

Chapter 2

Cognitive Behaviour Therapy with Adolescents

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2.1 Introduction

The period of adolescence is undoubtedly one of the most challenging periods in one's life. As a transition period, the adolescent faces many challenges. Negotiating these academic, interpersonal and intrapersonal challenges is crucial for adjustment. Many adolescents face emotional disorders that make it necessary for them to seek and receive psychological interventions, and most emotional disorders have their onset and peak during this period.

Helping adolescents deal effectively with these tasks is therefore important. This has been addressed through training in life skills and coping skills (assertiveness, problem-solving skills). While effective life skills and coping skills are important in order to negotiate situations and may at times be preparatory in nature, many psychological interventions are designed to address psychological problems that have already been identified.

2.2 A Brief Overview of Psychological Treatments for Adolescents

There is increasing recognition that psychological interventions are important in the management of psychological problems in adolescents. There is a need to adopt evidence-based therapies in practice in order to make interventions more scientific and effective. Evidence-based interventions are practices that are based on

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empirical research and carried out on populations with similar diagnoses or problems. These interventions have been demonstrated to be superior to no treatment or alternative interventions for people with specific diagnoses. They are specifically matched to target problems/needs. In the absence of this fit, the effectiveness of therapy is reduced. They may sometimes be harmful or worsen problems, if they are used for persons who do not have the criterion disorder or belong to the targeted group. Clinicians must be able to accurately and reliably identify problems and make diagnoses for evidence-based interventions to have greater utility.

Psychological interventions in children and adolescents are of three types, **therapeutic, preventive or focused on enhancing specific skills** (Kendall 2006).

Researchers have identified several different types of psychological interventions that are considered either well established or probably efficacious. These include behaviour modification, multisystemic therapy, functional family therapy, graduated exposure, modelling, exposure and response prevention (ERP), cognitive behaviour therapy (CBT) for a variety of problems and parent management training (Ollendick and King 2004). More recently, in addition to CBT, dialectic behaviour therapy and interpersonal therapy have also been reported to show promising outcome. These psychological interventions target anxiety, mood disorders such as bipolar disorder, depression, eating disorders, disruptive and oppositional behaviours, self-harming or self-injurious behaviours, anger and aggressive behaviours, major psychiatric disorders such as schizophrenia and also substance use disorders (Ollendick and King 2004; Report of the Children's Evidence Based Practices Expert Panel 2005).

Psychological interventions for adolescents face special challenges often due to the nature of problems. Many problems seen in later years and managed in therapy are those that may be present even earlier, without being problematic (e.g. aggression, shyness). Another challenge lies in the fact that adolescents are often referred by significant others such as teachers, parents and health professionals, and this makes participation and decision-making in therapy different from that of adults. This also leads to an often-asked question of whose problem is it? Adolescents face multiple influences by way of family and peer, and these influences are likely to impact the nature of problems and manifestations.

2.3 Cognitive Behaviour Therapy as an Effective Treatment in Adolescents

CBT is a time-oriented and problem-focused psychological therapy. Cognitive behaviour therapies are a group of therapies that include both cognitive and behavioural interventions. Dobson (1988) identified nearly 22 varieties of therapies that come under the categories of cognitive and cognitive behavioural therapies. Broadly, three major groups of CBT have been recognized. These include therapies aimed at **cognitive restructuring** such as the approaches by Beck et al. (1979), Ellis (1958), the **coping skills training** (CST) that includes interventions

such as stress inoculation training and self-instruction training (Meichenbaum and Goodman 1971) and finally **problem-solving skills training** (PSST) (D’Zurilla 1986). CBTs include a variety of cognitive and behavioural techniques that target symptom reduction and changes through identification and modification of dysfunctional thoughts and skill building. While it appears that CBT is a unitary therapeutic approach, CBT actually is diverse in its components. CBT is developed within the context of learning theories and gradually moved on to incorporating the mediational role of cognitions in the maintenance of emotional disorders, while behaviour therapy focuses more on non-mediational models, that is, the direct relationship between stimulus and response.

All CBTs share some common features that include a comprehensive cognitive and behavioural assessment of thoughts, emotions and behaviours using a functional analysis, a therapeutic model for psychopathology based on cognitive theory, recognition of thought patterns and subsequently strategies to modify them, using behavioural and cognitive strategies.

The core ingredients with which the cognitive therapist works are negative automatic thoughts, information processing errors (distortions) and schema. Cognitive or thinking errors can be either inferential or attributional in nature. For example, personalization, magnification and minimization (attributional errors), selective abstraction and jumping to conclusions (inferential errors).

CBT is becoming the treatment of choice for adolescents with various psychological issues with reviews providing evidence for this form of psychological intervention. This is due to the fact that CBT is flexible and includes a variety of both behavioural and cognitive strategies that the therapist can choose to adopt while continually monitoring the progress of the client. CBT also allows the therapist to choose from a combination of therapeutic strategies that can bring about reduction in symptoms and prevent relapse.

2.4 CBT for Adolescents and Adults Same or Different?

Cognitive behavioural theory as applied to adults works on the assumption that appraisals of events or situations are crucial for the regulation of affect or emotions and behaviour. These appraisals are in turn shaped by various processes, including early learning experience. Thus, therapy focuses on various levels of cognition such as negative automatic thoughts, dysfunctional assumptions, cognitive errors and schema or cognitive structures.

2.5 The Need to Adopt a Developmental Perspective in CBT

The approach to understanding emotional disorders in CBT has been developed for adult clients. A core aspect of CBT is the need for the client to become aware of thought processes, to be able to detect, identify, document and then develop

alternative perspectives. Therefore, for a long time, there was hesitation in the use of CBT in younger clients, particularly children and adolescents.

In an attempt to understand the applicability of CBT to younger clients, researchers have referred to theories of cognitive development (Inhelder et al. 1958; Vygotsky 1988). These theories are influential and are considered to be the basis of understanding cognitive development. Their description of the role of language and the linkages between cognition and action has significant relevance to CBT. However, while Piaget's works suggest that CBT in young children has limited applicability, this is not always true in all young children or adolescents, as many are able to engage in the process of CBT.

Two major theoretical approaches relevant to children and adolescents are the **social attribution and social information processing models** (Dodge 1993; Garber and Flynn 2001). Research on social cognitions addresses issues related to the processing, encoding and interpretation of social information and cues that are relevant for the development of appraisals (Why did the other child do this to me?). They are also essential for the development of problem-solving skills and conflict resolution skills and have been used in studies on adolescents with anger problems.

Thus, it was believed that as cognitive techniques in particular rely heavily on the level of cognitive development or tasks that could be carried out, CBT was not considered suitable for younger clients. However, more recent research has suggested that there is not much clarity on this assumption, that younger children would be able to participate in behaviour-oriented therapies only and that cognitive techniques could be introduced only after adolescence. Researchers now conclude that developmental processes that are necessary for a therapy such as CBT may occur over years, without a definite cut-off. On the other hand, some studies also hold the view that by adolescence, there is a clear emergence of formal operations. Therefore, there is a need for the clinician to consider the developmental stage of the child (O'Connor and Creswell 2005).

The second major theoretical influence is from **the attachment theory** (Ainsworth et al. 1978; Bowlby 1982), which explains the process of how a child's experiences with early relationships shape his/her representations of later relationships and help in building 'internal working models' (Bowlby 1982).

Despite the emphasis on cognitive mediation, CBT is flexible with a scope to include behavioural and cognitive strategies. These different techniques target different problems.

2.6 Assessment and Case Formulation in CBT—Cognitive Theory Versus Case Formulation

The three main assumptions in CBT are that thoughts precede changes in emotions and behaviours, thoughts can be monitored and assessed, and changes in thinking can lead to changes in emotions and behaviours.

2.7 Assessment

Assessment of symptom severity, beliefs and assumptions and other cognitive phenomena such as negative automatic thoughts, hopelessness, suicidal ideation and self-concept is an important step in carrying out the therapy. Assessment can be carried out using self-report measures, rating scales as well as self-monitoring or diaries and functional analysis. Many of the measures, in particular the rating scales are suitable for use in the Indian setting. Silverman and Ollendick (2005), provide a comprehensive list of interview-based as well as self-report measures that can be used in adolescents.

2.8 Case Conceptualization

Case conceptualization or case formulation in CBT considers the contributions of early experiences in the subsequent development of schema. The model takes into consideration the appraisals or thought processes at various levels, from core schema to dysfunctional assumptions and negative automatic thought. Cognitive theory must be separated from case formulation. Case formulation is specific to each individual and is thought to link theory with actual therapeutic planning. The unique aspect of a cognitive case formulation is that it remains open to new information and validation throughout therapy. Case formulations vary depending on the complexity of issues, age or developmental level of the client. In CBT, the case formulation is a shared understanding between therapist and client. Therefore, the client contributes to the development of the model and must be in agreement with the overall formulation. Starting with a simple formulation that identifies maintaining cognitions and behaviours and then gradually elaborating on this is one approach suggested for use when working with adolescents.

Several approaches to case formulation in children and adolescents have been suggested. In particular, Williams et al. (1997) suggest the use of what they call a 'mind map' to assist case formulation. In building a case formulation in children and adolescent, the clinician must remember that cognitions are still in the process of developing and are likely to be continually influenced by various factors including parents and peers. The case formulation needs to consider this as well along with family and peers as protective factors. Modelling as an influence on learning is also significant.

Some of the significant early learning experiences in adolescents are based on family environment, parenting styles and exposure to parental or significant other models. These early experiences interact with the temperament of the adolescent along with other vulnerabilities and lead to the formation of core beliefs.

Therefore, as with adult patients, the case formulation (Fig. 2.1) consists of identifying early experiences that contribute to the formation of core schema or beliefs (I must always be perfect, nobody loves me, the world is a dangerous place, I must be careful), critical incidents that trigger or activate the core schema

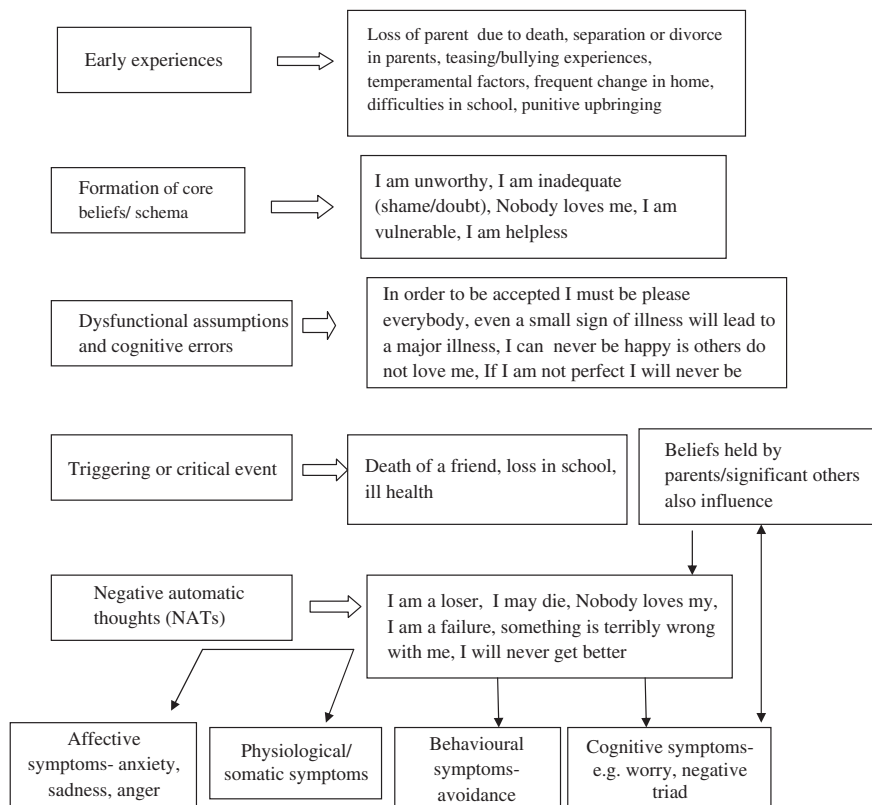


Fig. 2.1 The cognitive behavioural framework for emotional disorders

leading to dysfunctional assumptions (only if I am perfect can I be successful) and subsequently identifying the symptoms in terms of **behavioural** (restlessness, being fidgety, withdrawn), **affective** (sadness/anxiety), **motivational** (lethargy, loss of interest), **physiological** (sweating, palpitations) and **cognitive** (negative automatic thoughts, decreased concentration). This developmental model then guides the therapist to formulate the plan of therapy in collaboration with the client. Case formulation in CBT for adolescents should also consider the changing nature of environment and ongoing events that continue to impact beliefs and assumptions.

Various strategies can be adopted to develop a case formulation in CBT. A detailed interview that guides the adolescent through various possible experiences and factors is the most reliable method. Often, as the adolescent cannot provide much of the early development information, significant others are also to be interviewed. Understanding the family structure, systemic factors as well as specific disabilities the adolescent presents with is important in arriving at a comprehensive formulation (Bailey 2001).

A cognitive behavioural interview uses a process of guided discovery and Socratic questions through which assumptions and cognitions are elicited.

Additionally asking the adolescent to elaborate on specific events and examples also helps in arriving at hypothesis about how cognitions develop over a period of time. Several other methods to elicit beliefs and assumptions have been recommended and these can also be used in working with adolescents. They include the use of imagery to recall thoughts, exposure to specific situations and then asking for thoughts that may have occurred and role-plays to recreate situations that can elicit dysfunctional thoughts.

The precipitating factor is often considered to be the **critical incident** which activates or triggers dormant beliefs and leads to activation of dysfunctional assumptions. Identifying the critical incident or incidents (such as failure in exam, loss of a parent, separation, break-up in relationship, teasing experience) provides the information as to what led the adolescent to begin experiencing difficulties and till what point was he/she functioning adequately.

The cognitive behavioural formulation or case conceptualization can be either **longitudinal** in nature, which is tracing the development of core beliefs based on early experiences and other vulnerabilities, or **cross-sectional**, which attempts to explain a typical cycle of trigger, interpretation and consequence. The longitudinal model is helpful in providing the therapist a broad understanding of contributory and maintaining factors from a developmental perspective and in identifying core beliefs how they develop as a result of an interaction of various factors.

On the other hand, a cross-sectional model attempts to provide the therapist and client an understanding of the here-and-now factors such as triggers and cognitive processes (thinking errors), behavioural and emotional changes as result of these thought processes. Several cross-sectional models are available to specific emotional disorders, such as panic, social phobia, obsessive-compulsive disorders (OCD) and GAD.

Despite the emphasis on early experiences, CBT is considered to adopt a **here-and-now** approach in the management of problems. This is reflected in the nature of strategies used in therapy. Common aims across CBTs include symptom reduction, modification of dysfunctional thinking and relapse prevention.

2.9 Therapeutic Relationship in CBT for Adolescents

The nature of relationship in CBT is one of **collaborative empiricism**. The term refers to the scientific or experimental nature of the approach to solving problems in therapy. Thus, in therapy, the therapist does not assume that he/she already knows better than the adolescent. Prescribing solutions or deciding for the adolescent is avoided. They work jointly on the discovery of dysfunctional patterns in thinking, setting goals and deciding on activities. Collaboration is to be followed at all points in therapy. This includes the start of therapy at which point goals are set. Thus, therapy is a joint effort between the adolescent and the therapist and the family as well.

When working with adolescents, it is important to involve parents at various points in the intervention and to keep the adolescent informed. This is particularly relevant in anxiety management, wherein parents are either cotherapists, facilitators or are part of the intervention due to their role in maintaining anxiety.

2.10 Homework in CBT

CBT involves the acquisition of skills for new patterns of thinking and coping. An important way of achieving this is through practice. Homework compliance has been found to be a major predictor of treatment outcome. Factors such as poor understanding of the therapy, anxiety, cognitive distortions and inadequate motivation/opportunities affect compliance. The therapist must be aware of these factors and work on them to ensure that compliance is maintained. CBT in adolescents involves the use of activities, worksheets and various other methods of communicating formulation, educating and increasing participation.

2.11 Ethical Practice in CBT for Adolescents

Several ethical concerns arise in the treatment of children and adolescents. These are governed by the basic ideas of do no harm, doing what is in the best interest of the child or adolescent and protecting the privacy of the child or adolescent. Respecting the child and family without any bias and promotion and supporting the highest level of development and autonomy in the child are some of the other important rules (Schetky 1995). The therapist additionally faces pressures to control the child and force compliance at the cost of the individuality of the client.

Several other concerns arise in working with adolescents. It is important to protect the privacy of the adolescent client and keep him/her informed about frequency of parent involvement. The exceptions to the rules of privacy and confidentiality are also to be made clear to the adolescent.

Ascherman and Rubin (2008) provide an excellent discussion about current ethical concerns in the practice of child and adolescent psychotherapy.

2.12 Cognitive Behavioural Strategies

The threefold aim of CBT is (a) symptom reduction, (b) belief modification or identification and modification of unhelpful thinking and (c) preventing relapse. Thus, CBT shares certain common strategies that help achieve these goals. Depression and anxiety in adolescents are two major mental health concerns.

A brief overview of some of the frequently used therapeutic strategies are described here.

Several cognitive and behavioural strategies have been found to be effective in adolescents. The choice of strategies is based on the case conceptualization and the functional analysis of problems. Rationale for each of the strategies must be established clearly, as also the monitoring of progress once they are implemented. Continuous monitoring by the therapist and adolescent also allows for the detection of changes and responses and allows the therapist to alter or change treatment strategies.

In the following section, a few frequently used strategies are briefly described. They are further described in the later sections of this chapter, in the context of conditions for which they have been found to be effective.

Arousal reduction methods: Anxiety or arousal reduction is an important therapeutic goal as it leads to symptom reduction. Several different types of strategies can be used to help the adolescent client reduce arousal or anxiety. They include deep muscle relaxation, biofeedback procedures (EMG and galvanic skin response), deep breathing and Eastern methods such as Shavasana and mindfulness-based stress reduction programmes. These methods have also been found to be helpful in anger management and help the adolescent in coping with anxiety and anger by teaching them self-regulation. Arousal reduction methods are most effective when practised regularly.

Applied relaxation (AR) (Öst 1987): The need for more portable and briefer methods of producing the relaxation response in anxiety management led to the development of the AR. It was first described by Chang-Liang and Denney (1976) and later developed by Öst (1987). AR is described as a coping skill, which has several steps. They include recording and identifying early signs of anxiety or worry that act as cues for anxiety and training in deep muscle relaxation or tension release relaxation (sessions 2 and 3), followed by release-only relaxation (session 4) and cue-controlled relaxation (session 5) in which the word cue or calm is paired with exhalation, differential relaxation and rapid relaxation (session 8). Sessions 10–11 are focused on application of these skills to actual situation, based on the cues recorded by the client. Finally, the client and therapist review the overall programme and its maintenance. AR has been found to be particularly effective in panic disorder, generalized anxiety disorder and social phobia.

Exposure and Response Prevention (ERP) is a treatment of choice in the management of OCD. It is based on the theoretical principle of habituation and extinction. ERP involves drawing a hierarchy of situations or triggers that provoke anxiety/fear/disgust, by collaboratively working with the adolescent. The situations/triggers are rated for their subjective units of distress (SUD). The adolescent may also be asked to state what would happen if he/she did not perform the neutralizing behaviour or compulsion so as to understand underlying beliefs. Systematic exposure to these cues is started with items that elicit moderate amounts of anxiety and the adolescent is asked not to engage in compulsions either overt or covert, till there is a significant reduction in anxiety (usually at least 50 %). This allows for habituation of the experience of anxiety, and with repeated practice, there is an extinction of the response of anxiety, even in the presence of these triggers. During the practice of ERP, the therapist must ensure that the adolescent

has understood the rationale for response prevention, as well as the need to be able to tolerate distress that arises during exposure. Sufficient education regarding the symptoms, role of neutralizing behaviours in maintaining distress and beliefs is to be carried out before beginning ERP. This not only ensures adequate compliance but is also likely to be helpful in reducing attrition.

Adequate time for exposure is crucial factor in the practice of ERP. Insufficient or brief exposure can result in the enhancement of anxiety or inadequate learning. The therapist is also alert to use of cognitive compulsions in place of overt ones, avoidance or other subtle forms of neutralizing behaviours and this can be seen when clients report sudden decreases in anxiety.

Graded exposure is a behavioural strategy based on the learning principle of habituation and extinction. It is the treatment of choice in the management of specific phobia, panic disorder, social phobia and other anxiety disorders. Graded exposure addresses avoidance and fear, by systematic exposure to fear-evoking stimuli. The therapist and client prepare a hierarchy that includes fear-evoking situations or triggers and the level of anxiety or fear (subjective unit of distress). Based on this list of situations, the client is gradually exposed to cues, allowing for habituation to occur and subsequently extinction of fear.

Social skills training (SST) is a skills-based programme developed on the principles of social learning. SST assumes that social skills can be learned and acquired with training. Skill deficits in adolescents account for several emotional and behavioural problems such as anxiety, anger, poor interpersonal relationships and overall adjustment leading to stress. SST focuses on building verbal and non-verbal skills that are essential in initiating and maintaining interpersonal skills. Assessment plays a very important role in setting goals for SST. It includes both self-report and observation and behavioural data. Role-play and modelling are some of the important methods by which SST is imparted. Steps in SST include establishing a rationale for skill acquisition, discussing steps involved, modelling skill in role-play, reviewing role-play, engaging the client in a role-play of the same situation, providing positive and corrective feedback and finally assigning homework that will help consolidate gains. Repeated practice and practice across different situations are essential in making SST effective.

Assertiveness skills are an important component of SST and use role-play and modelling to teach skills in effective expression of positive and negative emotions. Assertiveness skills training involves training in refusal, requesting skills, accepting positive or commendatory feedback. In adolescents, assertiveness is particularly important for resisting peer pressure for risky behaviours such as sexual behaviours or substances.

PSST (D’Zurilla 1986): The absence of adequate problem-solving skills often results in the build-up of stressful states and subsequently anxiety and depression. Problem-solving skills are particularly helpful in adolescents who experience various sources of stress such as academic, peer-related and family. Steps in PSST are (a) orientation or set to formulate problems as potentially solvable. This includes the recognition of a problem and the ability to resist taking an action impulsively.

(b) Problem definition in which the central element is specificity as one must be precise, and specific (e.g. I have difficulty in getting to know people socially) (c) generate alternate courses of action: by using brainstorming and other such procedures) decision-making (e.g. refusing to go out with a friend where pressure to drink is high) (d) verification requires that the client be able to anticipate, rehearse and implement a decision. Here, social skills are required or even detailed anticipation of events in the person's life followed by a debriefing after these schedules are implemented. Thus, PSST is a cognitive behavioural programme.

In addition to these broad strategies, cognitive restructuring and many other behavioural strategies such as stimulus control (for study skills, weight management), behavioural activation (in depression) and self-instructional training may be incorporated into programmes that target specific problems.

2.13 Depression in Adolescents

Depression in youth and adolescents is a major concern for mental professionals, and nearly 1.5–8 % young adults (from late adolescence) suffer from depressive disorder (Rushton and Schectman 2002; Waslick et al. 2003). CBT is considered to be one of the most efficacious treatments for depression (Waslick et al. 2003), with a significant amount of evidence supporting it (TADS 2003; Kaufman et al. 2005).

Cognitive models of depression in older children and adolescents recognize that by around ages 8–11 years, most children can both identify and report several cognitions that are seen in adults (Harrington 2005). This is also the time when children are able to perceive self psychologically as well as understand the meaning of events such as death, separation or loss. The nature of presenting complaints appears to be a significant positive indicator for CBT in adolescents. Thus, adolescents who present with a primary problem of mood or depression appear to be more suited for CBT. In addition, the recognition and acknowledgement of the problem by the adolescent and family serve as positive indicators for the choice of CBT. When the family acknowledges the presence of depression and the need for psychological intervention, they will also assist and support the adolescent in therapy.

Contraindications include the developmental stage of the adolescent, severity of depressive symptoms and the social context. With respect to the developmental stage, many techniques used in CBT require knowledge about thought processes or cognition (metacognition). Therefore, if the adolescent is not able to do this, carrying out homework and other tasks will be difficult. The social context is an important factor in response. Many adolescents are caught in social contexts that are difficult to alter, and therefore, despite psychological treatments, problems may ensue. There is a little research on the role of comorbid disorders in impacting outcome of CBT in adolescents.

2.14 Anxiety Disorders in Adolescents

Anxiety disorders and other internalizing disorders form a major part of the psychiatric disorders seen in children and adolescents. Although many fears and anxieties may be transient, changing as the child grows up, others continue, developing into debilitating problems. OCD, social anxiety, specific phobia, school refusal and panic attacks are common anxiety disorders seen in adolescence.

Social phobia is known to have onset in childhood or adolescence; however, very often social anxiety goes unrecognized. This has resulted in far more research on adult samples than in adolescents. The presentation of social phobia is also likely to be different in adolescents, with greater externalizing and antisocial problems, excessive self-focused attention and avoidance (Kashdan and Herbert 2001).

Cognitive behavioural management of anxiety disorders assumes a multicomponent etiologic, involving biological, psychological/cognitive and behavioural components. The treatment that follows this understanding of anxiety disorders employs a group of techniques that try to break the vicious cycle of physiological responses, fear and safety behaviours. It is important to note that anxiety disorders also have comorbid depression, which may impact treatment outcomes.

2.15 Cognitive Behavioural Strategies in the Management of Anxiety and Depression

CBT for depression and anxiety shares many common strategies. An overview of these main strategies is provided below with reference to depression and anxiety.

Education and engagement is an important stage in CBT. Depending upon the severity of depressive or anxiety symptoms and existence of comorbid disorders, the process of engagement can vary in terms of time and difficulty. The process of engagement can be challenging, particularly with difficult adolescents.

CBT for anxiety disorders in adolescents includes an **educational component** in which the therapist provides information about the role of biological processes in the maintenance of anxiety and skills training which would help the adolescent **identify the early signs of anxiety** through self-monitoring.

Behavioural activation through activity scheduling aims at increasing activity levels as well as enhancing mastery and pleasure, thereby improving mood. This is particularly important in depression wherein low motivation and activity could be a presenting complaint as well as in anxiety disorders in the form of avoidance. This is achieved through pleasant events as well as tasks that are graded in terms of difficulties. In anxiety disorders, activity schedules can also incorporate tasks that have been previously avoided and provoke anxiety.

Self-monitoring (thought diary) is used to identify these patterns of dysfunctional thinking, and through this activity, the adolescent is helped to gain an understanding of the vicious cycle between thoughts, emotions and behaviours. Exposure, role-plays and other behavioural methods are also helpful in eliciting dysfunctional cognitions.

Cognitive restructuring is a key component of CBT and aims at identifying and modifying typical patterns of dysfunctional thinking that maintain depressed affect and reduce social behaviours. The process of restructuring dysfunctional patterns of thinking involves both **verbal and behavioural strategies**. Verbal reattribution techniques include using a cost–benefit analysis, developing a pie chart to understand the various factors that lead to a predicted outcome (error of personalization) and identifying the use of double standards to challenge excessive self-criticality, all of which are aimed at taking a more rational perspective. Behavioural reattribution techniques include behavioural experiments, role-plays, exposure sessions and poll surveys. These strategies complement the verbal strategies and also aim at cognitive change.

Learning relaxation skills help manage arousal symptoms. Several types of relaxation skills have been found to be helpful including deep muscle or progressive muscle relaxation, deep breathing, guided or positive imagery and biofeedback. Behavioural strategies are also helpful in the reduction of anxiety and are based on the learning principles such as habituation and extinction and social learning. These include, in session exposure, role-play and modelling, imagery-based methods and graduated exposures (or step ladders). For specific anxiety, symptoms such as worry and worry management techniques can also be recommended. These include worry postponement, worry exposure and prevention of worry behaviours such as checking and reducing reassurance by seeking help from the parents. Cognitive components of the anxiety management programme include identification of negative cognitions that are frequently encountered in anxiety disorders or anxious self-talk. The use of **coping self-statements** has been recommended to deal with anticipatory anxiety. This is carried out through the use of self-statements and cognitive restructuring that can address misinterpretation of anxiety symptoms and catastrophization.

PSST is a core component in the depression treatment protocol for adolescents (Kazdin 2002). It has also been found useful in the management of anxiety disorders. In both conditions, it can effectively prevent relapse. In depression, PSST is based on the assumption that deficits in interpersonal problem-solving skills contribute to and maintain depressive symptoms. It includes skills for interpersonal or social problem-solving, such as dealing with peers, conflicting relationships within the family and dealing with everyday problems that can potentially generate stress in adolescents. Social problem-solving allows the adolescent to anticipate and deal with situations as well as learn to respond to social cues (others' anger, sadness) and also helps in negotiating interpersonal problems that are common in this period. The steps in PSST are similar to those in adults, beginning with identifying a problem that is to be solved, generating as many potential solutions as possible, without at this point judging quality of solutions, choosing the best options while keeping backup solutions, implementing based on skills and resources and finally reviewing outcomes.

CST is helpful in the management of both anxiety and depression. The behavioural model of depression emphasizes skill deficits as an important aspect in the maintenance of depressive symptoms (Lewinsohn and Clarke 1999). Skill deficits are seen in the interpersonal and social problem-solving domains. These skills are important to earn and sustain positive and supportive relationships as well as in

regulating difficult emotions. There are different approaches to CST. They share a few common features such as the identification and modification of schema related to depression or anxiety, correction of cognitive errors, skills training to improve social interactions that include conversational skills, social problem-solving (conflict resolution skills) and other skills and competencies relevant to enhancing self-esteem (e.g. setting performance goals and reaching them), relaxation training to reduce the physiological arousal that could interfere with experience of pleasure and structured experience in selecting and engaging in mood-enhancing activities to increase rates of positive reinforcement.

CBT and CST share similar components, as both modify faulty and depressogenic and anxiety-producing cognitions and involve in session exposures and modelling.

2.16 Treatment Modules and Research on CBT in Adolescents with Depression

Although depression is a major mental health concern in adolescents, there have been relatively fewer research studies on psychological interventions, in particular CBT for adolescent depression as compared to problems such as anxiety and aggression (Para 2008). Reviews by Kazdin and Weisz (1998) and by Kaslow and Thompson (1998) suggest that CBT for adolescents with depression is one of the relatively few childhood or adolescent treatments that met the criteria for at least probable efficacy as an empirically supported treatment. They point out that components of successful CBT for depression in young people include methods to increase participation in pleasant, mood-enhancing activities, to increase and improve social interactions, to improve conflict resolution and social problem-solving skills to reduce physiological tension or excessive affective arousal and to identify and modify depressive thoughts and attributions.

Brent and Poling (1997) and Lewinsohn et al. (1985, 1990) also suggest the inclusion of mood monitoring, goal setting, presentation of a clear treatment rationale and socialization of the adolescent and parents to the treatment model based on this rationale.

Treatment for Adolescents with Depression Study (March 2004; TADS 2003) is a pioneering attempt to treat depression in adolescents, based on key components of CBT for depression described by Beck et al. (1979). It combines CBT for adolescents with parental involvement.

Adolescent coping with depression (CWD-A) is another group cognitive behavioural programme that has been used with adolescents between 14 and 18 years of age in the community settings (Lewinsohn et al. 1984). It is conducted for a mixed gender group over 16 years of age, 2-h sessions (Lewinsohn et al. 1985). The components are based on the coping with depression programme for adults. It is based on the social learning theory and includes skills training and pleasant activities through self-monitoring, self-reinforcement and goal setting.

Reviews of CBT for adolescents suggest mixed results for the effectiveness of CBT (Compton et al. 2004; James et al. 2013). There is an absence of long-term follow-up to establish durability. Few studies have conducted controlled trials, and the relative contribution of different components in CBT to outcome is also not clear. There is limited evidence that CBT is more effective than active controls or TAU or medication at follow-up (James et al. 2013). Therefore, there is a need for controlled research with active treatment controls and longer follow-up to further establish the efficacy of CBT for adolescent depression.

2.17 Programmes Based on Cognitive Behavioural Framework for Other Anxiety Disorders

The Coping Cat programme is a programme that was developed for the management of anxiety disorders in children and adolescents (Kendall 2006). It is a frequently recommended and used treatment programme for the management of anxiety in children and adolescents. The Coping Cat programme involves roughly those with 14–18 years of age, 60-min sessions, delivered over a 12–16-week period. The entire programme is designed to teach the child/adolescent skills and provide opportunities to practise the skills acquired, through exposure. The main aspects of the programme in addition to recognition of anxiety reactions include identifying cognitions in anxiety-provoking situations and making a plan to cope (such as self-talk, exposure, review, evaluation of action and reinforcing one self). Skills taught in the programme include identifying signs of anxious arousal that serve as cues or for the child to employ the skills in anxiety management they have acquired. The **Cool Kids programme** is based on the Coping Cat programme. It follows a group format, involving the family. The main goals of this programme are helping the adolescent learn anxiety management skills, graded exposure or ‘step ladders’, cognitive restructuring and parent management. Optional modules include SST, assertiveness and handling teasing/bullying.

The Coping Cat programme has also been used in a recent Indian study that demonstrated its effectiveness in early adolescents in a community school setting (Selvi 2013). This study demonstrated the efficacy of the Coping Cat programme in a school setting in reducing anxiety.

Reviews on CBT for childhood and adolescent anxiety disorders indicate that while they are effective psychological interventions, more studies on their comparative efficacy with alternate treatment are required (Cartwright-Hatton et al. 2004).

2.18 CBT for Specific Anxiety Disorders

CBT for specific anxiety disorders has also been formulated. OCD is one such anxiety disorder. About 0.5–1 % of children and adolescents receive a diagnosis of OCD (March et al. 1997). Like older patients, CBT has shown to be effective

in dealing with OCD in adolescents. While it is the most recommended treatment for OCD, clinicians document the difficulties in implementing CBT for this disorder, due to poor compliance, attrition, difficulties in belief modification and family accommodation that maintains the symptoms.

A typical CBT protocol for OCD includes a detailed phase of education and socialization to the CB model, **exposure and response prevention (EXP/RP)**, along with **cognitive restructuring** for handling beliefs related to performance of compulsions, **reducing family accommodation** and proxy compulsions (March and Mulle 1998; Mehta 1990) and behavioural interventions such as **modelling and shaping** which help develop appropriate coping behaviours and in enhancing compliance with EX/RP. However, the effectiveness of EX/RP is enhanced with the inclusion of cognitive interventions (Soechting and March 2002). The family also plays an important role in providing positive reinforcements when the adolescent completes tasks successfully and for other positive behaviours.

Most treatment protocols based on CB framework accomplish these goals over a 12-week period with about 14–16 sessions and are dependent on severity of problems and compliance (March and Mulle 1998).

2.19 Cognitive Behavioural Management for Problems Related to Anger and Aggression

Anger, aggression and difficulties in regulating similar negative emotions directed at external events or people are a major problem that clinicians encounter when working with adolescents. Anger and aggression may be seen as part of a larger psychological problem, such as conduct disorder, as anxiety disorder or as an independent problem maintained by contingencies in the environment. They impact the interpersonal relations of the adolescent negatively.

Kazdin (2002) describes a five-step self-instruction approach as part of comprehensive programme to help adolescents build competencies in dealing with anger and aggression. This includes the steps that have been described in the previous section in this chapter. The problem-solving approach used with adolescents with conduct disorder is also referred to as the **cognitive problem-solving skills** (Kazdin 1997) as it involves a variety of cognitive and behavioural processes such as being able to identify the problem accurately, think of it from various points of view before generating a variety of solutions. It also attempts to teach the adolescent skills in delaying impulsive decision-making and use of coping self-talk or self-instructions that can act as effective ways to reduce impulsive acts by allowing the adolescent to reflect before responding.

SST is based on the social learning theory proposed by Bandura (1977). Social skills are an integral and an important component of many emotional and behavioural disorders. The development of social skills is said to occur through vicarious learning. However, many children fail to acquire the desired social skills to successfully manage challenging situations in life. The failure to acquire social

skills can be attributed to a variety of factors, including biological factors that hinder learning, inadequate role models/ opportunities and symptoms such as anxiety or depression that interfere with the effective use of social skills.

SST includes a variety of skills designed to address skills in managing difficult or challenging social situations. They include behavioural and social skills, training in social perception, which involves accurate interpretation of social cues from others, self-instruction/self-regulation training which is the use of self talk, self-reinforcement in response to appropriate social behaviours, social problem-solving, which is similar to PSST, but is applied in an interpersonal context. SST also includes the reduction of inappropriate, inhibiting or competing social behaviours that interfere with appropriate social interactions. This is achieved through the practice of strategies such as contingency contracting, parent management training or even cognitive restructuring where cognitive distortions may interfere or inhibit social interactions (Spence 2003). SST is an essential component in the treatment of emotional disorders.

Assertiveness training is an important component of SST. Deficits in assertiveness have been identified as being an important factor in substance use disorders, high-risk sexual behaviours, aggression and internalizing disorders such as anxiety and depression. Training in assertiveness involves identifying specific areas in which the adolescent has difficulties, such as refusal skills, requesting skills, accepting compliments or expressing positive and negative emotions effectively. Assertiveness training is most effectively delivered through role-plays, role reversals and feedback.

2.20 Parental Involvement

While many of cognitive behavioural programmes are carried out with the adolescent, additional parental involvement becomes important for many of the behavioural problems. Research evidence suggests that parent involvement is likely to improve treatment outcome in anxious children and adolescents (Albano and Kendall 2002; Barrett et al. 1996). The therapist can involve the parents as cotherapists, as collaborators or as consultants who provide important assistance to the therapy. Thus, parents can function as '**cognitive behavioural coaches**'. The frequency at which parents may be called can vary depending upon the tasks required. Parents are often involved in planning exposure activities, in desisting reassurance giving or in carrying out proxy compulsions. Parents are also instructed to provide positive reinforcements during the course of treatment.

The active involvement of parents in the child or adolescent's treatment plan will vary depending upon a number of factors including degree of impairment, comorbidity, age and developmental level of the child (i.e. degree of independent functioning). Parent involvement may be impeded by marital discord, parental psychopathology or other psychosocial stresses such as economic or environmental problems. Thus, the clinician will assess each individual situation and 'dose' the parental involvement accordingly.

For problems such as attention-deficit/hyperactivity disorder, conduct disorders and other externalizing disorders, interventions involve both the adolescent and the parent. A variety of behavioural strategies such as contingency management have been found to be effective. Conflict resolution skills and handling negative self-talk affect regulation skills such as learning to relax or use social problem-solving skills that are used in the management of problems related to anger (Novaco 1979).

Parent management training (PMT) refers to procedures in which parents are trained to alter their child's behaviour in the home (Kazdin 2005). The parents meet with a therapist and acquire skills in specific procedures that aim to alter interactions with their child, to promote pro-social behaviour and to decrease undesirable behaviour. PMT is based on the assumption that problem behaviours are maintained by coercive and maladaptive parent-child interactions in the home setting. Multiple aspects of this interaction that foster the behavioural problems including harsh punishment along with use of ineffective commands by parents in addition to a failure by parents to positively reinforce the child when he/she shows appropriate behaviour are said to be major reinforcing factors (Patterson 1982).

Recent advances in this field include the application of **mindfulness-based interventions** for adolescents in the management of anxiety (Urvashi 2013), conduct disorder, aggressive behaviours (Singh et al. 2007) and attention-deficit/hyperactivity disorder (Zylowska et al. 2007). Mindfulness-based interventions, considered to be the third wave in behaviour therapy, are considered to be a promising approach in the management of psychological problems in adolescents (Burke 2009).

2.21 Varied Forms of CBT Delivery

Since the development of CBT in the last few decades, varied forms of CBT delivery have been reported. Face-to-face delivery of CBT has been the most common mode of CBT practice. However, in the recent years, as the need to reach out to more adolescents and to make CBT more easily available to clients, CBT has been delivered through Internet (Internet CBT or Web-based), telephone (Tele-CBT) and computer-assisted CBT. More recently, CBT is also made available as a telephone application. Evidence for the clinical effectiveness of Internet-based CBT has been recently reported with respect to depression (Ruwaard et al. 2009). One such programme that has been studied is the MoodGYM, which is a free Web-based CBT programme developed to prevent and treat mild-to-moderate depression and has been studied in adolescent population (Groves et al. 2003). These forms of delivering CBT have been most often used in non-clinical settings or in clients with mild levels of symptoms. They have the distinct advantage of being accessible to more people and also overcome the difficulties associated with lack of time and availability of therapist, as well as cost.

2.22 Conclusions

CBT is a problem-focused, time-oriented and evidence-based psychological intervention. It has been adapted to suit both children and adolescents as well. The therapist stance in CBT is one of collaborative empiricism, and this approach ensures that the adolescent feels that he/she is an active collaborator in therapy. The main focus in CBT for adolescents is the identification and modification of depressogenic or anxious thinking patterns and teaching skills in problem-solving, anxiety management and similar skills that will help the adolescent in dealing with challenging situations. Problem-solving skills and coping skills are effective for a variety of emotional and behavioural problems in adolescents. In addition to core cognitive components such as cognitive restructuring, CBT also includes behavioural techniques such as relaxation training, exposure, role-play and activity scheduling. Parental involvement has been recommended in many formats of CBT for adolescents; however, care needs to be taken to inform the adolescent, and parental involvement must be defined clearly.

Recent reviews support the effectiveness of CBT in adolescents; however, there is a need for long-term studies, with active treatment controls to further substantiate these conclusions. Future research must also focus on understanding how different mechanisms operate in CBT to bring about outcome. Studies must also focus on mediators and moderators of change in therapy (Kazdin and Weisz 1998; Kazdin and Nock 2003). This can be made possible through dismantling studies. Psychological interventions based on the cognitive behavioural framework are effective in treating a wide variety of psychological problems seen in adolescents.

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