1992, Parent–child interaction in the etiology of dependent and self-critical depression. Clinical Psychology Review, 12, 47–91.

Bloom, B. S., Engelhard, M. D., Furst, E. J., Hill, W. H. and Krathwohl, D. R., 1956. Taxonomy of Educational Objectives: The Classification of Educational Goals. New York: David McKay.

Bowlby, J., 1969. Attachment and Loss: Vol. I. Attachment. New York: Basic Books.

Bowlby, J., 1978, Attachment theory and its therapeutic implications. Adolescent Psychiatry, 6, 5–33.

Bowlby, J., 1980. Attachment and Loss: Vol. 3. Loss: Sadness and Depression. New York: Basic Books.

Braswell, L. and Kendall, P. C., 2003. Cognitive-behavioural therapy with youth. *In*. K. S., Dobson, ed. Handbook of Cognitive Behavioural Therapies. New York: Guilford Press, 167–213.

British Association for Counselling and Psychotherapy Professional Standards. , London: BACP.

British Association for Counselling and Psychotherapy Professional Standards., 2005. BACP counsellor/psychotherapist accreditation scheme: Criteria for application. Available at: < http://www.bacp.co.uk/accreditation/>

British Psychological Society, 1995. Professional Practice Guidelines. Division of Clinical Psychology, BPS: Leicester.

British Psychological Society, 2005. Good Practice Guidelines for the Conduct of Psychological Research Whithin the NHS . BPS: Leicester.

Burns, N., Grove, S.K., 2005. The Practice of Nursing Research: Conduct, Critique and Utilization, 5th ed. W.B. Saunders, Philadelphia.

Caspi A, Sugden K, Moffitt TE, Taylor A, Craig IW, et al. 2003. Influence of life stress on depression: moderation by a polymorphism in the 5-HTT gene. Science 301:386–89

Cicchetti, D., and Toth, S. L., 1995, A developmental psychopathology perspective on child abuse and neglect. Journal of the American Academy of Child and Adolescent Psychiatry, 34 (5), 541–565.

Clapham, M. M., 1997, Ideational skills training: A key element in creativity training programs. Creativity Research Journal, 10 (1), 33–44.

Clark, D. A., Steer, R. A., Beck, A. T., and Ross, L., 1995, Psychometric characteristics of the revised sociotropy and autonomy scales in college students. Behavioural Research and Therapy, 33, 325–334.
Clarke, G. N., Hawkins, W., Murphy, M., and Sheeber, L. B., 1993, School-based primary prevention of depressive symptomatology in adolescents: Findings from two studies. Journal of Adolescent Research, 8, 183-204.

Coche, E. and Flick, A., 1975, Problem-solving training groups for hospitalized psychiatric patients. Journal of Psychology, 91(1), 19-29.

Cole, D. A., 1990, Relation of social and academic competence to depressive symptoms in childhood. Journal of Abnormal Psychology, 99 (4), 422–429.

Cole, D. A., 1991a, Preliminary support for a competency-based model of depression in children. Journal of Abnormal Psychology, 100 (2), 181–190.

Cole, D. A., 1991b, Change in self-perceived competence as a function of peer and teacher evaluation. Developmental Psychology, 27 (4), 682–688.

Cole, D. A., Jacquez, F. M., and Maschman, T. L., 2001, Social origins of depressive cognitions: A longitudinal study of self-perceived competence in children. Cognitive Therapy and Research, 25, 377–395.

Cole, D. A., Maxwell, S. E., Martin, J. M., Peeke, L. G., Seroczynski, A. D., Tram, J. M., Hoffman, K. B., Ruiz, M. D. Jacquez, F., and Maschman, T., 2001, The development of multiple domains of child and adolescent self-concept: A cohort sequential longitudinal design. Child Development, 72 (6), 1723–1746.

Collishaw, S., Maughan, B., Goodman, R., and Pickles, A., 2004, Time trends in adolescent mental health. Journal of Child Psychology and Psychiatry, 45 (8), 1350–1362.

Combs, M. L., and Slaby, D. A., 1977. Social skills training with children. *In*. B. B. Lahey and A. E. Kazdin, eds. Advances in Clinical Child Psychology. Vol. 1, New York: Plenum, 161-201.

Compton, S.N., March, J.S., Brent, D., Albano, A.M., Weersing, R. and Curry, J., 2004, Cognitive-behavioural psychotherapy for anxiety and depressive disorders in children and adolescents: an evidence-based medicine review. Journal of American Academy of Child and Adolescents Psychiatry, 43 (8), 930–959.

Connor-Smith, J. K., Compas, B. E., Wadsworth, M. E., Thomsen, A. H. and Saltzman, H., 2000, Responses to stress in adolescence: Measurement of coping and involuntary stress responses. Journal of Consulting and Clinical Psychology, 68 (6), 976–992.

Cooper, M., and McLeodb, J., 2007, A pluralistic framework for counseling and psychotherapy: Implications for research. Counseling and Psychotherapy Research, 7(3), 135-143.

Corsini, R., 2002. Dictionary of Psychology. London: Brunner-Routledge.

Costello, E. J., Angold, A., Burns, B. J., Stangl, D. K., Tweed, D. L., Erkanli, A. and Worthman C. M., 1996, The Great Smoky Mountains Study of Youths: Goals, design, methods, and the prevalence of DSM-III-R disorders. Archives of General Psychiatry, 53 (12), 1129–1136.
Costello, E. J., Mustillo, S., Erkanli, A., Keeler, G., and Angold, A., 2003, Prevalence and development of psychiatric disorders in childhood and adolescence. Archives of General Psychiatry, 60(8), 837–844.

Costello, E. J., Egger, H., and Angold, A., 2005, 10-year research update review: The epidemiology of child and adolescent psychiatric disorders: I. Methods and public health burden. Journal of the American Academy of Child and Adolescent Psychiatry, 44(10), 972–986.

Costello, E. J., Erkanli, A., and Angold, A., 2006, Is there an epidemic of child or adolescent depression. Journal of Child Psychology and Psychiatry, 47(12), 1263–1271.

Creswell, J. W., 2005. Educational research: Planning, conducting, and evaluating quantitative and qualitative research (2nd ed.). Upper Saddle River, NJ:
Pearson Education.

Creswell, J. W., 2009. Research design: Qualitative, quantitative, and mixed methods approaches (3rd ed.). Thousand Oaks, CA: Sage.

Creswell, J. W. 2011. Educational research, Planning, conducting and evaluating qualitative and quantitative Research. Pearson, p. 650.

Davidson, K. W., Rieckmann, N. and ¸ Oislespe, F., 2004, Psychological theories of depression: Potential application for the prevention of acute coronary syndrome recurrence, Psychosomatic Medicine 66:165–173.

Davidson, R., 2004. Affective style: Causes and consequences. *In*. J. T. Cacioppo And G. T. Berntson, eds. Essays in Social Neuroscience. Cambridge, MA: MIT Press,
77–91.

Dixon, J. F., & Ahrens, A. H., 1992, Stress and attributional styles as predictors of self-reported depression in children. Cognitive Therapy and Research, 16, 623–634.

Down-Wamboldt, B., 1992, Content analysis: method, applications, and issues. Health care for Women International, 13, 313 321.

Dowrick, C., Dunn, G., Ayuso-Mateos, J. L., Dalgard, O., Page, H., Vasquez, B., Lehtinen, V., Casey, P., Wilkinson, C., Vazquez-Barquero, J. L., Wilkinson, G. and the ODIN group., 2000, Problem-solving treatment and group psycho-education for depression: multicentre randomised controlled trial. British Medical Journal 321:1450–1454.
D'Zurilla, T. J., and Goldfried, M. R., 1971, Problem solving and behavior modification. Journal of Abnormal Psychology, 78 (1), 107-126.

D'Zurilla, T. J., and Nezu, A. M., 1982. Social problem solving in adults. *In*. P. C. Kendall, ed. Advances in Cognitive–Behavioral Research and Therapy. NewYork: Academic Press, 201–274.

D'Zurilla, T. J., and Nezu, A. M., 1990, Development and preliminary evaluation of the Social problem solving Inventory (SPSI). Psychological Assessment: A Journal of Consulting and Clinical Psychology, 2 (2), 156–163.

D'Zurilla, T. J., and Nezu, A. M., 1999. Problem Solving Therapy: A Social Competence Approach to Clinical Intervention, 2nd ed. New York: Springer.

D'Zurilla, T. J., Nezu, A. M., and Maydeu-Olivares, A., 2002. Manual for the Social Problem Solving Inventory-Revised. North Tonawanda, NY: MHS.

D'Zurilla, T. J., and Nezu, A. M., 2007, Problem-Solving Therapy: A Positive Approach to Clinical Intervention. 3nd ed. New York: Spring Publishing Company.

Edwards, S. J. L., Lilford, R. J., Braunholtz, D. A., Jackson, J. C., Hewison, J. and Thornton, J., 1998, Ethical issues in the design and conduct of randomised controlled trials. Health Technology Assessment, 2 (15).

Ellis, F. (2000) Rural Livelihoods and Diversity in Developing Countries. Oxford: Oxford University Press.

Essau, C. A., Feehan, M., Ustun, B., 1997, Classification and assessment strategies. In C. A. Essau & F. Petermann (Eds.), Developmental psychopatology: Epidemiology, diagnostics, and treatment (pp. 19-62). London: Harwood Academic.

Estrada, C. A., Isen, A. M., and Young, M. J., 1994, Positive affect improves creative problem solving and influences reported source of practice satisfaction in physicians. Motivation and Emotion, 18 (4), 285–299.

Eysenck, M. W., 1992. Anxiety: The Cognitive Perspective. Hove: Erlbaum.

Farquhar M, Prevost AT, McCrone P et al. Study Protocol: Phase III single-blinded fast-track pragmatic randomised controlled trial of a complex intervention for breathlessness in advanced disease. Trials 2011, 12:130.

Feldhusen, J., 1999. Talent identification and development in education: The basic tenets. *In*. S. Cline and K. T Hegeman, eds. Gifted Education in the Twenty-first Century. New York: Winslow Press, 89-100.

Feneck, O.R., 2009, Clinical research in anaesthesia: randomized controlled trial or observational studies? Eur J Anaesthesiol 24: 1–5.

Fendrich, M., Weissman, M. M., Warner, V., 1990, Screening for depressive disorder in children and adolescents: validating the Centre for Epidemiologic Studies Depression Scale for Children. American Journal Epidemiology, 131, 538-51.

Fergusson, D. M., Horwood, L. J., Ridder, E. M., and Beautrais, A. L., 2005, Subthreshold
depression in adolescence and mental health outcomes in adulthood. Archives of General Psychiatry, 62 (1), 66–72.

Fisher, R., 1995. Teaching Children to Think. London: Chassell.

Flay, B. R., Biglan, A., Boruch, R. F., Castro, F. G., Gottfredson, D., Kellam, S. G., Moscicki, E. K., Schinke, S., Valentine, J. C., and Ji, P., 2004. Standards of evidence: Criteria for efficacy, effectiveness and dissemination. Falls Church, VA: Society for Prevention Research. Available at http://www.preventionresearch.org/StandardsofEvidence book.pdf.

Flay, B. R., Biglan, A., Boruch, R. F., Castro, F. G., Gottfredson, D., Kellam, S., Moscicki E. K., Schinke, S., Valentin, J. C. and Ji, P., 2005, Standards of evidence: Criteria for efficacy, effectiveness and dissemination. Prevention Science, 6 (3), 151−175.

Flynn, M., and Rudolph, K. D., 2007, Perceptual asymmetry and youths' responses to stress: Understanding vulnerability to depression. Cognition and Emotion, 21 (4), 773–788.

Forsyth, K. M., 2001. The Design and Implementation of a Depression Prevention Program. Thesis (PhD). University of Rhode Island.

Freud, S., 1923. The Ego and the Id. New York: W.W. Norton & Company.

Freud, S., 1960. The Interpretation of Dreams. Reprinted as Vol. 6 of J. Strachey, ed. The Standard Edition of the Complete Pschological Works of Sigmund Freud. London: Hogarth Press, (orig. publ. 1900).

Galambos, N.L., Leadbeater, B.J., and Barker, E.T., 2004, Gender differences in and risk factors for depression in adolescence: A 4-year longitudinal study. International Journal of Behavioral Development, 28 (1), 16–25.

Garber, J., Webb, C. and Horowitz, J., 2009, Prevention of depression in adolescents: A review of selective and indicative programme. *In*. S., Nolen-Hoeksema and L. M., Hilt, eds. Handbook of Depression in Adolescents. New York: Routledge.

Gardner, H., 1993. Creating Minds: An Anatomy of Creativity Seen Through the Lives of Freud, Einstein, Picasso, Stravinsky, Eliot, Graham, and Gandhi. New York: Basic Books.

Gazelle, H., & Rudolph, K. D., 2004, Moving toward and away from the world: Social approach and avoidance trajectories in anxious solitary youth. Child Development, 75, 829-849.

Ghassemzadeh, H., Mojtabai, R., Karamghadiri, N. and Ebrahimkhani, N., 2005, Psychometric properties of a Persian-language version of the Beck Depression Inventory Second Edition: BDI-II-Persian. Journal of Depression and Anxiety, 21(4)185–192.

Gladston, T. R. G., and Kaslow, N. J., 1995, Depression and attributions in children and adolescents: A meta-analytic review. Journal of Abnormal Child Psychology, 23, 597-606.

Gloaguen, V., Cottraux, J., Cucherat, M. and Blackburn, I., 1998, A meta-analysis of the effects of cognitive therapy in depressed patients. Journal of Affective Disorder, 49 (1), 59–72.

Goldsmith, J. G. and McFall, R. M., 1975, Development and evaluation of an interpersonal skill training program for psychiatric inpatients. Journal of Abnormal Psychology, 84 (1), 51-58.

Gonzalez-Tejera, G., Canino, G., Ramirez, R., Chavez, L., Shrout, P., Bird, H., Bravo, M., Martinez-Taboas, A., and Beuermeister, J., 2005, Examining minor and major depression in adolescents. Journal of Child Psychology and Psychiatry, 46(8), 888–899.

Goodyer, I. and Cooper, P. J., 1993, A community study of depression in adolescent girls, II: the clinical features of identified disorder. British Journal of Psychiatry, 163, 374-380.

Gotlib, I.H. and Hammen, C., 1992. Psychological Aspects of Depression: Toward a Cognitive-Interpersonal Integration. Chichester, UK: John Wiley and Sons.

Gotlib, I. H., Lewinsohn, P. M., Seeley, J., 1995, Symptoms versus a diagnosis of depression: Differences in psychosocial functioning. Journal of Consulting and Clinical Psychology 63:90-100.

Gotlib, I. H., and Hammen, C. L. eds., 2002. Handbook of Depression. New York: Guilford Press.

Gotlib, I.H., Lewinsohn, P.M., Sceeley, J.R., 1995, Symptoms versus a diagnosis of depression: Differences in Psychosocial functioning. Journal of Counselling and Clinical Psychology 63, 1, 90-100.

Greene, J. C., Caracelli, V. J., & Graham, W. F.,1989, Toward a Conceptual Framework for Mixed-method Evaluation Designs. Educational Evaluation and Policy Analysis, Vol 11, No, 3, pp. 255-274.

Green, H., McGinnity, A., Meltzer, H., Ford, T. and Goodman, R., 2005. Mental Health of Children and Young People in Great Britain. Cardiff: Palgrave MacMillan.

Grover, K. E., Green, K. L., Pettit, J. W., L. L., Monteith, Garza M. J., and Venta, A., 2009, Problem solving moderate the effects of life event stress and chronic stress on suicidal behaviours in adolescents, The Journal of Clinical Psychology, Vol. 65(12), 1281—1290.

Gruenberg, A.M., Goldstein, R.D. & Pincus, H.A., 2005, Classification of Depression: Research and Diagnostic Criteria: DSM-IV and ICD-10. Biology of depression. From novel insights to therapeutic strategies,

Hamilton, M., 1967, Development of a rating scale for primary depressive illness. Br J Soc Clin Psychol ; 6(4):278–96.

Hammen, C., Burge, D., Daley, S. E., Davila, J., Paley, B. and Rudolph, K. D., 1995, Interpersonal attachment cognitions and prediction of symptomatic responses to interpersonal stress. Journal of Abnormal Psychology, 104 (3), 436–443.

Han, S. S., Weisz, J. R., and Weiss, B., 2001, Specificity of relations between children's control-related beliefs and internalizing and externalizing psychopathology. Journal of Consulting and Clinical Psychology, 69 (2), 240–251.

Hankin, B. L., Abramson, L. Y., Moffi tt, T. E., Silva, P. A., McGee, R., and Angell, K. E., 1998, Development of depression from preadolescence to young adulthood: Emerging gender differences in a 10-year longitudinal study. Journal of Abnormal Psychology, 107(1), 128–140.

Hankin, B. L., Mermelstein, R., and Roesch, L., 2007, Sex differences in adolescent depression: Stress exposure and reactivity models in interpersonal and achievement contextual domains. Child Development, 78 (1), 279–295.

Hankin, B. L., 2008, Beck's cognitive theory of depression in adolescence: specific prediction of depressive symptoms and reciprocal influences in a multi-wave prospective study. International Journal of Cognitive Therapy, 1(4), 313-332.

Harrington, R., Clark, A., 1998, Prevention and early intervention for depression in adolescence and early adult life. European Archives of Psychiatriy and Clinical Neuroscience, 248 (1), 32–45.

Harrington, R., Whittaker, J., Shoebridge, P., Campbell, F., 1998, Systematic review of efficacy of cognitive behaviour therapies in childhood and adolescent depressive disorder. British Medical Journal, 316 (7144)1559-1563.

Harnett, P. H., and Dadds, M. R., 2004, Training school personnel to implement a universal school based prevention of depression program under real-world conditions. Journal of School Psychology, 42(5), 343–357.

Hathaway, S.R. and McKinley, J.C., 1967. The Minnesota Multiphasic Personality Inventory. New York: The Psychological Corporation.

Health Advisory Service, 1995. Child and Adolescent Mental Health Services. London: HMSO.

Hollon, S. D., DeRubeis, R. J.. Evans, M. D., Wiemer, M. J., Garvey, M. J.. Grove W. M., and Tuason, V. B., 1992, Cognitive therapy and pharmacotherapy for depression: Singly
and in combination. Archives of General Psychiatry, 49 (10), 774-781.

Hollon, S., Thase, M., and Markowitz, J., 2002, Treatment and prevention of depression. Psychological Science in the Public Interest, 3 (2), 39–77.

Hussian, R. A., and Lawrence, P. S., (1981), Social reinforcement of activity and problem-solving training in the treatment of depressed institutionalized elderly patients, Cognitive Therapy and Research. 5 (1), 57-69.

Jaser, S. S., Langrock, A. M., Keller, G., Merchant, M. J., Benson, M. A., Reeslund, K., Champion, J. E. and Compas, B. E., 2005, Coping with the stress of parental depression II: Adolescent and parent reports of coping and adjustment. Journal of Clinical Child and Adolescent Psychology, 34 (1), 193–205.

Jaycox, L. H., Reivich, K. J., Gillham, J. E., and Seligman, M. E. P., 1994, Prevention of depressive symptoms in school children. Behaviour Research & Therapy, 32 (8), 801–816.

Joiner, T. E., 2002. Depression in its interpersonal context. *In*. I. H. Gotlib and C. L. Hammen, eds. Handbook of Depression. New York: Guilford, 295–313.
Kant, G. L., D'Zurilla, T. J. and Maydeu-Olivares, A., 1997, Social problem-solving as a mediator of stress-related depression and anxiety in middle-aged and elderly community residents. Cognitive Therapy and Research, 21(1), 73−96.

Kazdin, A. E., 1995. Conduct disorders in childhood and adolescence (2nd ed.). Thousand
Oaks, CA: Sage

Kendall, P. C., and Hollon, S. D., 1979. Cognitive-Behavioural Interventions. Overview and current status. *In*. P. C. Kendall and S. D. Hollon, eds. Cognitive-behavioural interventions: Theory, Research and Procedures. New York: Academic Press, 1-9.

Kendall, P. C., Panichelli-Mindel, S. M., and Gerow, M., 1995. Cognitive-behavioural therapies with children and adolescents: An integrative overview. *In*. H. van Bilsen, P.C.

Kendall, P. C., and Slavenburg, J. H. eds. Behaviour Approaches for Children and Adolescents: Challenges for the Next Century. New York: Plenum Press, 1-18.

Kendler KS, ThorntonLM,Gardner CO. 2001. Genetic risk, number of previous depressive episodes, and stressful life events in predicting onset of major depression. Am. J. Psychiatry 158:582–86

Kendler, K. S., Kuhn, J. and Prescott, C. A., 2004, Interrelationship of neuroticism, sex and stressful life events in the prediction of episodes of major depression. American Journal of Psychiatry, 161 (4), 631–636.

Kelly, J. A., 1982. Social Skills Training: A Practical Guide for Interventions. New York: Springer.
Kelly, J. A. and Lamparski, D. M., 1985. Outpatient treatment of schizophrenics: Social skills and problem-solving training. *In*. M. Hersen and A. S. Bellack, eds. Handbook of Clinical and Behaviour Therapy with Adults. New York: Plenum, 485-500.

Kerlinger, F. and Lee, H. B., 2000. Foundations of Behavioural Research. 4nd ed, United State: Harcourt College Publisher.

Kessler, R. C. and Walters, E. E., 1998, Epidemiology of DSM-III-R major depression and minor depression among adolescents and young adults in the National Comorbidity Survey. Depression and Anxiety, 7(1), 3–14.

Kessler, R. C., Avenevoli, S. and Merikangas, K. R., 2001, Mood disorders in children and adolescents: An epidemiological perspective. Biological Psychiatry, 49 (12), 1002–1014.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Koretz, D., Merikangas, K. R., Rush, A. J., Walters, E. E. and Wang, P. S., 2003, The epidemiology of major depressive disorder results from the national comorbidity survey replication (NCS-R). Journal of the American Medical Association, 289(23), 3095–3105.

Kim-Cohen, J., Caspi, A., Moffit, T. E., Harrington, H. L., Milne, B. J. and Poulton, R., 2003, Prior juvenile diagnoses in adults with mental disorder: Developmental follow-back of a prospective-longitudinal cohort. Archives of General Psychiatry, 60, 709–717.
Klomek, A. B., Marrocco, F., Kleinman, M., Schonfeld, I. S. and Gould, M. S., 2007, Bullying, depression and suicidality in adolescents. Journal of the American Academy of Child and Adolescent Psychiatry, 46 (1), 40-49.

Kovacs, M., Gatsonis, C., Paulauskas, S.L., Richards, C., 1989. Depressive disorders in childhood: IV. A longitudinal study of comorbidity with and risk for anxiety disorders. Arch. Gen. Psychiatry, 46 (9), 776–782.

Kovacs, M., Obrosky, D.S., Sherrill, J., 2003. Developmental changes in the phenomenology of depression in girls compared to boys from childhood onward. J. Affect. Disord. 74 (1), 33– 48.

Kramer, T. and Garralda, M. E., 1998, Psychiatric disorders in adolescents in primary care. British Journal of Psychiatry. 173, 508–513.

Krasnor, L. R. and Rubin, K. H., 1981. Assessment of social problem-solving skills in youngchildren. In. T. Merluzzi and M. Genest, eds. Cognitive Assessment. New York: Guilford, 452-474.

Kuo, E. S., Stoep, A. V. And Stewart, D. G., 2005, Using the short mood and feelings questionnaire to detect depression in detained adolescents. Journal of Assessment, 12 (4), 374-383.

Langrock, A. M., Compas, B. E., Keller, G., Merchant, M. J. and Copeland, M. E., 2002, Coping with the stress of parental depression: Parents' reports of children's coping, emotional, and behavioral problems. Journal of Clinical Child and Adolescent Psychology, 31(3), 312–324.

Latvala, E., Voukila-Oikkonen, P., Janhonen, S., 2000, Videotaped recording as a method of participant observation in psychiatric nursing research. J. Adv. Nurs. 31, 1252–1257.

Lawrence, D., Jablensky, A. V., Holman, C. D., et al., 2000, Mortality in Western Australian psychiatric patients. Social Psychiatry and Psychiatric Epidemiology, 35, 341 - 347.

Lautrey, J., and Lubart, T. I., 1998, Créativité. *In*. O. Houdé, D. Kayser, O. Koenig, J. Proust and F. Rastier, eds. Vocabulaire des Sciences Cognitives: Neurosciences, Psychologie, Intelligence Artificielle, Linguistique et Philosophie. Paris: PUF, 123-124.

Lawrence, S. T., Hansen, J. S., Cutts, D. J., Tisdelle, T. F. and Irish, D. A., 1985, Situational context: Effects of perceptions of assertive and unassertive behaviour. Behaviour Therapy, 16, 51-62.

Layard, R., 2006, The case for psychological treatment centres. British Medical Journal, 332 (7548), 1030–1032.

Lewinsohn, P. M., Hops, H., Roberts, R. E., Seeley, J. R. and Andrews, J. A., 1993, Adolescent psychopathology: I. Prevalence and incidence of depression and other DSM-III-R disorders in high school students. Journal of Abnormal Psychology, 102(1), 133–144.

Lewinsohn, P. M. and Clarke, G. N., 1999, Psychosocial treatments for adolescent depression. Clinical Psychology Review, 19 (3), 329–342.
Lewinsohn, P. M., Solomon, A., Seeley, J. R. and Zeiss, A., 2000, Clinical implications of "subthreshold" depressive symptoms. Journal of Abnormal Psychology, 109 (2), 345−351.

Lewinsohn, P. M., Joiner, T. E. and Rohde, P., 2001, Evaluation of cognitive diathesis–stress models in predicting major depressive disorder in adolescents. Journal of Abnormal Psychology, 110 (2), 203–215.

Lewinsohn, P. M., Rohde, P., Seeley, J. R., Klein, D. N. and Gotlib, I. H., 2003, Psychosocialcharacteristics of young adults who have experienced and recovered from major depressive disorder during adolescence. Journal of Abnormal Psychology, 112, 353–363.

Lewinsohn, P. M., Shankman, S. A., Gau, J. M. and Klein, D. N., 2004, The prevalence and co-morbidity of subthreshold psychiatric conditions. Psychological Medicine, 34(4), 613–622.

Lineham, M., 1993. Cognitive-Behavioural Treatment of Borderline Personality Disorder. New York: Guilford Press.

Logan, D. E., and King, C. A., 2002, Parental identification of depression and mental health service use among depressed adolescents. Journal of the American Academy of Child and Adolescent Psychiatry, 41(3), 296-304.

Lorraine, P, Lennie. C, and Humphreys, N, 2008, Emotional literacy in the primary classroom: teacher perceptions and practices, Education 3-13, 36: 1, 27 — 37

Lubart, T. I., 1994, Creativity. *In*. R. J. Sternberg, ed. Thinking and Problem Solving. NewYork: Academic Press, 289−332.

Lubart, T. I., & Lautrey, J., 1998. Family environment and creativity. XVth Biennial Meeting of the International Society for the Study of Behavioral Development (ISSBD). Bern, Switzerland.

Malouff, J. M., Thorsteinsson, E. B. and Schutte, N. S., 2007, The efficacy of problem solving therapy in reducing mental and physical health problems: A meta-analysis. Clinical Psychology, 27 (1) 46–57.

Marx, E. M., Williams, J. M. G. and Claridge, G. C., 1992, Depression and social problem solving. Journal of Abnormal Psychology, 101(1), 78−86.

McLaughlin, K. 2009, Universal prevention for adolescent depression. *In*. S., Nolen-Hoeksema and L. M., Hilt, eds. Handbook of depression in adolescents. New York: Routledge.

Meltzer, H., Gatward, R., Goodman, R. and Ford, T., 2000. Mental Health of Children and Adolescents in Great Britain. London: HSMO.

Merry, S., McDowell, H., Hetrick, S., Bir, J., and Muller, N., 2004. Psychological and/or educational interventions for the prevention of depression in children and adolescents. The Cochrane Database of Systematic Reviews, 2, CD003380.
Available at http://www.ncbi.nlm.nih.gov/pubmed/14974014
Merry, S. N., and Spence, S. H., 2007, Attempting to prevent depression in youth: A systematic review of the evidence. Early Intervention in Psychiatry. 1 (2), 128–137.

Mitchell, J., McCauley, E., Burke, P.M., Moss, S.J., 1988. Phenomenology of depression in children and adolescents. J. Am. Acad. Child Adolesc. Psych. 27 (1), 12– 20.

Moor, S., Maguire, A., McQueen, H., Wells, J. E., Elton, R., Wrate, R. and Blair, C., 2007, Improving the recognition of depression in adolescence: Can we teach the teachers? Journal of Adolescence. 30(1), 81-95.

Mrazek, P. J., Haggerty, R. J., 1994. Reducing Risks for Mental Disorders: Frontiers for Preventive Intervention Research. Washington DC: National Academy Press.

Mufson, L., Dorta, K. P., Moreau, D., and Weissman, M. M., 2004a. Interpersonal Psychotherapy for Depressed Adolescents. 2nd ed. New York: Guilford Press.

Mufson, L., Dorta, K. P., Wickramaratne, P., Nomura, Y., Olfson, M., and Weissman, M. M., 2004b, A randomized effectiveness trial of interpersonal psychotherapy for depressed adolescents. Archives of General Psychiatry, 61, 577–584.

Munoz, R., and Miranda, J., 2000, Group Therapy Manual for the Cognitive Behavioural Treatment of Depression, RAND: http:/www.rand.org

Murray, C. J. and Lopez, A. D., 1996, The incremental effect of age-weighting on YLLs, YLDs, and DALYs: A response. Bulletin of the World Health Organization, 74(4), 445–446.

Mynors-Wallis, L. M., Gath, D. H., Lloyd-Thomas, A. R., Tomlinson, D., 1995, Randomised controlled trial comparing problem solving treatment with amitryptyline and placebo for major depression in primary care. British Medical Journal, 310 (6977), 441-445.

Mynors-Wallis, L., M., Davies, I., Gray, A., Barbour F. and Gath D., 1997, A randomised controlled trial and cost analysis of problem-solving treatment for emotional disorders given by community nurses in primary care. The British Journal of Psychiatry, 170, 113-119

Mynors-Wallis, L. M., Gath, D. H., Day, A. and Baker, F., 2000, Randomised controlled trial of problem solving treatment, antidepressant medication, and combined treatment for major depression in primary care. British Medical Journal, 320, 26-30.

Mynors-Wallis, L. M., 2005. Problem Solving for Anxiety and Depression: A Practical Guide. Oxford University Press.

National Institute for Clinical Excellence, 2004. Management of Depression in Primary and Secondary Care. Clinical Guidelines, London: NICE, Available at http://www.nice.org.uk/CG023.

National Institute of Clinical Excellence, 2005. Depression in Children and Young People: Identification and Management in Primary, Community and Secondary Care. National Clinical Practice Guideline. Leicester: British Psychological Society and Royal College of Psychiatrists, Available at http://www.nice.org.uk/CG028.

National Institute for Clinical Excellence, 2005. Suggested Actions for Implementing the NICE Clinical Guidelines on Depression in Children and Young People. London, Department of Health.

Nielson, L. (1990). Impact of creative problem solving training: An in-depth evaluation of a six day cours in creative problem solving.Master project, State University College at Buffalo, NY.

Neimeyer, R. A., Robinson, L. A., Berman, J. S., Haykal, R., 1989, Clinical outcome of group therapies for depression. Journal of Group Analysis , 22, 73-86

Neshat Doost, H. T., Nouri, N., Molavi, H., Kalantari, M. and Mehrabi, H. A., 2005, Standardization of Mood and Feelings Questionnaire and investigation on the prevalence of depressive disorder in the Esfahan adolescents. Journal of Psychology, 9 (4), 33-42.

Nezu, A. M., and Ronan, G. F., 1985, Life stress, current problems, problem solving, and depressive symptoms: An integrative model. Journal of Consulting and Clinical Psychology, 53 (5), 693–697.

Nezu, A.M., 1986, Efficacy of a social problem-solving therapy approach for unipolar depression. Journal of Consulting and Clinical Psychology, 54 (2), 196-202.

Nezu, A. M., Nezu, C. M., and Nezu, V. A., 1986, Depression, general distress, and causal
attributions among university students. Journal of Abnormal Psychology, 95 (2), 184-186.

Nezu, A. M., Nezu, C. M., Saraydarian, L., Kalmar, K. and Ronan, G. F., 1986, Social problem solving as a moderating variable between negative life stress and depression. Cognitive Therapy and Research, 10 (5), 489–498.

Nezu, A. M., Perri, M. G., and Nezu, C. M. 1987, Validation of a problem-solving/stress model of depression. Presented to the American Psychological Association, New York, August.

Nezu, A.M. and Ronan, G.F., 1987, Social problem solving and depression: Deficits in generating alternatives and decision making. The Southern Psychologist, 3(1), 29-34.

Nezu, A. M., 1987, A problem solving formulation of depression: A literature review and proposal of a pluralistic model. Clinical Psychology Review, 7 (2), 121–144.

Nezu, A. M. and Ronan, G. F., 1988, Problem solving as a moderator of stress-related depressive symptoms: A prospective analysis. Journal of Counseling Psychology, 35 (2), 134–138.

Nezu, A. M., Nezu, C. M., and Perri, M.G., 1989. Problem Solving Therapy for Depression: Theory, Research, and Clinical Guidelines. New York:Wiley.

Nezu, A. M., Nezu,C. M. and Perri, M.G., 1989. Problem solving therapy for depression: Theory, research, and clinical guidelines. New York: Wiley.

Nezu, A. M. and D'Zurilla, T. J., 1989. Social problem solving and negative affective states. *In*. P. C. Kendall and D. Watson, eds. Anxiety and Depression: Distinctive and Overlapping Features. New York: Academic Press, 285–315.

Nezu, A. M. and Perri, M.G., 1989, Problem solving therapy for unipolar depression: An initial dismantling investigation. Journal of Consulting and Clinical Psychology, 57, 450–452.

Nezu, A. M., Nezu,C. M., and Perri, M.G., 1990, Psychotherapy for adults within a problem solving framework: Focus on depression. Journal of Cognitive Psychotherapy: An International Quarterly, 4, 247–256.

Nezu, A. M., Nezu, C. M., Rothenberg, J. L. and D'Zurilla, T. J., 1996. Problem solving therapy. *In*. J. S. Kantor, ed. Clinical Depression During Addiction Recovery. New York: Marcel Dekker, 187–219.

Nezu, A. M., Nezu, C. M., Friedman, S. H., Faddis, S. and Houts, P. S., 1998. Coping With Cancer: A Problem Solving Approach. Washington, DC: American Psychological Association.

Nezu, A. M., Nezu, C.M. and Lombardo, E., 2003. Problem-solving therapy. *In*. W. O'Donohue, J. E. Fisher, S. C. Hayes, eds. Cognitive Behavior Therapy: Applying Empirically Supported Techniques in Your Practice, Hoboken, NJ: John Wiley & Son, 301-307.

Nezu, A. M., Wilkins, V. M. and Nezu, C. M., 2004. Social problem solving, stress, and negative affect. *In*. E. C. Chang, T. J. D'Zurilla and L. J. Sanna, eds. Social Problem Solving. Washington, DC: American Psychological Association, 49−65.

Nezu, A. M., Nezu, C. M., Jain, D., & Lee, M., 2009. Social problem solving and depression among patients with congestive Herat failure. Presented to the Society of Behavioral Medicine, Montreal, Canada, April.

Nezu, A. M., & Nezu, C. M., 2010. Problem-solving training. Paper presented to the Department of Veterans Affairs Mental Health Conference: Implementing a Public Health Model for Meeting the Mental Health Needs of Veterans, Baltimore, MD, July.

Nolen-Hoeksema, S., 1991, Responses to depression and their effects on the duration of depressive episodes. Journal of Abnormal Psychology, 100 (4), 569–582.

Nolen-Hoeksema, S., and Girgus, J. S., 1994, The emergence of gender differences in depression during adolescence. Psychological Bulletin, 115(3), 424–443.

Nolen-Hoeksema, S., 2001, Gender differences in depression. Current Directions in Psychological Science, 10 (5), 173–176.

Nolan, S. A., Flynn, C. and Garber, J., 2003, Prospective relations between rejection and depression in young adolescents. Journal of Personality and Social Psychology, 85 (4), 745–755.

Nolen-Hoeksema, S., and Hilt, M. L., 2009, Handbook of Depression in Adolescents, Routledge, Taylor and Francis Group, London.

Noller, R. B., and Parnes, S. J., 1972. Applied creativity: The creative studies project: Part III The curriculum. Journal of Creative Behavior, 6(4), 275-294.

Noller, R., Parnes, S. and Biondi, A., 1976. Creative Action Book. New York: Charles Schribner Sons.

Noller, R., 1977. Scratching the Surface of Creative Problem-Solving: A Bird's Eye-View of CPS. Buffalo, New York: D.O.K. Publishers, Inc.

Osborn, A. F., 1953. Applied Imagination: Principles and Procedures of Creative Thinking. New York: Charles Scribner Sons.
Osborn, A. F., 1956. Ways to be more creative. *In*. The Meeting of the Education Committee, January 31, New York: Sales Executives Club of New York.

Osborn, A. F., 1957. Applied Imagination: Principles and Procedures of Creative Thinking 2nd ed. New York: Charles Scribner Sons.

Osborn, A. F., 1963. Applied Imagination, Principles and Procedures of Creative Problem Solving. New York: Scribner.

Osborn, A. F., 1965. The Creative Trend in Education. Buffalo, New York: Creative Education Foundation.

Osborn, A. F., 1967. Applied Imagination: Principles and Procedures of Creative Thinking. 3nd ed. New York: Charles Scribner Sons.

Osborn, A., 1979. Applied Imagination. 3nd ed. New York: Lee Hastings Bristol.
Parnes, S., 1967. Creative Behaviour Workbook. New York: Charles Schribner Sons.

Parnes, S. J. and Noller, R. B., 1972a, Applied creativity: The creative studies project: Part I - The development. Journal of Creative Behavior, 6 (1), 11-22.

Parnes, S. J. and Noller, R. B. 1972b, Applied creativity: The creative studies project: Part II - Results of the two-year program. Journal of Creative Behavior, 6 (3), 164-186.

Parnes, S. J. and Noller, R. B., 1973, Applied creativity: The creative studies project: Part IV - Personality findings and conclusions. Journal of Creative Behavior, 7 (1), 15-36.

Parnes, S., Noller, R. and Biondi, A., 1977. Guide to Creative Action. New York: Charles Schribner Sons.

Parnes, S.J., ed., 1992. Source Book for Creative Problem-Solving: A Fifty Year Digest of Proven Innovation Processes. Buffalo, New York: Creative Education Foundation Press.

Parnes, S.J., 1997. Optimize the Magic of Your Mind. Buffalo, New York: Creative Education Foundation Press.

Patel, V., Flisher, A. J., Hetrick, S. and McGorry, P., 2007, Mental health of young people: A global public-health challenge. The Lancet, 369 (9569), 1302–1313.

Pathak, S., Kratochvil, C. J., Rogers, G. M., Silva, S., Vitiello, B., Weller, E. and March, J. S., (2005), Comparative efficacy of cognitive behavioural therapy, fluoxetine, and their combination in depressed adolescents: Initial lessons from the treatment for adolescents with depression study. Current Psychological Reports, 7 (6), 429-434.

Patterson, G. R., Littman, R. A. and Bricker, W., 1967, Assertive behaviour in children. Monographs of the Society for Research in Child Development, 32 (5), 1-43.

Pattison, S. and Harris, B., 2006, Counselling children and young people: A review of the evidence for its effectiveness. Counselling and Psychotherapy Research, 6, 4 233-237.

Peers, Ian, 1996. Statistical Analysis for Education and Psychology Researchers. London: Falmer.

Perri, L., Lennie, C., and Humphrey, N., 2008, Emotional literacy in the primary classroom: teacher perceptions and practices. Education 3-13, 36: 1, 27 -37

Piaget. J., 1954. Theory of Intelligence. Englewood Cliffs, New Jersey: Prentice-Hall.

Platt, J. j., Spivack, G., Altman, N., Altman, D. and Peizer, S. B., 1974, Adolescent problem-solving thinking. Journal of Consulting and Clinical Psychology, 42 (6), 787-793.

Possel, P., Baldus, C., Horn, A. B., Groen, G., Hautzinger, M. 2005, Influence of general self-efficacy on the effects of a school-based universal primary prevention program of depressive symtpoms in adolescents: a randomized and controlled follow-up study. Journal of Child Psychology and Psychiatry, 46:982-994.

Pössel, P., Horn, A. B. & Hautzinger, M., & Groen, G., 2004, School-based Universal Primary Prevention of Depressive Symptoms in Adolescents: Results of a 6-Month Follow-up. Journal of the American Academy of Child and Adolescent Psychiatry, 43, 1003–1010.

Powell, T. J., 1994. Understanding the Self-Help Organization: Frameworks and Findings. Thousand Oaks, CA: Sage.

Prinstein, M. J. and Aikens, J. W., 2004, Cognitive moderators of the longitudinal association between peer rejection and adolescent depressive symptoms. Journal of Abnormal Child Psychology, 32 (2), 147–158.

Prowse, M. and Camfield, L., 2009, What role for qualitative methods in randomized experiments?' Working Paper 2009.05, Institute of Development Policy and Management, University of Antwerp, Antwerp : IOB.

Puccio, G. J. and Murdock, M. C., 2001, An essential life skill. *In*. V. A. Alexandria, ed. Developing Mind. Plerandria, VA: Association for Supervision and Curriculum Development, 67-71.

Raiff, N. R., 1982, Self-help participation and quality of life: A study of the staff of recovery: helping people to help themselves. Prevention in Human Services, 1(3), 79–89.

Redburn, D. and Juretich, M., 1989, Some considerations for using widowed self-help group leaders. Gerontology & Geriatrics Education, 9(3), 89-98.
Reinherz, H. Z., Paradis, A. D., Giaconia, R. M., Stashwick, C. K. and Fitzmaurice, G., 2003, Childhood and adolescent predictors of major depression in the transition to adulthood. American Journal of Psychiatry, 160(12), 2141–2147.

Reivich, K.J., 1996. The prevention of depressive symptoms in adolescents. Unpublished doctoral dissertation, University of Pennsylvania, Philadelphia.

Renshaw, P. D. and Asher, S. R., 1982. Social competence and peer status: The distinction between goals and strategies. *In*. K. H. Rubin and H. S. Ross, eds. Peer Relationships and social skills in childhood. New York: Springer-Verlag, 375-395.

Reynolds, W. M., 1986. Reynolds Adolescent Depression Scale. Odessa, Fla.: Psychological Assessment Resources.

Reynolds, W. M., 1987. Reynolds Adolescent Depression Scale: Professional Manual. Odessa, FL: Psychological Assessment Resources.

Reynolds, W. M., 1994. Assessment of depression in children and adolescents by self-report questionnaire, *In* W. M. Reynolds & H. F. Johnston, eds. Handbook of Depression in Children and Adolescents, New York: Plenum Press, 209–234.

Ricelli, S. E., Nezu, C. M., & Nezu, A. M., 2010. Personality is not destiny: Social problem solving as a mediator of traits and emotional distress. Paper presented at the Annual Convention of the Association of Behavioural and Cognitive Therapies, San Francisco, CA, November.

Richards, D. A., Lovell, K., , Gilbody, S., , Gask, L., Torgerson, D., Barkham, M., Bland, M., Bower, P., Lankshear, A. J., Simpson, A., Fletcher, J., Escott, D., , Hennessy, S. and Richardson, R., 2008, Collaborative care for depression in UK primary care: A randomized controlled trial. Psychological Medicine, 38, 279–287.

Roberts, R. E., Lewinsohn, P. M., Seeley, J. R., 1995, Symptoms of DSM-III-R major depression in adolescence: evidence from an epidemiological survey. J Am Acad Child Adolesc Psychiatry, 34:1608–1617

Roff, M., Sells, B. and Golden, M., 1972. Social Adjustment and Personality Development in Children. Minneapolis: University of Minneapolis Press.

Rogers, C., 1959. Toward a theory of creativity. *In*. H. H. Anderson, ed. Creativity and Its Cultivation. New York: Harper & Brothers, 51-63.

Rosello, J., Bernal, G., 1999, The efficacy of cognitive-behavioural and interpersonal treatments for depression in Puerto Rican adolescents. Journal of Consulting and Clinical Psychology 67:734-745.

Rothwell, P. M., 2005, External validity of randomised controlled trials: to whom do the results of this trial apply? Lancet 365 (9453) 82–93.

Rotter, J. B., 1966, Generalises expectancies for internal versus external control of reinforcement. Psychological Monographs, 80 (1), 1-28.

Rudolph, K. D., Hammen, C. and Burge, D., 1994, Interpersonal functioning and depressive symptoms in childhood: Addressing the issues of specificity and comorbidity. Journal of Abnormal Child Psychology, 22 (3), 355–371.

Rudolph, K. D., Dennig, M. D. and Weisz, J. R., 1995, Determinants and consequences of children's coping in the medical setting: Conceptualization, review, and critique. Psychological Bulletin, 118 (3), 328–357.

Rudolph, K. D., and Clark, A. G. 2001. Conceptions of relationships in children with depressive and aggressive symptoms: Social-cognitive distortion or reality? Journal of Abnormal Child Psychology, 29 (1), 41–56.

Rudolph, K. D., Kurlakowsky, K. D. and Conley, C. S., 2001, Developmental and social-contextual origins of depressive control-related beliefs and behavior. Cognitive Therapy and Research, 25 (4), 447–475.

Rudolph, K. D., Hammen, C., & Daley, S. E., 2006, Mood disorders. *In*. D. A. Wolfe and E. J. Mash, eds. Behavioural and Emotional Disorders in Adolescents: Nature, Assessment, and tTeatment. New York: Guilford Press, 300–342.

Rudolph, K.D., 2009. The interpersonal context of adolescent depression. *In*. S., Nolen-Hoeksema and L. M., Hilt, eds. Handbook of depression in adolescents. New York: Routledge.

Ryan, N.D., Puig-Antich, J., Ambrosini, P., Rabinovich, H., Robinson, D., Nelson, B., Iyengar, S., Twomey, J., 1987. The clinical picture of major depression in children and adolescents. Arch. Gen. Psychiatry 44 (10), 854–861.

Sandelowski, M., 2000, Combining qualitative and quantitative sampling data collection and analysis techniques in mixed mmethod studies. Research in Nursing and health, 23, 246-255.

Sawyer, M. G., Arney, F. M., Baghurst, P. A., Clark, J. J., Graetz, B.W., Kosky, R. J., et al., 2000. Child and Adolescent Component of the National Survey of Mental Health and Well Being: The Mental Health of Young People in Australia. Canberra, Australia: Mental Health and Special Programs Branch, Commonwealth Department of Health and Aged Care.

Seligman, M. E. P., 1991. Helplessness: On Depression, Development, and Death. 2nd ed. New York: WH Freeman.

Sharp, C., Goodyer, I. M. and Croudace, T. J., 2006, The short mood and feelings questionnaire item response theory and categorical factor analysis of self-report ratings from a community sample of 7-through 11-year old children. Journal of Abnormal Child Psychology, 34 (3), 379-391.

Shatté, A.J., 1997. Prevention of depressive symptoms in adolescents: Issues of dissemination and mechanisms of change. Unpublished doctoral dissertation, University of Pennsylvania, Philadelphia.

Sheffield, J. K., Spence, S. H., Rapee, R. M., Kowalenko, N., Wignall, A., Davis, A., et al., 2006, Evaluation of universal, indicated, and combined cognitive- behavioural approaches to the prevention of depression among adolescents. Journal of Consulting and Clinical Psychology, 74 (1), 66–79.
Shochet, I., Dadds, M. R., Holland, D., Whitefi eld, K., Harnett, P. H. and Osgarby, H. M., 2001, The efficacy of a universal school-based program to prevent adolescent depression. Journal of Clinical Child Psychology, 30 (3), 303–315.

Shure, M. B., Spivack, G. and Jaeger, M. A., 1971, Problem-solving thinking and adjustment among disadvantaged preschool children. Child Development, 42 (6), 1791-1803.

Shure, M. B. and Spivack, G., 1972, Means-ends thinking, adjustment, and social class among elementary school-aged children. Journal of Consulting and Clinical Psychology, 38 (3), 348-353.

Siegel, J. M. and Platt, J. J., 1976, Emotional and social real-life problem-solving thinking in adolescent and adult psychiatric patients. Journal of Clinical Psychology, 32 (2), 230-232.

Singleton, N., Bumpstead, R., O'Brien, M., Lee, A., Meltzer, H. Y., 2001. Office of National Statistics : Psychiatric Morbidity Among Adults Living in Private Households. London: HMSO.

Solomon, R. W. and Wahler, R. G., 1973, Peer reinforcement of classroom problem behaviour. Journal of Applied Behaviour Analysis, 6 (1), 49-56.

Spence, S. H., Sheffield, J. and Donovan, C., 2002, Problem-solving orientation and attributional style: Moderators of the impact of negative life events on the development of depressives in adolescence. Journal of Clinical Child Psychology, 31 (2), 219–229.

Spence, S. H., Sheffi eld, J. K. and Donovan, C. L., 2003, Preventing adolescent depression: Evaluation of the Problem Solving for Life Program. Journal of Consulting and Clinical Psychology, 71 (1), 3–13.

Spence, S. H., Sheffield, J. K. and Donovan, C. L., 2005, Long-term outcome of a school-based, universal approach to prevention of depression in adolescents. Journal of Consulting and Clinical Psychology, 73 (1), 160–167.

Spence, S.H., 2008. Integrating Individual and Whole-School Change Approaches in the Prevention of Depression in Adolescents. In J. R. Z. Abela, & B. L. Hankin (eds). Handbook of Depression in Children and Adolescents. New York: Guilford Press.

Spivack, G. and Shure, M., 1974. Social Adjustment of Young Children. San Francisco: Jossey-Bass.

Spivack, G., Platt, J. J. and Shure, M. B., 1976. The Problem Solving Approach to Adjustment. San Francisco: Jossey-Bass.

Stein, B.M., 1974. Stimulating Creativity: Vol. 1. Individual Procedures. New York: Academic Press.

Stein, B.M., 1975. Stimulating Creativity: Vol. 2. Group Procedures. New York: Academic Press.

Sternberg, R.J., 2006, Creating a vision of creativity: The first 25 years. Psychology of Aesthetics, Creativity, and the Arts, S (1), 2-12.

Stice, E., Ragan, J., and Randall, P., 2004, Prospective relations between social support and depression: Differential direction of effects for parent and peer support? Journal of Abnormal Psychology, 113 (1), 155–159.

Stter, R. A., Kumar, G., Ranieri, W. F. And Beck, A., 1998, Use of the Beck Depression Inventory-II with adolescent psychiatric outpatients. Journal of Psychopathology and Behavioral Assessment, 20 (2), 127-137.

Sullivan, H. S., 1953. The Interpersonal Theory of Psychiatry. New York: Norton.

National Advisory Mental Health Council Workgroup on Child and Adolescent Mental Health Intervention and Deployment, 2001. Blueprint for Change: Research on Child and Adolescent Mental Health. Washington, DC

Tashakkori, A., & Teddlie, C., 1998, Mixed methodology: Combining qualitative and quantitative approaches. Applied Social Research Methods, No. (46). Thousand Oaks, CA: Sage.

Tashakkori, A., & Teddlie, C., 2003. *In* A. Tashakkori & C. Teddlie, The past and future of mixed method research, eds. Handbook of mixed methods in social & behavioural research. Thousand Oaks, CA: Sage.

Torrance, E. P., 1974. Norms and Technical Manual for the Torrance Test of Creative Thinking. Bensenville, IL: Scholastic Testing Services.

Torrance, E. P. and Safter, H. T., 1999. Making the Creative Leap Beyond. Buffalo, New York: Creative Education Foundation.

Towler C, Lofthouse R, Leat D. Comparing coaches' and senior managers' perceptions of how peer coaching interacts with performance management. School Leadership and Management 2011.

Ullmann, C. A., 1957, Teachers, peers, and tests as predictors of adjustment. Journal of Educational Psychology, 48 (5), 257-267.

U.S. Public Health Service, 2000. Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda. Washington, DC: Department of Health and Human Services.

Vasilevskaia, T., Nezu, C. M., & Nezu, A. M. 2007, Problem-solving as a mediator of optimism and psychological well-being. Paper presented at the Association for Behavioral and Cognitive Therapies, Philadelphia.

Verhoef, M. J., Vanderheyden, L., 2006. Combining qualitative methods and randomized controlled trials in CAM intervention research. In: Adams J, editors. Researching Complementary and Alternative Medicine. New York: Routledge, pp.72-87.

Warshofsky, F., 1999. Stealing Time: The New Science of Aging. New York: TV Books.

Weersing, W. R., Gonzalez, A., 2009. Effectiveness of Interventions for adolescent depression: Reason for hope or cause for concern? *In*. S., Nolen-Hoeksema and L. M., Hilt, eds. Handbook of Depression in Adolescents. New York: Routledge.

Weersing, V. R., Rozenman, M. and Gonzalez, A., 2009, Core components of therapy in youth: Do we know what to disseminate? Behaviour Modification, 33 (1), 24–47.

Weisz, J. R., 1986. Understanding the developing understanding of control. *In*. M. Perlmutter, ed. Cognitive Perspectives on Children's Social and Behavioral Development: The Minnesota Symposia on Child Psychology. Hillsdale, NJ: Erlbaum, 219–285.

Weisz, J. R., Sweeney, L., Proffi tt, V. D. and Carr, T., 1993, Control-related beliefs and self-reported symptoms in late childhood. Journal of Abnormal Psychology, 102 (3), 411–418.

Weiss, B., Weisz, J.R., Politano, M., Carey, M., Nelson, W.M., Finch, A.J., 1992. Relations among self-reported depressive symptoms in clinic-referred children versus adolescents.
J. Abnorm. Psychol. 101 (3), 391– 397.

Weiss, B., Garber, J., 2003. Developmental differences in the phenomenology of depression. Dev. Psychopathol. 15 (2), 403– 430.

Weissman, M. M., Markowitz, J. C. and Klerman, G. L., 2000. Comprehensive Guide to Interpersonal Psychotherapy. New York: Basic Books.

Wittchen, H. U., Nelson, C. B. and Lachner, G., 1998, Prevalence of mental disorders andpsychosocial impairments in adolescents and young adults. Psychological Medicine, 28(1), 109–126.

WHO, Mental Health Department Web Page
http://www.who.int/mental_health/management/depression/definition/en/ Last visited

WHO, Depression Fact Sheet. http://www.who.int/mediacentre/factsheets/fs265/en/ World Health Organization. Last visited: 10-7-2009.

WHO, 2003. World Health Organization. Investing in Mental Health. Geneva: World Health Organization, 2003.

Woodhouse, P., 1998. People as informants, in A. Thomas, J. Chataway and M. Wuyts, eds. Finding Out Fast: Investigative Skills for Policy and Development. Oxford: University Press.
World Bank; 2ed. World Development Report, 2001. Attacking Poverty. New York: Oxford University Press.

World Health Organization/Regional Office for Europe. Mental Health in: WHO's European Region, Report for the 53rd Session of the Regional Committee. 11-9-2003.

Yang, B. And Clum, G. A., 1996, Effects of early negative life experiences on cognitive functioning and risk for suicide: a review. Clinical Psychology Review, 16, 5, 177-195.

Yesavage, J. A., Brink, T. L., Rose, T. L., Lum, O., Huang, V., Adey, M. B. and Leirer, V.
O., 1983, Development and validation of a geriatric depression screening scale: A preliminary report. Journal of Psychiatric Research, 17 (1), 37-49.

Young, A. S., Klap, R., Sherbourne, C. D. and Wells, K. B., 2001, The quality of care for depressive and anxiety disorders in the US. Archives of General Psychiatry, 58 (1), 55–61.

Appendix 1
Searching strategy

With the goals of the study in mind, a detailed review was conducted of research to date to examine the quality of the evidence in relation to the research concepts. The search strategy involved literature searches using PsychInfo, PsycArticles, Medline and Eric, Google-Scholar. The last search was done in October 2010. Databases of ongoing and existing trials and systematic reviews were searched including the Cochrane Central Register of Controlled Trials (CENTRAL), the Cochrane Database of Systematic Reviews, The National Research Register (hftp: //www. nrr. nhs. uM), and the metaRegister of Controlled Trials (hftp:/ /www.c ontrolled-trialsc. om/mrct/). The following electronic databases were also searched - via OVID - for published reviews, and individual trials: Embase Psychiatry (1997 to 2009), Psyclnfo (1990 to 2008), Medline (1990 to 2008), the Cochrane Database of Systematic Reviews, the Cochrane Central Register of Controlled Trials (CENTRAL). Any studies being identified as possibly relevant to the research were searched for further relevant articles. Even those research studies that had not used randomized control or comparison groups could have valuable references. Using keywords relating to depression (depress*) and prevention (prevent*) and entering adolescent or youth and focusing on young people between the ages 9-16, references from the identified papers were examined. Looking at the specific research concept of creative problem solving for depressed adolescents, the main key words or phrases of: depressed adolescent, aetiology of depressed adolescents, interventions for depressed adolescents, prevention programmes for depression in adolescents, creative problem solving, cognitive behavioural therapy, and problem solving therapy for depression in adolescents were searched for along with any synonym and related terms. Studies were included only if they had been published in peer-reviewed

journals and used a well-recognised, reliable and valid measure for the assessment of depression.

Authors of relevant studies and known experts (such as Sternberg, Treffinger, Nezu, The CPS in Buffalo etc...) in the field were contacted to acquire any information regarding the relationship between CPS and depression. These searches were carried out in each of the databases named above, as well as manual searches of the reference lists of any articles identified by the database searches as being potentially relevant for the research, with the following main search terms:

1) Problem solving therapy for depression in youth

2) Intervention or psychological intervention for depression in youth(s) evaluated

3) Aetiology of depression in youth

4) Intervention programmes in school

5) Creative problem solving for life challenges

Abstracts were checked for potentially relevant studies and the studies identified during the search were assessed for relevance to the present research based on information contained in the title and the abstract, and the full text of each relevant paper was obtained for further evaluation.

Appendix 2

The 5 Processes of CPST (adapted from Osborn, 1953; Parnes, 1967 & Isaksen et al., 1985) for Depressed Youth

Fact-Finding

This stage is designed to increase the participants' understanding of an objective area, and it has several advantages. It first of all helps to avoid the 'premature closure' of a problem and also helps in noticing aspects of the objective area that have previously been overlooked or not anticipated. It also allows us to find new ways of viewing the objective area, consider alternative problem perspectives and finally determine priority areas; all of which will help refine our understanding of the problem.

During the fact-finding stage, the primary task for participants is to gather as much data as they possibly can about their objective area and to limit those data to 'just the facts'. Generating data is done through divergent thinking and can be assessed by considering observations, feelings, knowledge and thoughts and deferring judgement. The next aim is to distinguish relevant from the irrelevant data. In order to identify relevant information, a general checklist of questions beginning with who, what, where, when, why, and how, could be used. Then it's time to begin establishing the priority areas through convergent thinking in a systematic approach to consider and review all the data collected and to look for those 'hits' that are of more importance in relation to the objective area. The next step is to look for common ground between all distinguished 'hits' and select them as 'relates'. The most important cluster of 'relates' then need to be selected as 'critical concerns' and finally all the 'critical concerns' need to be prioritised. Once the participants identify priorities they can then proceed to suggest a tentative problem statement.

Problem-Finding

Problem-finding is one of the most important stages since it channels efforts towards the development of a problem statement that will be used to generate potential solutions. Failure to arrive at the correct problem statement at this stage means that the participant could potentially spend time dealing with the wrong problem at later stages; therefore, the problem-finding stage to some extent determines how successful solving that problem will be. It also teaches the participants not to limit their options by defining their problems too narrowly and to consider all angles in viewing the situation.

The goal of this stage is developing a statement of the real problem which is the one that is most important to the individual. The first task, in the divergent phase, is the review of all data generated during fact-finding and a list of ownership and action elements must be considered to contribute to any potential redefinition of problem, using methods such as the "why method" as many redefinitions as possible must be generated. All boundaries of the problem situation must also be explored. In the convergent phase, 'hits', 'relates' and 'hotspots', must be identified and finally one final statement must be selected.

In order to achieve the best possible results, a correct problem statement should clearly state 'who will do what'. In other words it should include an indication of who owns the problem, an action verb indicating what will be done and it should also spell out the goal or objective area. It should also be short and concise, which only include one problem area to begin with In What Ways Might ('IWWM'). This appropriately made problem statement will then pave the way for the flow of ideas towards solving the problem, and if that doesn't happen, another problem perspective should be considered.

Idea-Finding

By the time the participants start this stage they should have a good understanding of the general problem situation. Therefore the next stage is to gather help to stimulate ideas using various either individual or group techniques to generate more ideas. One important difference between individual and group techniques is that all individual techniques could be modified for use in groups but not all group techniques could be used by the individual. The advantages of using group techniques could include the potential for generating more good quality ideas more quickly, satisfying the need of people for social interaction, and finally potentially creating an atmosphere that can assist in further creative thinking. However, there are also a number of disadvantages associated with group techniques. Some groups can create a climate that makes creative thinking rather difficult by, for example, criticising each other's ideas which can cause frustration in the group. Also interpersonal problems and conflicts could arise and dampen the playful mood required for creative thinking, and finally working in a group is more time-consuming than working individually.

What is common is that at this stage the divergence phase should be guided by the four principles of brainstorming, which are to: 1.defer all judgment, 2. generate as many ideas as possible, 3. the wilder the ideas, the better, 4.combine ideas.

The primary purpose of this stage is to generate as many ideas as possible and to assist in that several techniques exist used to stimulate idea generation, such as:

- What if?

  Listing a number of what if questions to try and view the problem from different angles

- Two words

  Two key words are selected form the problem statement and are substituted with alternative words to suggest more ideas

- Reversals

  This involves reversing the elements of the problem statement in as many ways as possible. These reversals do not have to be logical ones and in fact illogical reversals are more likely to lead to the generation of new innovative ideas.

- Relational algorithms

  Two key words are selected from the problem statement and a word chosen from the list of 42 “relational” words is placed in between them.

- Semantic intuition

  This process generates names and uses them to prompt ideas.

- Focused-object

  This technique uses the principle of forced relationship between two elements to suggest new ideas from the combination.

- Attribute-association chains

  Participants write down a list of all attributes of a problem and next list all the sub attributes they can think of and the free associate with each attribute.

- Analogies

New perspectives on a problem are gained by being freed from familiar patterns. This is done by taking a temporary break from the problem by thinking about something similar and making comparisons. The convergence phase of the idea finding stage is similar to those in the stages before. It involves looking for hits, relates and hotspots. At the end of this stage the participants should be left with at least three ideas for further evaluation during solution finding.

Solution-Finding

The task in this stage is to decide which ideas out of those selected before could have the potential to solve the problem stated. This requires more than just negative critical judgment and the emphasis should be more upon affirmative judgment and recognising potential in each idea by considering the positive points and their best features and if possible modifying them into a workable solution.

In contrast to other stages so far, solution-finding contains two sets of divergent and convergent activities. Divergence itself consists of two activities. The first is to generate many criteria for evaluating the ideas with delayed judgment. Then there is a need for convergence to select the best criteria and using those selected criteria as judgment standards, converge again to select the best ideas. Finally using divergence again with the chosen ideas, generating the best workable solution possible. Using criteria in evaluating ideas has certain advantages, as it makes the decision making explicit rather than implicit, and as a result the final selection would have higher quality.

The three major processes in this stage are screening, which compares each idea with each criterion and therefore reduces the massive number of ideas if they fail to fit the criteria; selecting, which is a more systematic approach compared to screening and

further assists in the reduction of ideas by putting them through a matrix of criteria and therefore provides a more in depth analysis of ideas; and supporting, which consists of the principle of affirmative judgment and the effort to improve the potential of ideas by altering them. The goal is to arrive at a workable solution.

Acceptance-Finding

The aim of this stage is to come up with a plan of action after selecting the high quality solutions, but before implementing any solution, all potential challenges and obstacles ahead must be taken into account and appropriate precautions must be put in place. The acceptance finding stage is of great importance, since it first of all convinces the person that the best workable solution has been chosen and if there are any doubts and uncertainties about the solution, these could be reduced or eliminated at this stage. In addition gaining the acceptance of the participant helps with gaining the acceptance of others so it requires more person-to-person interaction.

Forcing the participant to consider all possible obstacles and anything that could go wrong during the implementation of the solution helps to overcome potential failures.

The process starts by generating a list of solution assistors and resistors which are factors that can either help or hinder the process of the implementation of the solution. Then, depending on the timescale, the participants either need to do a potential problem analysis or proceed immediately to developing a plan of action. The action plan consisting of immediate, short-range and long-range activities produced after analysing assistors and resistors, PPA, implementation checklist, solution-finding criteria and a final evaluation of ownership and motivation.

Once all the above is considered, the solution could be easily put into practice.

Appendix 2.1

The definitions of variables in the CPS process, based on Osborn (1979) and Parnes (1992) are proposed as followed:

Fact finding: The stage of increasing the adolescent's understanding of an objective area, to avoid 'premature closure' of a problem and to notice aspects of the objective area that have previously been overlooked or not anticipated, finding new ways of viewing the objective area, considering alternative problem perspectives, determining priority areas and refining understanding the problem

Task 1: gathering as much data as possible about the objective area and limiting those data to 'just the facts'; generating data through divergent thinking and considering observations, feelings, knowledge and thoughts and deferring judgement

Task 2: distinguishing the relevant data from the irrelevant, (a general checklist of questions beginning with who, what, where, when, why, and how, could be used)

Task 3: establishing the priority areas through convergent thinking in a systematic approach in which pupils consider and review all the data collected and look for those 'hits' that are of more importance in relation to the objective area.

Task 4: look for common ground between all distinguished 'hits' and select them as 'relates'. The most important cluster of 'relates' then need to be selected as 'critical concerns'

Task 5: 'critical concerns' need to be prioritised. Participants can then proceed to suggest a tentative problem statement.

Problem-Finding: the crucial efforts towards the development of a correct problem statement to generate potential solutions; failure to do this could mean spending time

dealing with the wrong problem, and in fact this stage determines how successful solving that problem will be.

Task 1: avoiding limitations of options by considering all angles in viewing the situation using the '6 hats' exercise (White Hat: facts and information; Red Hat: feelings and emotions; Black Hat: critical judgement; Yellow Hat: positive judgement; Green Hat: alternatives and creativity; Blue Hat: the big picture) in order to develop a statement of the real and important problem for the individual.

Task 2: in the divergent phase, a review of all data generated during fact-finding; a list of ownership and action elements must be considered to contribute to any potential redefinition of problems and, using methods such as 'why', as many redefinitions as possible must be generated. All boundaries of the problem situation must also be explored.

Task 3: is the convergent phase where 'hits', 'relates' and 'hotspots' must be identified and finally one final statement must be selected.

Task 4: a correct problem statement should clearly state 'who will do what', it should include an indication of who owns the problem, an action verb indicating what will be done and it should also spell out the goal or objective area, a short and concise, only one problem area, beginning with (In What Ways Might "IWWM") and this problem statement will then pave the way for the flow of ideas towards solving the problem and, if that doesn't happen, another problem perspective should be considered.

Idea-Finding: with a good understanding of the problem situation in the last two stages, adolescents start to gather as much help to stimulate ideas using various either individual or group techniques.

Task 1: generate more ideas individually, in the divergence phase four principles of brainstorming will guide the process which are: 1. defer all judgment, 2. generate as many ideas as possible, 3. the wilder the ideas, the better, 4. combine ideas.

Task 2: an optional task which involves social interaction with peers to assist in further creative thinking and obtain more good quality ideas. The group will be informed not to criticise each other's ideas to avoid frustration, interpersonal problems and conflicts in the groups.

Tasks 3-8: several techniques used to stimulate idea generation such as 'What if?' (listing a number of what if questions to try and view the problem from different angles) 'Two words' where two key words are selected form the problem statement and are substituted with alternative words to suggest more ideas 'Reversals', reversing the elements of the problem statement in as many ways as possible, including logical ones and illogical reversals, since illogical reversals are more likely to lead to the generation of new innovative ideas 'Relational algorithms', where two key words are selected form the problem statement and 'relational' words are placed in between them; 'Semantic intuition' to generates names and uses them to prompt ideas; 'Focused-object' with forced relationships between two elements to suggest new ideas from the combination; 'Attribute-association chains', where adolescents write down a list of all attributes of a problem and next list all the sub attributes they can think of and the free associate with each attribute; 'analogies'; where perspectives of a problem are gained by being freed from familiar patterns, taking a temporary break from the problem by thinking about something similar and making comparisons.

Task 9: the convergence phase of the idea finding stage is similar to those of the stages before, but involves looking for hits, relates and hotspots, where pupils should be remained with at least three ideas for further evaluation during solution finding.

Solution-Finding: deciding which ideas out of those selected before could have the potential to solve the problem stated. The goal is to arrive at an effective solution, which requires more than just negative critical judgment and the emphasis should be more upon affirmative judgment and recognising potential in each idea by considering the positive points and their best features and if possible modifying them into a workable solution**.**

Task 1: using convergence and divergence together, in divergence with delayed judgement, pupils generate as many criteria for evaluating the ideas as possible, then converge and select the best criteria. Using those selected criteria as judgement standards, converge again to select the best ideas, finally using divergence again on the chosen ideas, to generate the best workable solution possible. This uses criteria in evaluating ideas, makes the decision making explicit rather than implicit, and as a result the final selection would be of higher quality.

Task 2: screening selecting and supporting. Screening compares each idea with each criterion and therefore reduces the massive number of ideas if they fail to fit the criteria; selecting which is a more systematic approach compared to screening and further assists in the reduction of ideas by putting them through a matrix of criteria and therefore having a more in depth analysis of ideas; and supporting consists of the principle of affirmative judgment and the effort to improve the potential of ideas by altering them. The goal is to arrive at a workable solution.

Acceptance-Finding: the aim is to come up with a plan of action after selecting high quality solutions, but before implementing any solution, all potential challenges and obstacles ahead must be taken into account and appropriate precaution must be put in place. The acceptance finding stage is of great importance since it first of all convinces the person that the best workable solution has been chosen and if there are any doubts and

uncertainties about the solution, these could be reduced or eliminated at this stage. In addition gaining acceptance of the participant helps with gaining the acceptance of others.

Task 1: forcing the pupils to consider all possible obstacles and anything that could go wrong during the implementation of the solution to help overcome potential failures; generating a list of solution assistors and resistors which are factors that can either help or hinder the process of implementation of the solution

Task 2: the participants either need to do a potential problem analysis or proceed immediately to developing a plan of action. Immediate, short-range and long-range activities are produced after analysing assistor and resistors, solution-finding criteria and a final evaluation of ownership and motivation. Once all the above is considered, the solution could be put into practice.

Appendix3 SMFQ

SHORT MOOD AND FEELINGS QUESTIONNAIRE

This form is about how your child may have been feeling or acting recently.

For each question, please check how much she or he has felt or acted this way *in the past two weeks.*

If a sentence was true about your child most of the time, check TRUE.

If it was only sometimes true, check SOMETIMES.

If a sentence was not true about your child, check NOT TRUE.

		TRUE	SOME TIMES	NOT TRUE
1.	S/he felt miserable or unhappy	☐	☐	☐
2.	S/he didn't enjoy anything at all	☐	☐	☐
3.	S/he felt so tired that s/he just sat around and did nothing.	☐	☐	☐
4.	S/he was very restless	☐	☐	☐
5.	S/he felt s/he was no good any more	☐	☐	☐
6.	S/he cried a lot	☐	☐	☐
7.	S/he found it hard to think properly or concentrate	☐	☐	☐
8.	S/he hated him/herself	☐	☐	☐
9.	S/he felt s/he was a bad person	☐	☐	☐
10.	S/he felt lonely	☐	☐	☐
11.	S/he thought nobody really loved him/her	☐	☐	☐
12.	S/he thought s/he could never be as good as other kids	☐	☐	☐
13.	S/he felt s/he did everything wrong	☐	☐	☐

Appendix 4: BDI-II

Roche

V 0477

Beck Depression Inventory

CRTN: _____ CRF number: _____

Page 14 patient inits: _____

Baseline

BDI-II®

Date:

Name: _____ Marital Status: _____ Age: _____ Sex: _____

Occupation: _____ Education: _____

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during the **past two weeks, including today**. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness

0 I do not feel sad.
1 I feel sad much of the time.
2 I am sad all the time.
3 I am so sad or unhappy that I can't stand it.

2. Pessimism

0 I am not discouraged about my future.
1 I feel more discouraged about my future than I used to be.
2 I do not expect things to work out for me.
3 I feel my future is hopeless and will only get worse.

3. Past Failure

0 I do not feel like a failure.
1 I have failed more than I should have.
2 As I look back, I see a lot of failures.
3 I feel I am a total failure as a person.

4. Loss of Pleasure

0 I get as much pleasure as I ever did from the things I enjoy.
1 I don't enjoy things as much as I used to.
2 I get very little pleasure from the things I used to enjoy.
3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings

0 I don't feel particularly guilty.
1 I feel guilty over many things I have done or should have done.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.

6. Punishment Feelings

0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.

7. Self-Dislike

0 I feel the same about myself as ever.
1 I have lost confidence in myself.
2 I am disappointed in myself.
3 I dislike myself.

8. Self-Criticalness

0 I don't criticize or blame myself more than usual.
1 I am more critical of myself than I used to be.
2 I criticize myself for all of my faults.
3 I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes

0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.

10. Crying

0 I don't cry anymore than I used to.
1 I cry more than I used to.
2 I cry over every little thing.
3 I feel like crying, but I can't.

THE PSYCHOLOGICAL CORPORATION®
Harcourt Brace & Company
SAN ANTONIO
Orlando • Boston • New York • Chicago • San Francisco • Atlanta • Dallas
San Diego • Philadelphia • Austin • Fort Worth • Toronto • London • Sydney

_____ Subtotal Page 1

Continued on Back

0154018392
NR15645

Appendix 5 Permission letter from department of Education in Tehran

Appendix 6 Information sheet and consent form for parents

Group Cognitive Behaviour Skills and Group Creative Problem Solving for Young People in schools: Pilot Randomised Controlled Trial

(Request for Parental Assent)

Dear Parent/Guardian

We are writing to you to inform you of a small, but significant, research study that will be conducted in your daughter's school over the next 4 months. This work will be a further contribution to everything we already do to support our pupils and their mood and feelings. We are working with an experienced academic and professional (a lecturer and therapist and member of Azad University North Branch who is a PhD student in the University of Newcastle in the UK) to conduct a randomised controlled trial of comparing two courses of interventions. The study intends to examine whether six weeks of Group Cognitive Behavioural Skills, or six weeks of Group Creative Problem Solving, or six weeks of Group Puzzle Activities followed up with six days of optional CBT or CPS are helpful for school pupils in improving their mood and feelings.

The school that your daughter is in has been chosen at random. All pupils will then be invited to read the information sheet and complete confidential questionnaires about how they have been feeling over the last two weeks. The information sheet gives them information about the study, also about whether they would be interested in completing the questionnaires and

interviews and taking part in the research if they meet the criteria of the research. Students will only be asked to complete these questionnaires if they explicitly agree to do so, and those who do not want to will be set some school work for them to do instead.

The researcher will check all students' results and those who are eligible to take part and meet the criteria of the research are invited to meet the researcher to explain more to them about the study. Students who explicitly agree to participate in the study will then be randomly allocated to receive Cognitive Behaviour Skills, or Creative Problem Solving, once per week for 6 weeks, or Leisure Group Activity for 6 weeks followed by six days optional CBT or CPS.

During the study all of our usual high professional standards will be met, and the normal rules of confidentiality within child protection guidelines will be consistent with our current procedures. At each stage of this study, pupils will be given full information about what they are being asked to do, and will only be invited to take part if they have given their signed consent to do so. However, if you do not want your daughter to take part in any aspect of this study, please let project leader Mrs Soudabeh Ershadi Manesh know.

If you have any queries about this study, please do not hesitate to contact project leader by contacting the following address:

Project Leader: Mrs Soudabeh Ershadi Manesh

Tel: 02188693631

Mobile: 09122174971

s.ershadi-manesh@ncl.ac.uk

su_ershadi@yahoo.com

Yours faithfully,

'Head Teacher' Or Researcher

Please indicate below your decisions regarding the various parts of this research project:

I give my permission for the items checked "Yes" below:

1._____

(Parent/Guardian printed name)

_____

_____

(Parent/Guardian signature) Date

Yes **No**

_____ _____ my child's participation in completing questionnaires, participating in the therapies if she is eligible for this, interviewing my girl, and audio recording the sessions

Please return this page in school office Mrs…

Appendix 7 Information sheet for all pupils in screening processes

Cognitive Behavioural Skills and Creative Problem Solving for Young People:

INTRODUCTION

What is the study?

I am a PHD student carrying out this research at your school to find out how different interventions or skills can improve mood and feelings and if the interventions are better than nothing for the young people who are at high risk of depression. I am going to be offering those pupils who meet the criteria of research the chance to try out these interventions: 1-Cognitive Behaviour Skills for 6 weeks, or 2-Creative Problem Solving for six weeks, or 3-Leisure Group Activities for six weeks followed by six days of optional intervention CBT or CPS.

What is the research?

We want to compare and also to see if 6 weeks of two different interventions are better than not having 6 weeks of them for

improving mood

We want to work with some pupils at your school who think they would benefit from participating in the study

What do you want me to do now?

Do I have to fill in the questionnaires?

The first thing we need to do is to find out who might be eligible as well as interested in taking part in this research. So we are asking all pupils in your school to complete the first questionnaire. It asks you about how you have been feeling during the last two to four weeks. *If you decide to complete this questionnaire, this does not mean that you will 'have' to take part to the rest of the study.* This first part of the study is just to see who might be eligible and interested.

No, definitely not. It is entirely up to you whether or not you fill it in. If you don't want to, there will be some other work that you can do instead, and you won't be punished in any way for not completing the questionnaires – no-one will mind.

What happens if I want to stop?

It should take about 10-20 minutes to fill in the questionnaire.

You can stop at any time. That will be absolutely fine and there won't be any punishment.

What will happen to the things I write down?

Only the researchers will know about what you have written down on these questionnaires – they will not be seen by anyone in your school or your parents or friends. The only time we will have to tell someone at your school about what you say is if you write something which suggests that you, or someone else, are very likely to be hurt.

The answers that you give us will be stored very carefully; Papers with your name on them will be kept for some years and then destroyed. Other anonymous data will be kept separately for an unlimited period and may be used for other research projects. For example, your answers may be used in writing for thesis, books and journals, but no one who reads these papers will ever have any idea of who you are.

Why should I do it?

Whether or not you think you might be eligible or interested in the study, filling in the questionnaires will help us understand more about young people's mood and feelings. It may also help you find out more about yourself and your feelings. This would be a good

chance to see whether it would be right for you and to perhaps volunteer to take part in rest of the study.

Why *shouldn't* I do it?

The questionnaires ask you some questions about how you feel, and there is a small chance that this might leave you feeling upset or worried.

What should I do if I feel upset or worried after filling in the questionnaires?

You should come to me as the researcher and see me or see the school counsellor MS....as soon as you can.

Researcher contact information:

Tel: 02188693631

Mobile: 09122174971

su_ershadi@yahoo.com

How will I know if I can take part?

If you meet the criteria, I will ask you to fill in another questionnaire At the end of the second questionnaire, the researcher then checks the criteria for you to take part in the intervention. If so, we will then write to you and invite you to meet with the researcher. If you still

want to take part after that, and you meet all our criteria for taking part in the study, you will then be asked to take part in a short interview, a group activity and perhaps another interview.

If you are able to take part in the study you will get a letter explaining what will happen next. If you are not included in the study you will be invited to meet with the researcher to explain why you haven't been included. You will get a letter telling you where and when to go to the group intervention. We have enclosed a 'flow chart' at the end of this information sheet so that you can see what the whole study looks like.

After we have made sure that it is OK for you to take part in the research you will randomly assigned to one out of three interventions. You will have the training during school time and it will take place in the counsellor's room.

Can anyone try the intervention?

To take part in the intervention, young people will need to meet the following 'criteria':

- Aged 12-15
- Have specific levels of mood and feelings
- Want to improve their mood
- Are considered capable of deciding for themselves that they can take part in the study
- Attend school fairly regularly
- Are not at significant risk of hurting themselves or others
- Are not involved with other mental health services for young

people, including the school's usual counselling service

- Are not likely to move schools soon
- Keep confidentiality the sessions of intervention

What happens if I do not meet the criteria?

If the young person or the researcher feels that a young person does not meet any of these criteria, the young person will have an opportunity to meet the researcher to look at other ways in which they can be helped. The researcher also informs you if you need specific help.

What will the intervention sessions be like?

You will attend intervention sessions with the researcher and a group of other students who meet the criteria in 90 minutes sessions, once a week, for up to six weeks; and will have a chance to improve your thinking skills and talk and discuss about things in the group. You can choose to stop attendance at any time. We will ask to audio record all the therapy sessions, though only the researchers will have access to these recordings.

Who can I talk to about this research?

If you have any questions at all about this research, please direct them to the researcher at any time. You can also ask questions through contacting the researcher.

Research Leader:

Soudabeh Ershadi Manesh

Tel: 02188693711 Mobile: 09122174971

s.ershadi-manesh@ncl.ac.uk

su_ershadi@yahoo.com

What should I do next?

First, if you have any questions, please ask them to the researcher. Once all questions have been answered, you will be handed a package. The first thing you should read through is the 'informed consent' form. If you want to take part in the study, please sign this, complete the forms, and then complete the questionnaires, then put all the papers back into the envelope and seal it.

If you do not want to take part in the study, do not sign the informed consent form, and do the alternative piece of work that has been prepared for you.

At all times, we would ask that pupils are quiet during this period and don't talk to others, so that you and others can do these forms on your own. Finally, we would very much ask you not to try and look at what other pupils' are doing, and let the researcher know if anyone is looking at your answers. It is important that you, and other pupils, feel that you can complete these forms in an entirely anonymous way.

Thank you very much for your interest

Appendix 8 Information Sheet for pupils have been invited to take part in intervention

I understand that I am taking part in a research project about creative behaviour therapy and creative problem solving for mood and feelings that will be used to improve mood and prevent depression. The interventions for young people who are at high risk of depression could be effective for students who are experiencing difficulties in daily life.

I understand that I have been asked if I want to consent to taking part in the research and complete two questionnaires in the class and in the counsellor's room.

Questionnaires:

I understand that I have been asked if I want to take part in the following:

- The researcher explains verbally the research study
- I complete some questionnaires to see if I meet the inclusion criteria for taking part in the group sessions of the intervention.
- I ask any questions about the study

- If I meet all the inclusion criteria for being able to take part in the study I will be sent a letter explaining what will happen next.

- If I don't meet all the inclusion criteria the researcher will notify me of this and I will be invited to meet with them to discuss why I haven't been included in the study.

1) Participation in the study:

If after the completing the questionnaires I am included in the study I understand my role in taking part in the study is to take part in the following:

- – Attending six sessions of weekly group cognitive behaviour therapy, to take place in school within the next two weeks, OR, attending six sessions of weekly group creative problem solving, OR, attending six sessions of group leisure activities and after six weeks have passed the option of attending six days of either CBT or CPS group therapy to take place in school.

- In each case I will take part in questionnaires and interviews at the beginning of a six week period and at the end of the six weeks. This will

help the research team to compare how I feel regarding my problems or difficulties at the beginning of the project with how I feel at the end.

- Audio recordings of my training or therapy sessions. I also understand that only the researchers will listen to these tapes and I understand that no members of school staff will listen to any of the tapes.

By taking part in both the initial assessment and the participation of the intervention I understand that:

- What I say within the project and fill in on the questionnaires may be used in a final report. However, my name and the name of the school I go to will not be linked with what I say.

- My details will remain anonymous (i.e. my name won't be used), unless I agree otherwise.

- Only the researcher will have access to my information in relation to participation in the project, though I am free to talk about these things to anyone else that I choose to share them with.

- I can speak to the researcher at any time about any aspect of the study

- I will be free to withdraw from the project at any time and without giving reason or affecting my situation in school.

- If I have any questions, inquiries or complaints about my role in the project I can contact the researcher.

- Counsellors, researchers and other professionals often use case material and audio recordings of counsellors and clients for training and research purposes. A separate consent form is included below if you are happy for your information (anonymised) to be used in this way.

I have read the ‘Information Sheet for Young People’ and I choose to be part of this project. I am happy for my participation and what I say to be used as information for this project and for the study report.

Consent to be a participant in the project:

Name: …… Date: …….

Researcher Name: …….. Date: ……

Consent for my material (case material and audio recordings) to be used for training and research purposes outside of this project:

Name: …… Date: …….

Researcher Name: …….. Date: ……

Appendix 9: **Consent form for Pupils invited to the study**

I have read the 'Information Sheet for Pupils' for the Cognitive Behavioural Skills and Creative Problem Solving Study and leisure activities and any questions I had have been answered to my satisfaction. I am aware of what taking part in this study involves and that there is a small risk that I may feel anxious or upset as a consequence of completing these questionnaires.

I understand that I don't have to take part in this study and that, if I do agree to take part, that I can stop taking part at any time without having to say why. I also understand that if I decide not to take part in some or all of this study this will not affect me in any way.

I understand that, after taking part in this study, I can ask for the answers that I have given to be withdrawn.

I understand that all the information I give will be treated with the utmost confidentiality and that my anonymity will be respected at all times.

I understand that anonymised data may be kept for an unlimited period and used for future research projects, unless I ask for it to be withdrawn.

I Consent to be a participant in the questionnaire phase of this research:

Name: …… Date: ……

Appendix 10: Cognitive Behavioural Therapy Key Points for Depression

Session	Key Message	Goals
1. Understanding each other 2. How we think about depression?	How to Work together Thoughts influence feeling	To introduce ourselves to each other, build trust between group members and facilitator To explain group therapy meetings To learn what depression is To learn a helpful way to think about depression To learn how thoughts influence how we feel
3.Ways to increase healthy thinking 4. Increasing self esteem	To understand negative and positive thoughts, and to understand personal strengths	To learn how to increase the number of good thought that produce a better mood and recognise our strengths To learn how to decrease the thoughts that make us feel bad To learn how to talk back to our thoughts To understand common thoughts that makes us depressed
5. The fewer pleasant activities people do, the more depressed they feel 6. practice	Pleasant activities, our body clues as well as self talk affect the way we feel and behave	Understanding pleasant activities Understand an adequate level of pleasant activities Doing pleasant activities without spending much money Understanding predicting pleasure Making a contract
7. Creating your plan to overcome depression and skills of keeping calm 8. Problem solving activities	Daily activities	To learn the techniques to overcome depression, to explore strategies of managing stress and anger, To learn about time management Recognising clear goals and unclear goals To learn planning for the future Understanding and planning short-term and long-term goals
9. How contact with people affects mood 10. Managing relationships	Relationship between thought, action and feeling	To learn three areas to focus in order to feel better To learn thoughts that help you feel comfortable with others, to learn strategies to manage conflict To learn how to be assertive
11. People are important for your mood 12. Understanding support networks	How to make a healthy relationship with others	To understand how to feel when relationships don't work well To learn how to practice assertiveness To learn how to be active in listening skills To avoid self blame To keep peace with other

Appendix 11: **Summary of CBT sessions**

Sessions 1 &2

In the first session, participants introduced themselves to each other and understood the group rules. After building trust between group members and facilitator, the therapist explained group therapy meetings, and how to work together. Then the therapist asked participants about how they think about depression to let them understand depression and to learn what depression is? Participants learned about how depression alters their thinking, emotions, and leads to altered bodily symptoms and behaviour. This session helped them to decide which of the areas (cognitive, emotion, feeling and behaviour) they need to focus on changing and helped them to decide which of the area they need to read about. The session also helped them to understand how thoughts influence feeling and to learn a helpful way to think about depression and how thoughts influence how they feel. The participants were also encouraged to work on some practice sheets were prepared for them and it was explained how to complete the daily mood questionnaire every night.

Sessions 3 &4

After reviewing the last session, participants were told about ways to increase healthy thinking and increasing self-esteem, and also to understand negative and positive thoughts, as well as personal strengths. They also were told that what they think about themselves, others and the situations that occur around them can alter how they feel and affect what they do. The session helped them to learn ways of identifying unhelpful or extreme ways of thinking, how to notice such thoughts and to understand the impact these have on how their feel and behaviour. They also learned how to increase the number of good thoughts that produce a better mood and recognise their strengths, and to learn how

to decrease the thoughts that make them feel bad, and to learn how to talk back to their thoughts and to understand common thoughts that make them depressed. This helps them to feel more in control of their life and the decisions that they make. They were told that by feeling more in control of their life, they gain more confidence about real situations. They also found out about the difference between passive, aggressive and assertive behaviour and learned how to develop more balanced relationships with others where their opinion was listened to and respected, and they listened to and respect other people.

Sessions 5 & 6

After reviewing the last sessions, the students were taught to understand the important skill of how to challenge negative thinking. They were given a series of questions to answer to help them to change those thoughts and to gain control of the extreme and negative thinking as a major problem in depression. Moreover, they were explained about the importance of pleasant activities, and that recognising this could help them, and that how the fewer pleasant activities people do, the more depressed they feel. They were told that including an adequate level of pleasant activities and doing pleasant activities and making contacts could help them to feel better. They were also given some examples about how their self-talk affects the way they feel and behave, and daily mood activities were also reviewed.

Sessions 7 & 8

Participants found out more about how altered behaviour kept their depression going. They learned ways of changing what they do in order to break the vicious circle of reduced activity. They also created their plans to overcome depression and skills of keeping calm. Some students talked about their daily activities which were completed every night and students voluntarily talked about their experience. They also learned the previous techniques to overcome depression, to explore strategies of managing stress and anger, and learned about time management, recognising clear goals and unclear goals and planning for the future. Participants also worked and practised individually as well as in small discussion group.

Sessions 9 & 10

The relationship between thought, action and feeling was explained to the participants. They focussed on three areas of thoughts, feeling and behaviour in order to feel better. They learned and practiced thoughts that help them to feel comfortable with others. They learned and practised some strategies of managing conflict and learned how to be assertive. They were told when someone is depressed, they not only feel emotionally and mentally low, but they also notice a range of physical changes that are a normal part of depression. The session continued with more practices on the prepared sample sheet individually as well as in groups. The session also helped them to find out about these common changes, and in particular helped them to deal with problems of low energy and the advantages of contact with other people. Some students who were not getting along together also were encouraged to be friendlier with each other.

Sessions 11 & 12

The sessions emphasised relationship with others. They were told people are important for their mood. They were also taught ways of understanding support networks and how to make a healthy relationship with others. They understood how to feel when relationships don't work well. They learned how to practice assertiveness. They learned how to be active in listening skills and avoid self blame and to keep peace with others. Low mood improves by managing the altered thinking, behaviour, physical symptoms and situations, relationships and practical problems that they face.

Appendix 12: Examples of CBT therapy sessions

Problem definition:

My problem is that I am fat and ugly and have always been like this. My classmates laugh at me and avoid being friends with me because I'm fat and unattractive. I've never had any good friends because of the way I look and always fail to keep a good friendship with someone. Whenever I go out everyone stares at me and laugh behind my back at the way I look or the clothes I wear and that upsets me. I hate school because I don't like to go to a place where everybody hates me because of what I look like. I am very lonely and hopeless and can't do anything right. I know that I will never be able to lose weight and will look fat and ugly for the rest of my life.

(Depression is explained)

How we think about depression

What kinds of thoughts go through your mind when you feel depressed?

I think I'm worthless and useless

I think I'm not capable of doing anything for myself

I think I'm very fat and unattractive

What do you do when you are depressed?

I cry a lot

I want to be left alone at home

I can’t study or do my homework

How do you get along with people when you are depressed?

I can’t be around people and socialize with them. I just want to be left alone.

What do you think is the cause of your depression?

People hating me

Being fat and unattractive

Being clumsy and useless

Exercise: how thoughts affect body, action and mood.

(Instructions on how to use the Daily Mood Scale given)

Session 2

Exercise: practice identifying your thoughts

What are thoughts?

How do they affect our mood?

(Identify non-flexible and judgmental thoughts)

Elham:

Non-flexible

I will never be able to lose weight

I will never be able to make friends

I have always been fat and ugly

I have never had good friends

I always fail in my friendships

Judgmental

I am fat and ugly

I am useless and hopeless

I am clumsy

Changed thoughts from nonflexible to flexible and hope for change

I hope to be able to lose weight in the future

I hope to make friends in the future

I have not always been fat and ugly

I have sometimes had good friends in the past

I have sometimes failed at my friendships with people

Constructive thinking VS destructive thinking

I can’t do anything right

Changed to:

I can learn skills or things to help me perform or do things better

Elham is practicing distinguishing unnecessary thoughts in her previous statement and replace them with positive ones:

Unnecessary: everyone hates me because of what I look like

Positive: Everybody has good and bad qualities. No one is perfect.

Practicing All or Nothing:

When I go out everyone stares at me

Everyone hates me for what I look like

I can’t do anything right

I’ve failed at all my friendships

Changed to:

Not everybody stares at me when I go out

Not everybody hates me for what I look like, there are some people who love me like my friends and family

I have not done some things right in the past but I will try harder next time

I have failed at some of my friendships but I do have a few friends

(Elham has learnt not to presume everything will be bad by seeing one bad event)

Mental filter and not counting the positive:

I am fat and ugly

Therefore:

I forget that people have said I wore a pretty top in Sara's birthday party

I forget my friend told me I looked nice with my hair in a ponytail.

(Elham is encouraged to think about nice and positive things people have said to her and count the positives)

Jumping to conclusion:

I will never be able to lose this weight

I will be fat and ugly for the rest of my life

Making more or less of things:

Taking your feelings too seriously:

My classmates laugh at me and avoid being friends with me because of what I look like

Identify “should”:

(Pupils learn about the effects of using critical, “should”, in thinking and how that can cause them to feel guilty and/or angry about things when they haven’t stuck to those “shoulds”)

Labeling yourself:

Fat

Ugly

Hopeless

Clumsy

Lonely

Failure

Just because I am slightly overweight doesn’t mean I’m fat and ugly.

Self blame:

Clumsy

I can’t do anything right

(Pupils learn to practice to keep track of their thoughts)

(Pupils fill in the Daily Mood Scale)

Session 3

Increasing healthy thinking:

1. Thoughts that produce better mood

About myself:

I look good when I have my hair in a ponytail

I managed to do all my homework on time last night

I was praised by the teacher after answering a question no one else could in the classroom

About Life:

I have more things in life than a lot of people

My family takes regular holidays to go and visit other relatives

Decreasing thoughts that make us feel bad:

1. Thought stopping

(Pupils are taught how to identify a thought that is ruining their mood, tell themselves that and think of something else)

I’m ugly

This thought is ruining my mood

I need to think of something else

I have beautiful hair

2. Worrying time

(Pupils are told to dedicate a time in the day to their worries completely and leave the rest of the day free of worry)

Make fun of problems by exaggerating them:

Consider the worst that could happen:

“I will be fat and ugly for the rest f my life”

(The worst thing that could happen is only one of the possibilities and just because it is the worst doesn’t mean it’s more likely to happen than the other possibilities)

How you want the situation to turn out?

I want to look good and lose weight and wear nice clothes

What are the necessary steps to take towards the outcome?

I need to go on a diet and lose weight

I need to exercise and lose weight

I need to eat healthily and lose weight

Exercise: ABCD method

- A is the Activating event: What happened?

Some of my classmates laughed when I walked past them

- B is the belief or thoughts you are having: What you tell yourself you are having?

They are laughing at me and making fun of me because I'm fat and ugly

- C is the consequence: the feelings you have because of the thoughts?

I felt depressed, angry and upset.

- D is the way you dispute: talk back to the thoughts?

Maybe they were laughing at something else amongst themselves. Sometime I am laughing at something and walk past people but it doesn't mean that I am laughing at them.

(A worksheet for the ABCD method is give to pupils to practice every day)

Session 4

Common thoughts that make you depressed

(pupils are learnt to identify types of statements that can make them depressed)

- One should be loved and approved of by everyone
- One should be able to do things well all the time
- Some people are bad and should be punished
- Feeling awful when things don’t go as planned
- I should worry about bad things that can happen
- I should feel bad for others when they are having problems
- It’s awful when I don’t do things right

A further Practice on ABCD method

A review on all 4 sessions so far:

Purpose of this therapy

Group rules

Our perception of depression and its treatments

Session 5

The fewer pleasant activities people do the more depressed they feel

The more depressed people feel the fewer pleasant activities they do

A vicious cycle

You can increase those activities which make you feel better such as rewarding, meaningful, inspiring, relaxing activities.

Exercise: pleasant activity

Remember the last pleasant activity you did?

What enjoyment did you get from it?

How do pleasant activities affect your mood?

If it is hard to remember, refer to the list of pleasant activities sheet (appendix)

Sign the personal contract (on doing the pleasant activity)

Choose 3 out of the list

Watch TV

Buy something

Take a long bath or shower

(Write down your thoughts)

Are there tings you say to yourself, which make it less likely that you will work on pleasant activities?

I don't want to go to the gym or go swimming even though I like to, because I think people will judge the way I look and laugh at me for being fat.

(Pupils are asked to fill in their Daily Mood Scale as well as trying to do four of the pleasant activities on the list given to them and sign the personal contract)

Session 6

Working with daily activities

How can pleasant activities help control your mood?

Just telling yourself to feel better isn't enough. The things you do will change the way you are feeling.

Just as the body needs as adequate level of nutrition such as vitamins and minerals, the mind needs an adequate level of positive activities to feel emotionally healthy. There needs to be a balance between things we have to do and those we want to do.

Exercise: coming up with a list of pleasant activities one can do without spending much money

Running outdoors

Playing with classmates in the school yards

Listening to music

Watching TV

Taking a bath

Taking a nap

Plan a pleasant activity to gain control of your life

Thoughts

I can make my time more enjoyable with things I plan to do throughout the day by getting myself away from stress and worries.

I need to take control of my life and plan to do things I want to enjoy and not worry about what other people might think of me.

Session 7

Create your plan to overcome depression

1. Set reasonable goals

2. Notice positive things you do

3. Reward yourself

4. Set clear goals

5. Set realistic goals

What are your goals?

My goal is to dedicate 3 hours each week to exercise and losing weight

What are the obstacles you feel in reaching them?

Getting tired and not having the motivation to do the exercises

Time management:

1. List of what you want to accomplish this week with assigned priority of A, B and C

   A. 3 hours of exercise this week
   B. Reducing portions of what I eat by 1/3
   C. Engaging more with friends on the school play ground

2. Schedule an “A” item in your week

There is room for doing all A, B and C together in the same week for me.

3. Time for pleasant activities in the week.

I will be watching TV and reading books as pleasant activities

5. Practice what works best for you

Planning for the future

Exercise: fill out the “Goals List”

(Pupils are asked to fill in the Daily Mood Scale, the List of activities, plan their week and finish their list of personal goals)

Session 8

Working with daily activities

(The difference between objective and subjective word and how to gain more control over them, were explained to the pupils)

Exercise:

What do you think gets in the way of you enjoying your life more?

My excess weight

How have you tried to deal with it? Has this helped? Why?

I have tried dieting but it hasn’t helped because it hasn’t been successful. It hasn’t been successful because previously I thought I wasn’t capable of keeping my diet and doing it right.

What are some alternative options available to you?

However now I think I can increase my exercise level, engage in group physical activities and games with my classmates in school and enjoy it. The activity helps me loose weight and feel happier in myself.

A discussion on: A way to think about reality and knowing the mental traps:

(Pupils are asked to do the Daily Mood Scale and a few activities from the list)

Session 9

How contacts with people would affect our mood

Pupils are taught:

What higher levels of depression are related to

Does depression cause people to be less sociable or being less sociable cases depression?

The importance of social support

(If it is small, enlarge it and if it is of a good size appreciate it and try to keep it)

How to deal with meeting new people

How to keep the social support system healthy

(Pupils are asked to fill in the Daily Mood Scale, the weekly activity schedule and to note positive and negative contacts with people

Session 10

How contacts with people affect mood

3 areas to focus on in order to feel better are:

Being alone

Being with others

Feeling good about what you do in life

And for each area pay attention to:

Thoughts

Expectations

Behavior

Feelings

Learning to be assertive:

- Practice in your mind
- Learn by imitating others whose style you like
- Get alternative suggestions from friends on how to handle a situation
- Then try it out in real life

I used to get upset and angry and irritated after thinking my classmates or friends have mocked me for what I look like. I used to shy away from them and avoid seeing them

around school even if it meant denying myself the pleasure of going to the school yard in break times and playing games.

Now I have learnt that I should let them know directly without being rude or aggressive that I have felt uncomfortable when they laughed and ask them to explain their reasons for doing so. Let them know how I feel and how I expect them to behave.

(A group practice takes place between pupils)

(Pupils are asked to fill in the Daily Mood Scale, weekly activity schedule, to note both positive and negative contacts with people)

Session 11

Consider:

Thoughts

Expectations

Behaviour

Feelings

Exercise: importance of building of trusting relationships when interacting with people.

Exercise:

How are people feeling about trusting others in the group?

If you don’t feel good about trusting someone, would you be able to tell them?

(Pupils are asked to fill in the Daily Mood Scale, the weekly activity schedule, note their positive and negative contact with people, practice thinking and behaving differently with someone outside the group, write down problems for which they would like advice from other members of the group)

Session 12

How can contact with people affect our mood

They help you have rewarding experiences

Provide companionship and stability for you

Reflect images of yourself

It is not helpful to think there is something wrong with you or others when relationships don’t work out or work well.

Elham:

My friends may have different interests and priorities than me but I know now to openly tell my friends what I think and what I feel.

I should try and maintain my friendships and if there were ever problems we need to think about the positives and try to resolve the issue.

A review of all sessions so far

Appendix 13 CPS Key messages
Group Creative Problem Solving Key point for Depression

Session	Key Message	Goals
1. Introducing ourselves to each other 2.Understanding creative problem solving	We are interested in your attitudes and habits and how they prevent you from seeing problems and challenges	Introducing to each other Roles of participating in CPS How emotional symptoms are caused by problems How to become aware of the problems
3. Redefining the problems 4.understanding habits	When the state of the problem is a "mess", it must undergo a process of problem definition	To learn the techniques to redefine the problem without any judgmental statements and to expand the statement to arrive at a better statement of the problem
5. Deferred judgement 6. Learning CPS key point skills	Our habits dictate stereotyped, rigid responses to situations and make us overlook potential creative responses	To learn flexibility, fluency, originality, brainstorming and generating novel ideas, and to learn to separate imagination from judgement to achieve a better understanding of the problem
7. Stimulating creativity 8. Divergent techniques	Ludicrous ideas may lead in valuable creative ideas	To learn forcing relationship between two unrelated concepts and effective use of a forced relationship for finding a novel solution for our problem
9. Evaluation, Acceptance finding 10. Divergent techniques	Important to stop generating ideas to be able to evaluate them	To learn about criteria of evaluating the ideas and learn techniques of how to get acceptance for solutions for our problems
11. Total creative problem solving process 12. More practice in all stages	Let's put it all to the test Increasing self esteem	To demonstrate the total creative problem solving process

Appendix 14 Summary of CPST sessions

Sessions 1 & 2

The session started by letting the members introduce themselves to each other. Then the students were asked about what they think creativity is. The facilitator asked people to think about what creativity is and that inventing different ways of solving the problem, creating potential solutions and the ability to come up with new and useful ideas were all creativity and that focusing on problems and clarifying the problem was a great way to help them to develop their thinking instead of remaining passive in facing with problems. However, the problem is we often have some obstacles in our thinking and habits, put limits to our thinking and don't do as well as we could. For example, people judge the idea so quickly that they never get the chance to express an opinion, so the ability to judge ideas is hugely important. The students practiced developing the concept of judgement for their survival. They understood that they had become too good at spotting what's bad with an idea instead of seeing what might be good about it and understood that they had ability to be creative. The participants practiced if they want to have more good ideas on their problems, they need to do two things. First, delay their judgement in dreaming up possibilities and try to give every idea a chance and try not to get too enthusiastic about any one idea as that tends to limit their creativity, leave their judgement at the door and pick it up on their way out, capture all their ideas and not to let them to float away, write them down on their notebook. Pupils started paying attention to their thoughts and letting go of their judgement, they were amazed at just how much was going on inside. Participants also were informed about their attitudes and habits and how they prevent them from seeing problems and challenges. They also practiced how to become aware of the problems.

Sessions 3 & 4

After reviewing the last session, participants started to practice on redefining the problems. When the state of the problem was a "mess", it must undergo a process of problem definition problem without any judgmental statements and to expand the statement to arrive at a better statement of the problem and how to delay their judgement. So participants were given some practical steps to help them strengthen this critical skill. For example, when they were confronted with a new idea, the first thing they need to do was to relax and explore the idea before making any decision. The key point about this was, no matter how strongly they feel about an idea, they must stay relaxed and give themselves enough time to explore it, rather than jumping to conclusions Participants were told that this was a really powerful technique which really could transform their judgement and to understand that some ideas would be easier to explore than others. The second step was to listen to what people were telling them, they practiced and developed listening skills in the class if they were not very good at listening. So to really delay their judgement they had to relax so that they could hear what others were saying then paid attention to make sure that they really hear them and this leads them to the third step of understanding. If someone tells them an idea that doesn't make sense, do they reject it immediately? Or do they pause, listen and then try to understand their point of view? It's amazing what they can learn when they really understand another person's perspective. So the three steps were: relax, listen and understand. in order to practice it, their task for rest of their life was to do two things. First: carry on capturing all their ideas, after a while it becomes automatic. But second: take every opportunity they find to practice the three steps. Delay their judgement; this applies just as much to their own ideas as it does to other people.

Sessions 5 & 6

How a problem is a mess. There are a couple of reasons why we can't see our problems. Think about how they feel in your body, the chances are that unless they feel uncomfortable, we can't feel them at all and that's a good thing. Our mind naturally filters out familiar things. It does this so we can concentrate on strange and possibly threatening things we may come across. Being able to concentrate on threats is a good survival technique but is has a side effect as parts of our world just fade away and that means we tend to accept things the way they are it. The second reason we can't see problems is that most of us don't like them. Problems are worrying and they make us tense, and the bigger the problem, the more we worry about them. This means that when people point out problems, we often get quite defensive and try to deny they exist; sadly this isn't usually a very effective approach. Participants practiced first: to delay their judgement in the class, in small groups they pointed out some criticism and some problems to each other, they delayed their judgement, relaxed, listened and tried to understand each other's point of view and they strengthened their problem solving skills. They were encouraged to invite some people into their life, show them what they do and listen to their comments, ask them how they might improve things, it's possible that they may point out things which you have stopped seeing. For example, ask yourself things like: why do they do that? Or what's the point of this? Write down your observations, you don't need to answer these questions, just write them. Being curious and asking questions is an essential skill of creative people.

Emphasising the activities such as problem perception, problem attribution, problem appraisal, perceived control and finally time/effort commitment are the core of problem finding. Problem perception refers to a general tendency to recognise problems as they happen throughout daily life instead of denying or ignoring them and is what prepares the scene for problem solving proper. Problem attribution refers to an individual's casual

interpretations and beliefs on everyday problems. When positive, it involves the individual's eagerness to perceive problems as normal and inevitable life events rather than attributing them to unfortunate personal flaws. This is in turn likely to create problem appraisal. Problem appraisal refers to a person's own evaluation of the significance of the occurrence of a particular problem and when positive, the person can perceive problems as a challenge and recognise potential benefits involved in each instead of just noticing the negative effects, harm and danger. Perceived control involves two components of believing in one's capabilities of solving a problem and the general belief in the fact that problems in life can be resolved. Last is the time/effort commitment also with two components of estimating the time it takes to solve a problem and also the ability to devote the necessary time to solving that problem.

Sessions 7 & 8

As a basic rule, it's much easier to solve a problem when we have all the relevant information. Unfortunately, people don't usually spend long enough gathering all the facts before they jump into action, but how can we know that we are collecting the right information? Fortunately, there are some simple ways to give your detective skills a boost! The first thing to be aware of is, when it comes to creative problem solving, that we must not limit ourselves to just the cold hard facts. Feelings, hunches and even unanswered questions can all play a crucial role in helping us understand the problem, now you could just collect information under those four headings at random; however, we find it works best when we take a more organised approach.

Sessions 9 & 10

They practised recognising how their habits dictate stereotyped, rigid responses to situations and make them overlook potential creative responses. They practised flexibility, fluency, originality, brainstorming and generating novel ideas, and to learn to separate imagination from judgement to achieve a better understanding of the problem. Stimulating creativity, ludicrous ideas may lead to valuable creative ideas, forcing relationship between two unrelated concepts and effective use of a forced relationship for finding a novel solution for their problems.

Sessions 11 & 12

Total creative problem solving process: let's put it all to the test. Increasing self-esteem to demonstrate the total creative problem solving process. Practice problem finding, fact-finding, putting more emphasis on problem finding again and taking the time to explore alternative problem redefinitions instead of settling on just one. Emphasising the process again, problem-finding, fact-finding, and idea-finding acceptance- finding following the last stage, convergent and divergent and brainstorming activities and incorporating them in every stage of the process.

Application of five main problem solving skills of problem definition and formulation, generation of alternative solutions, decision making and finally solution implementation, all applied to maximise the chances of finding the most appropriate and effective solution to a problem. Problem definition and formulation is a stage at which as much factual information relevant to the problem as possible is gathered to clarify realistic goals and the significance of the problem is considered.

In the generation of alternative solutions, the focus is on searching for as many solution alternatives as possible to maximise the likelihood that the most appropriate solution will be amongst them, using Osborne's method of brainstorming and delayed judgement and following three key principles of quantity. Which are: the more number of solutions available the better the quality, delayed judgment which means suspending all idea evaluations until later results in better quality ideas, and finally variety which is the broader the variety of the ideas found the better is their quality.

The purpose of decision making is to evaluate, compare and judge all available solution alternatives and find the best ones to implement in the specific problematic situation. Solution implementation and verification is used to assess the outcome of the solution implemented and verify the effectiveness of that particular solution.

Appendix 15

One example of CPST during the course of intervention

Shaghayegh's problem:

Fact Finding

Recording observations and feelings:

1. Since I've started seeing Arman, my mother doesn't love me.
2. People avoid me and distance themselves from me
3. Everyone hates me
4. I'm depressed, lonely and isolated
5. When I was younger my parents used to love me
6. My parents don't care for me because they think I'm old enough to look after myself
7. I've thoughts about committing suicide

Identifying hits, relates and critical concerns

Hits

My mother doesn't love me

People avoid me

Arman avoids me

Everyone hates me

My teachers hate me

I'm lonely

Relates

People hate

People avoid

Critical concern

Others hate me

Problem finding

Statement

Everyone hates me

I am hated by everyone

Use IWWM (In What Ways Might) statements to state problems:

Brainstorm and delay your judgment, (statements should include problem ownership, action verb and a goal)

In What Ways Might I improve my relationship with others?

In what ways might I make other people love me?

In what ways might I avoid alienating people?

In what ways might I stop caring about other people's feelings towards me?

In what ways might I make more friends?

In what ways might I improve my relationship with my parents?

In what ways might I reduce my feelings of loneliness?

In what ways might I avoid being alienated?

In what ways might I make my teachers like me?

In what ways might I stop caring about being alienated?

Change the ownership

In what ways might others be more loving towards me?

In what ways might others care more about me?

In what ways might my parents pay more attention to me?

In what ways might other people grow to like me?

In what ways might people stop alienating me?

The why technique (stimulus)

Ask why questions for each statement

In what ways might other people love me?

Why do I want to be loved by other people?

To fulfill my emotional needs

Why?

To make me feel better in myself

Why?

To gain more self confidence

Why?

To feel safer

Why?

To enjoy my life

Why?

To be happy

In what ways might I feel happier?

In what ways might I be happy?

Write down 5 or 6 problem statements that best define the problem

1. In what ways might I improve my relationship with others?
2. In what ways might I reduce my feelings of loneliness?
3. In what ways might I be accepted by other people?
4. In what ways might others stop distancing themselves from me?
5. In what ways might I be happy?

Hits

Relates

IWWM I improve my relationship with my parents?

IWWM I improve my relationship with my friends?

IWWM I improve my relationship with my teachers?

Relates

IWWM my parents love me?

IWWM my friends love me?

IWWM my teachers love me?

Relates

IWWM I reduce my feelings of loneliness?

IWWM I reduce my feelings of sadness?

IWWM I reduce my feelings of isolation?

Relates

IWWM my parents stop distancing themselves from me?

IWWM my friends stop distancing themselves from me?

IWWM my teachers stop distancing themselves from me?

IWWM I gain more self-confidence?

IWWM I feel happier?

Arrive at a tentative problem statement:

IN WHAT WAYS MIGHT I IMPROVE MY RELATIONSHIP WITH OTHERS?

Purge:

Be nicer to people

Do whatever they ask of me

Help people

Be more patient with them

Don’t criticise people

Don’t fight with people

Love people more

Attract attention by doing good deeds

Attract attention by studying well

Be reliable

Avoid doing things they don’t like

Do favours for them

Give them things they’d like to borrow

Do chores for parents around the house

Help parents with everything around the house

Do whatever my parents tell me to

Be polite

Be kind to my siblings

Be kind to people

Do my homework

Do my duties well

Study for exams

Don’t talk over the teachers in classrooms

Listen to the teachers in classrooms

Please people

Get good grades

Keep my room clean

Pay attention to my appearance and clothes

Pay attention to my hygiene

Get involved in exercise classes and sports

Don’t associate with troublemakers

Be reliable

Become an astronaut

Become a special person

Key Words (stimulus)

Swap key words in different statements with each other and write down the results

Pay attention to good grades

Be kind to things they like (get involved with things they like)

Involve my time (dedicate/allow/spend time with friends)

What If (stimulus)

Ask a series of what if questions

What if everyone loved me?

What if I was the most popular girl?

What if everyone wanted to be friends with me?

What if everyone wanted to do things for me?

What if my parents let me do everything?

What if people wanted to serve me?

What if I was the most cleaver girl?

What if I had the best parents in the world?

What if I was the most successful girl?

What if I was the wealthiest girl?

Be nice to people to become popular

Be nasty to people to become popular

Be popular and be friends with people

Wear good clothes to attract attention

Gain points from parents to let me do anything I want

Get good grades and be successful

Be successful to become wealthy

Two Words (stimulus)

Select from a statement two words, write down their synonyms and replace them

Be successful to become wealthy

Successful	wealthy
Winning	rich
Victorious	well off
Thriving	well-heeled
Doing well	loaded
Profitable	prosperous

Identify hits and relates, select hotspots:

Hot spots

Treat people better with more respect (5)

Pay attention to my appearance and hygiene (3)

Do my duties well (2)

Get involved in group activities and social activities (4)

Please people

Do favours for others

Be more sociable (4)

Make more friends (4)

Become more popular

Solution finding

Write down criteria

Criteria

1. It should be within my capabilities

2. It should be quick to achieve

3. It should not upset me

4. It should not put pressure on me

5. It should be morally acceptable for me

6. The effects of it should last

Compare each idea with the criteria and discard the ones that don't meet:

Treat people better with more respect

Pay attention to my appearance and hygiene

Do my duties well

Get involved in group activities and social activities

Please people (discarded)

Do favours for others (discarded)

Be more sociable

Make more friends

Become more popular (discarded)

Value ideas and criteria on a scale of (1-5):

Treat people better with more respect (5)

Pay attention to my appearance and hygiene (3)

Do my duties well (2)

Get involved in group activities and social activities (4)

Be more sociable (4)

Make more friends (4)

Value each criterion on a scale of (1-5):

Criteria

1. It should be within my capabilities (5)

2. It should be quick to achieve (5)

3. It should not upset me (5)

4. It should not put pressure on me (5)

5. It should be morally acceptable for me (2)

6. The effects of it should last (3)

Turn ideas into solutions

Solutions

Be more sociable to make more friends

Learn ways and try to treat people with more respect in a way that is morally acceptable

Present myself more respectfully and improve hygiene

Do my duties well

Get involved in more social and group activities.

Write down assistors and resistors for each solution (things that help the solution or prevent it)

More sociable with more friends:

Assistor

Learn and practice socializing with others

Learn to distinguish between people I get along with and not

Learn more things from them and use their ideas on how to have a healthy relationship with others

Prevents us from being isolated and lonely.

Getting involved in group activities and social situations

Prevents us from depending /relying on just one person

Resistor

It is time consuming

Become dependent on people

Become addicted to socialising

Treat people better:

Assistors

It gains other people's respect

Other people treat us better in return

Positivity is shared

People grow to like us

People liking us boosts our confidence

Prevents interpersonal problems

Resistors

It can be taken too far and so people might take advantage of that

Hygiene:

Assistor

It boosts my confidence

Gains acceptance of others

Gains respect from others

Gives a better impression of me to others

People won’t be alienating me

Resistors

It can be costly and time consuming

It can be addictive and result in vanity if taken too far

Duties:

Assistors

Being responsible and reliable gains others' trust

Gaining people's trust makes it easier to make friends and maintain a good relationship

Resistors

It can be time consuming

It can put pressure on me

Plan of action

Allow a certain time of the week (whenever is free in my timetable) to go and join a social club in community to meet new people, for example a music group.

Organize group studies and group revision sessions with my friends and classmates so that I can get work done and also have the opportunity to socialise with others at the same time.

Join the basketball club in school so that I can exercise and also socialise with my friends.

Join the community library so that I can meet new people there and also study.

Plan an appropriate timetable of things I need to do every week.

Plan and dedicate a small portion of my mornings to regular showers and doing the laundry so that I have clean clothes to wear every day.