Test anxiety is the uneasiness, apprehension or nervousness felt by students who have a fear of failing an examination. Students with test anxiety may experience low personal worth in association with grades, fear of embarrassment by a teacher, fear of alienation from parents or friends, time pressures, or feeling a loss of control. Common symptoms associated with test anxiety are sweating, dizziness, headaches, racing heartbeat, nausea, fidgeting, and drumming on a desk. Since test anxiety hinges on the fear of negative evaluation, a debate exists on whether test anxiety is itself a unique anxiety disorder, or whether it is a specific type of social phobia.

Philosopher Soren Kierkegaard, described anxiety as being associated with the "dizziness of freedom" and suggested the possibility for positive resolution of anxiety through the self-conscious exercise of responsibility and choosing.

Research on test anxiety has a long and fruitful history. While first studies relating to test anxiety were conducted as early as 1914 (Folin, Demis & Smillie, 1914), test anxiety entered the stage of scientific investigation under its own proper name in 1952 when Mandler & Sarason (1952) published a series of studies on test anxiety and how it related to performance. This provided researchers with an instrument to Advances in Test Anxiety Research assessing individual differences in test anxiety in adults. The Test Anxiety Questionnaire, was followed a few years later, by an instrument to
assess test anxiety in children, that is, the Test Anxiety Scale for Children (Sarason, Davidson, Lighthall, Waite & Ruebush, 1960). These two questionnaires became the gold standard of test anxiety research and granted a sound basis for many advances in test anxiety research in the years to come.

In the 60s and early 70s, a number of conceptual advances followed suit, of which two turned out to be seminal contributions for test anxiety research: the first was the distinction between anxiety as a transitory state and anxiety as a stable personality trait (Cattell & Scheier, 1961; Spielberger, 1972) and the second the distinction between two basic dimensions in the experience of anxiety, namely worry and emotionality (Liebert & Morris, 1967).

Following these conceptual advances, the 70s and 80s saw major leaps in model construction (particularly cognitive models of test anxiety and its effects on attention and cognitive performance), research, and applications. These advances resulted in a sizable body of cumulative research findings as demonstrated by an increasing number of scientific publications on test anxiety that, from 1952 up to now, have summed up to a total of over a1,000 publications (Zeidner, 1998).

However, after a peak in the 80s, the number of scientific publications on test anxiety started decreasing, a trend that still continues today (Zeidner, 1998).

Despite test anxiety not appearing in the headlines of scientific publications as often as it did in the 80s, test anxiety research still is well and
alive, and continues to be a key construct in research on anxiety, stress, and coping.

2.1 Early Research on Examination Stress and Test Anxiety

Fear and anxiety were clearly recognized as significant aspects of human behavior in ancient Egypt, the Old Testament, and in Greek and Roman literature. May (1977) traced the historical roots of the most conceptions of anxiety to the philosophical and theological views of different philosophers. From the biological perspective, Darwin (1872) considered fear to be a universal characteristic in both animals and humans, that has evolved over countless generations as an adaptive response to dangerous situations. Manifestations of fear, according to Darwin, included heart palpitations, trembling, increased perspiration, dryness of the mouth, and other physiological and behavioral reactions that would now be recognized as resulting from activation of the automatic nervous system.

The noted Russian physiologist Luria (1932) was perhaps the first investigator to call attention to individual differences in the emotional reactions that students experience in test situations. Luria classified medical students, who became excited and disorganized during examinations, as “unstable”, while those who remained relatively calm, with well-coordinated speech and motor reactions, were considered “stable”. More than 60% of the students classified as unstable were judged to have “neuropathic symptoms,” as compared with only 16% of the stable students. These findings were interpreted by Luria as evidence that academic examinations evoked intense
emotional reactions (test anxiety) in unstable (i.e., neurotic) students, for whom such situations elicited “unmanageable stress.”

Between 1932 and 1937, test anxiety received a great deal of attention from German investigators. The first book on test anxiety (Neumann, 1933) was published during this period, along with a number of papers on its etiology and treatment (Stengel, 1936; Weber, 1934). Conceptualized in the context of psychoanalytic theory, test anxiety was assumed to result from traumatic childhood experiences. Unfortunately, this research was never translated into English and has subsequently received little attention in the test anxiety literature.

Brown and his colleagues, in a series of studies at the University of Chicago (Brown, 1938; Brown & Gelder, 1938; Fiedler, 1949; Hastings, 1944; Waite, 1942), systematically investigated individual differences in test anxiety. The Chicago group developed the first psychometric scale for identifying test-anxious students, finding that students with high scores on this scale were nervous before examinations and performed more poorly than those who were relatively calm. The potentially serious consequences of test anxiety were also noted by Brown (1938), who attributed the suicides of two university students to worry over approaching examinations.

2.2 Major components of test anxiety

Worry and Emotionality

Liebert and Morris (1967) were first to conceptualize test anxiety as having two major components, worry and emotionality. The worry component
of test anxiety, as described by Liebert and Morris (1967), is a “primarily cognitive concern about the consequences of failure” and emotionality refers to “reactions of the autonomic nervous system that are evoked by evaluative stress”. Research findings reported by Morris and Liebert (1970) indicated that worry was associated with performance decrements on tests and other intellectual tasks. In contrast, they found little or no relation between emotionality and performance. Their definition of emotionality primarily in terms of the physiological reactions evoked by evaluative stress is similar in many respects to S-Anxiety. However, the physiological changes resulting from arousal of the autonomic nervous system are emphasized in this definition, and less attention is given to the qualitative feelings that are associated with autonomic activation.

Covington (1983) also directly attributed the poor performance of test-anxious students to the adverse effects of worrying during examinations. According to Covington, “During testing, anxious students worry that they are falling behind, scold themselves for forgetting the answers and fearfully recall similar, previous test situations that ended in a disaster. Such intrusive worry inhibits all but the simplest, automatic response.”

2.3 Test Anxiety and State-Trait Anxiety

In the early studies of examination stress (Cannon, 1929; Folin, Demis & Smiles, 1914), test anxiety was inferred from the physiological responses (e.g., glycosuria) that students experienced during stressful examinations. Thus, test anxiety was implicitly defined as functionally equivalent to the physiological arousal associated with activation of the autonomic nervous
such definitions typically ignored the experiential qualities of the emotional states that were experienced during examinations. Definition of test anxiety that emphasize on physiological arousal, also fail to take into account individual differences in anxiety proneness as a personality trait that influence the perception and appraisal of examinations as more or less threatening.

In the context of stress as a transactional process, Spielberger (1966, 1972) distinguished between the stress associated with examination situations (stressor), the subjective interpretation of a test as more or less threatening for a particular person (threat), and the emotional states that are evoked in test situations. The concepts of stressor and threat denote significant components of a temporal sequence of events during an examination that result in the evocation of an anxiety reaction:

Stressor—Threat—S-Anxiety

State anxiety involves activation of the autonomous nervous system and the consequent triggering of a series of physiological reactions and conditions. The emotional state (S-Anxiety) experienced during examinations consists of feelings of tension, apprehension, nervousness, and worry and associated physiological arousal, resulting from activation of the autonomic nervous system. The intensity of this S-Anxiety reaction will vary as a function of the degree of perceived threat, which depends on a number of factors, such as the nature of the test questions, the student’s general ability and aptitude in
the subject matter area, how diligently he or she has prepared for the examination, and individual differences in test anxiety as a personality trait.

Trait anxiety is a form of anxiety which is a relatively stable aspect of the personality. Individuals who present an anxiety trait will tend to have an attitude reflecting their perception of certain environmental stimuli and situations as dangerous or threatening. A cognitive approach to trait anxiety can account for many phenomena (e.g. failures of concordance). According to the four-factor theory, the experience of anxiety depends on the processing of the four sources of information: external stimuli; internal physiological stimuli; one's own behaviour; and one's own cognitions (e.g. worries about the future). High-anxious individuals (high in trait anxiety; low in defensiveness) have cognitive biases, leading them to exaggerate the threat posed by these four sources of information. Individuals with a repressive coping style (low in trait anxiety; high in defensiveness) have cognitive biases leading them those minimize the threats.

Thus, state-anxiety is the type of anxiety we experience when something causes us to feel appropriately and temporarily anxious, and this anxiety then retreats until we feel 'normal' again.

Trait anxiety is the 'preset' level of anxiety experienced by an individual who has a tendency to be more anxious and react less appropriately to anxiety provoking stimuli.
2.4 Origin of EMDR

Eye movement desensitization and reprocessing (EMDR) therapy was initially developed by Francine Shapiro (1989, 1995). This can be traced back to 1979 while Shapiro was writing her dissertation in English Literature in New York University (NYU). During that period of time, she developed an interest in the relation of causal effect in human psychological phenomenon and physical well being. It was at that same time she was diagnosed with breast cancer, and it made her treasure her life even more. It became more meaningful at this point of her life, when she first had an interest in the viewpoints that behaviorism carries on the physiological causal effect. Later on, she studied the neuropsychoimmunological research that Norman Cousins and some others were researching on, and this made her strongly believe in the correlation between illness and pressure.

When she was told that the cancerous cells in her body had been completely removed, but uncertain if she would relapse, Shapiro started going to many mental health, physiological and psychological workshops to ensure her well being as a whole person. Then she went on to pursue her PhD in clinical psychology. The topic of her dissertation was on the relationship between mental and physical health and pressure. This was when Eye Movement Desensitization and Reprocessing was first established and developed.
2.4.1 Meaning of the Eye Movement

Eye movement refers to the fingers of the therapist moving back and forth in front of the client or in the form of tapping so the client's vision can be led from one end to the other in order to elicit the client's neurotransmission system. The distance that needs to be kept between the therapist and the client mainly depends on the comfort zone of the client.

It is believed that when a person is very upset, their brain cannot process information as it does ordinarily. One moment becomes "frozen in time," and remembering a trauma may feel as bad as going through it the first time, because the images, sounds, smells, and feelings haven't change. Such memories have a lasting negative effect that interferes with the way a person sees the world and the way they relate to other people.

EMDR seems to have a direct effect on the way that the brain processes information. Normal information processing is resumed, so following a successful EMDR session, a person no longer relives the images, sounds, and feelings when the event is brought to mind. One still remembers what happened, but it is less upsetting. Many types of therapy have similar goals. However, EMDR appears to be similar to what occurs naturally during dreaming or REM (rapid eye movement) sleep. Therefore, EMDR can be thought of as a physiologically based therapy that helps a person see disturbing material in a new and less distressing way.
2.4.2 The Formulation of EMDR and Treatment of PTSD

Shapiro proposed the accelerated, or adaptive, information-processing model (AIP) in an attempt to explain the reason EMDR seems to have rapid clinical results (Shapiro, 1994, 1995, 1998, 2001). According to this model, PTSD and other mental disorders develop when the information related to a distressing experience is inadequately processed and is stored in a state-dependent fashion. The memory network becomes effectively isolated from more adaptive information and is not assimilated. During EMDR, this material is linked to more adaptive information and new associations are made, resulting in complete information processing and adaptive resolution.

In the evolution of EMD into EMDR, an eight-phase treatment protocol was developed, which has been described in detail by Shapiro (1995, 1999, 2001). It is now generally acknowledged that this multicomponent package contains numerous elements that are common in other forms of behavioral interventions. However, the inclusion of eye movements remains a pivotal (and controversial) feature of the overall procedure, although it has been suggested that forms of alternating stimuli (i.e., other than eye movements) such as finger taps (Bauman & Melnyk, 1994) and auditory tones (Shapiro, 1994) are also therapeutically effective (Shapiro, 1995). It is hypothesized that the external stimulation enhances the information processing qualities of the treatment.

In principle, the balance between these competing visions and values can vary from client to client or from stage to stage of the therapeutic work. In
addition, familiarity with therapists who practice EMDR makes it clear that individual differences among therapists are clearly evident, with some practicing EMDR in a way that emphasizes the structured, therapist-directed flavour of cognitive-behavioral therapy (CBT) and some emphasizing more on the client-directed dimension of the work.

2.5 EMDR and Cognitive Behavior Therapy

Behavior therapy, or as it is now more commonly called, CBT, is a treatment approach that reflects diverse theories and procedures, none of which have been accepted as the one unifying framework. However, over the years, behavior therapy has always retained its original firm adherence to empiricism and “the application of the experimental method to the understanding and modification of abnormalities of behavior”.

Unlike some other psychotherapeutic approaches that are closely associated with the work of a single individual, views differ about the origins and essential characteristics of behavior therapy. However, there is widespread agreement that research into what is now referred to as classical conditioning (Pavlov, 1927, 1928) and on the principles of instrumental learning, or operant conditioning (Bekhterev, 1932; Skinner, 1938; Thorndike, 1913), were key elements in the development of behavior therapy. As Yates (1970) pointed out, “The experimental procedures of these workers began to be applied almost immediately to the area of abnormal behavior, both in a general explanatory sense and in the explanation of particular disorders”.
By the 1950s, behavior therapy really began to emerge and challenge the then accepted concept of mental disorders. It did so in different forms and with different emphases on both sides of the Atlantic. In America, many psychologists at various centers sought to apply operant conditioning techniques to clinical problems. Operant conditioning is the process by which an organism’s actions are shaped by either reinforcement or punishment; reinforcement is the process of rewarding behavior with positive consequences or elimination of negative stimuli, increasing the likelihood that an action will recur, whereas punishment is the process of discouraging behavior by introducing aversive consequences or removing positive stimuli decreases the likelihood behavior will be repeated.

Eysenck (1964) defined behavior therapy as “the attempt to alter human behavior and emotion in a beneficial manner according to the laws of modern learning theory”, whereas Yates (1970) argued that behavior therapy “represents (or should represent) a unique and particular way of approaching the patient”. The definition does not deny an important role to learning theory in many disorders of behavior, with respect to both, explanation and to therapy; what it does deny is that the use of learning theory is the essence of behavior therapy (Yates, 1975).

2.5.1 Development of CBT

Given the limited success of purely behavioral methods in treating depression, behavior therapists began to recognize the need to pay more attention to and place greater emphasis on the importance of their patients’
attitudes, values, and beliefs. As a consequence, numerous behaviorally oriented researchers and clinicians became increasingly interested in the work of Beck and his colleagues on the cognitive theory of depression (Beck, 1967; Beck, Rush, Shaw & Emery, 1979). In recent years more overt behavioral approaches have been merging with procedures designed to address the cognitive factors believed to contribute to the development and maintenance of emotional disturbances (Barlow, Craske, Cerny & Klosko, 1989). The integration of cognitive concepts with behavior therapy has also stimulated a return to emphasis on the importance of theory.

2.5.2 PTSD: CBT Formulations and Treatment

In 1980, PTSD was accorded the status of a formally recognized diagnostic classification when it first appeared in third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III; American Psychiatric Association, 1980). Before this, the symptoms of posttraumatic stress had long been recognized and described in the psychiatric literature, often in relation with reactions to specific types of traumatic experiences. A PTSD diagnosis is based on the presence of a constellation of symptoms that occur after exposure to a traumatic event. The symptoms include persistently re-experiencing the event, emotional numbing and avoidance of trauma-related stimuli, as well as symptoms of hyperarousal.

Since the diagnostic criteria for PTSD include a presumed causal environmental event, (i.e., exposure to a traumatic experience), it is not surprising that attempts to understand and treat the disorder would attract the
interest of behavior therapists working with other anxiety-based disorders. Within a relatively short period after the formal recognition of PTSD as a diagnostic category, reports of the use of behaviorally oriented treatment strategies began to be described in the literature. Two conceptual models have had a significant influence on behavioral approaches: the conditioning model of Keane, Zimering & Caddell (1985) and the emotional-processing formulation of Foa & Kozak (1986).

During the mid-1980s, when Keane and his colleagues (Keane, Fairbank, Caddell & Zimering, 1989) and Foa with his colleagues (Foa, Rothbaum, Riggs & Murdock, 1991) were developing CBT treatment for PTSD, Shapiro was developing Eye Movement Desensitization (EMD). When EMD was introduced in 1989 in a controlled study (Shapiro, 1989) as a method for treating PTSD, only one other controlled clinical outcome study had been published (Peniston, 1986).

On the basis of Pavlov’s (1927) theories, Shapiro (1989) suggested that a traumatic event causes imbalance between excitatory and inhibitory neural processes, causing information processing to be blocked and preventing resolution of the experience. She hypothesized that “the rhythmic multi-saccadic [eye] movement may be the body’s automatic inhibitory (or excitation releasing) mechanism” and that “the EMD process, therefore, reciprocally inhibits the excitatory phase” (Shapiro, 1989). This was a post hoc theoretical explanation presented to account for the effects of the EMD procedure, which seemed to have rapid and lasting effects on trauma-related symptoms. Shapiro (1991) subsequently modified her theoretical explanation
of the treatment process as simple desensitization to incorporate aspects of cognitive reprocessing and renamed the method eye movement desensitization and reprocessing (EMDR) to reflect this shift.

The origin of EMDR, which was initially presented by Shapiro (1989) as the behavioral treatment procedure called EMD, was unusual, if not unique, in the field of behavior therapy. Rather than being derived from general psychological theory or from direct clinical observation, Shapiro reported that it was the result of personal experience and introspection. As she stated, "Careful self-examination ascertained that the apparent reason for this effect [the desensitization of the traumatic memories] was that the eyes were automatically moving in a multi-saccadic manner while the disturbing thought was being held in consciousness" (Shapiro, 1989).

2.5.3 The Relationship between EMDR and Behaviour Therapy

Examination of the multi component procedure in contemporary EMDR reveals an overlap between EMDR and other behavior therapy interventions. The focus on the trauma image, body sensations, associated affect, and beliefs is consistent with the emotional processing (Foa & Kozak, 1986) and cognitive therapy elements of behavioral approaches to PTSD. From this perspective, EMDR might simply be considered a new comprehensive, multidimensional behavior therapy reminiscent of multimodal therapy (Lazarus, 1991) that, as argued by Hyer and Brandsma (1997), combines the various elements particularly effectively and efficiently.
Another key element of EMDR, but one that is rarely highlighted in the ongoing debates about EMDR's mechanisms, is mindful attention ("just notice"), which has an emphasis on just letting "whatever happens, happen" (Shapiro, 1989, 1995). This component is not unlike dialectical behavior therapy’s (DBT's) "mindfulness" (Linehan, 1993) and the "radical acceptance" characteristic of DBT and acceptance and commitment therapy (Hayes, Strosahl, & Wilson, 1999). Most notably, this focus contrasts with the protocols for prolonged exposure, in which the therapist must be vigilant, noticing any signs of avoidance, and work with clients to ensure they remain focused on the trauma. It may be that careful attention and acceptance of "whatever happens" are more efficient strategies for accessing associated elements of the trauma-related memory structures than the procedures used in prolonged exposure and flooding.

Considered from this perspective, EMDR, minus the eye movements, can be considered as a integration of all of the core elements of old and new behavioural treatment methods. For this reason, some have noted that EMDR is just a variant of "extant behavioral treatments" and that the eye movements are superfluous (Lohr, Tolin & Lilienfeld, 1998). It is not surprising then, that eye movements have become such a central focus in the debates about EMDR. They comprise of the sole component that do not seem to be clearly derived from existing behavior therapy procedures or from any other established theory of behavior change (Shapiro, 1995).

It is certainly true that imaginary exposure is a component of EMDR, as is true of other behaviorally oriented interventions for PTSD. However, as
used within the EMDR process, it differs from the prolonged exposure protocols that have been generally considered necessary for habituation of anxiety responses (Marks, 1987).

2.5.4 Contribution of Behaviour Therapy to EMDR

Behavior therapy’s strong empirical tradition, with its emphasis on the scientist-practitioner model and the experimental investigation of the single case, has influenced the development and practice of EMDR (Rubin, 1999). However, behavior therapy has more to offer the EMDR practitioner.

Shapiro (1995) has discussed the importance of assigning behavioral tasks as homework in particular clinical situations. A behavioural perspective would promote this, together with ongoing systematic assessment of the client’s current life, as a good general strategy for a client who had not already initiated such changes, to ensure that changes observed in the treatment session were generalized into daily life. Similarly, although Shapiro noted the importance of determining client goals, behavior therapy would place more emphasis on the importance of making them operational in measurable and quantifiable terms. Adopting the behavior therapists’ practice of determining how often a problem occurs, when and where a problem does (and does not) occur, and a problem’s intensity and duration, could help EMDR therapists to assess more precisely the degree of progress made in treatment.

In addition, using the CBT procedure of functional analysis, sometimes called behavior chain analysis, can assist EMDR therapists in narrowing down
target problems for intervention. Use of such analysis identifies the immediate events (or antecedents) that trigger a particular problem behavior and the sequence of reactions, (e.g., thoughts, images, feelings, and body sensations) that follow the trigger and culminate in the problem behavior. Also, the immediate and long-term consequences of behavior can be identified.

Other CBT techniques that can be helpful to the EMDR therapist include Socratic questions and behavioral experiments (Beck, Rush, Shaw & Emery, 1979). Socratic questions are questions that allow clients to come to their own conclusions. Behavioral experiments are tasks that are given to clients to carry out either during or between sessions, to assess a specific belief. They can be particularly helpful in developing cognitive interweaves when EMDR processing becomes stalled.

**2.5.5 Contribution of EMDR to Behavior therapy**

If nothing else, EMDR provides behavior therapists with a structured method that includes many effective elements of traditional behavioral treatment, with some that are used in more recent behavioral interventions, developed by Linehan (1993) and Hayes, Strosahl, and Wilson (1999), combined in a way that facilitates therapeutic change (Hyer & Brandsma, 1997).

EMDR also encourages behaviour therapists to reexamine the procedure and assumptions of exposure treatments. The practice of EMDR suggests to clients the importance of conscious attention ("just notice") and
acceptance ("let whatever happen, happen"). As noted previously, these components are present in newer behavioural treatments (Hayes, Strosahi & Wilson 1999; Linehan, 1993). Together, these treatments may comprise a new direction for cognitive interventions in behaviour therapy, which have tended to focus on controlling, changing, and stopping thoughts rather than having the client simply accept them.

EMDR also offers CBT therapists, a tool to help clients who have difficulty accepting what they know rationally, rather than what they believe emotionally. The EMDR protocol allows clients to differentiate between what they know to be true and what feels true (through the validity of cognition [VoC] rating of their positive cognition). Evidence has suggested that after successful EMDR treatment, clients report congruence between these two perspectives (Shapiro, 1995). DBT practitioners, who teach clients about rational, emotional, and wise mind (Linehan, 1993), think of this process as helping clients shift from emotional mind to wise mind, while synthesizing the knowledge of the rational mind. From this perspective, EMDR may offer a focused method for eliminating emotional blocks to the processing of new information or skills acquired through standard CBT.

Another possible contribution of EMDR to behaviour therapy is that it may raise the age-old issue of the relationship between the “mind” and the “brain”. Traditionally, behavioural theory focused on learning principles and then mental processes (the mind), without speculating on the actual physiological mechanisms of change (the brain). The eye movement component of EMDR has raised questions about what physiological process
could stimulate adaptive information processing. Shapiro (1995) and others (Levin, Lazrove & van der Kolk, 1999; Stickgold, 2002) have speculated about this question, and debates about the contribution of biological perspectives to behaviour therapy are ongoing (Hayes, 2000; Tryon, 2000). Shapiro’s accelerated or adaptive information processing model might be considered another attempt to bridge the gap between the mind and the brain.

There is a similar therapy process involved in EMDR to that in CBT. Firstly, an assessment enables the client and therapist to collaboratively understand the clients’ presenting problem.

Information that is collected helps in developing a treatment plan. The material to be processed might be recent distressing events, situations that elicit powerful emotions and the development of specific skills and future behaviour needed by the client.

However, the treatment stage in EMDR is different to that of CBT. During a typical EMDR treatment session, the client is invited to bring to mind past and present experiences. The therapist then asks the client to follow his/her fingers with their eyes – this is called bilateral stimulation. When a ‘set’ is completed, the client is then asked to allow any experiences to come to mind, without ‘making anything happen’. This alternate attention to internal recollections and external stimulus is called ‘dual attention’. This sequence of dual attention and personal association may be repeated many times during a session.
After EMDR processing, clients generally report that the emotional distress related to memory has been eliminated, or greatly reduced. These changes also usually result in spontaneous behaviour and personal change.

2.6 EMDR and Psychoanalysis

For an integration or combination of EMDR and psychoanalysis to be viable, two conditions must be satisfied: firstly, the differences must not be so fundamental and unbridgeable that any effort to bring the two approaches together is inherently incoherent and contradictory, secondly, at the same time, the differences must not be so trivial or superficial that putting them together adds little or nothing. The interface between EMDR and psychoanalysis meets both these conditions.

2.6.1 Interface between Psychoanalysis and EMDR

Both psychoanalysis and EMDR have evolved and changed over time, and in part, it is those changes that have created the possibility for useful interactions between the two approaches. Over time, certain significant changes in the psychoanalytic approach have created a more fertile ground for the inclusion of EMDR in the practice of psychoanalytic therapists.

In some ways, the evolution of psychoanalysis has taken it in directions that increase the differences between psychoanalysis and EMDR. In certain respects, EMDR is most similar to the very earliest versions of psychoanalytic practice.
2.6.2 Beyond Orthodoxy

The very term orthodox, once so commonly applied to certain versions of psychoanalysis (versions which for a time even constituted the mainstream of psychoanalytic thought), now sounds rather dated. Even practitioners whose approach most closely resembles that venerable set of practices, would now most likely groan at the use of such a term.

In earlier times psychoanalysis practice was to be "given" and perfect, so those who suggested new ways of practices were viewed as, not valued innovators. In contrast, today’s psychoanalytical journals tend to publish works of other theorists.

Although this evolving openness in psychoanalysis does not imply that psychoanalysis is in any way getting to look more like EMDR, it does mean that some of the obstacles even to considering the relation between the two approaches have diminished. Further pursuit of the question of whether aspects of EMDR might be fruitfully combined with psychoanalytic work could potentially accelerate this trend toward greater openness and, indeed, lead to deeper inquiry into the fundamental nature of both EMDR and psychoanalysis.

2.6.3 One- and Two-Person Models

In contemporary psychoanalytic discourse, the distinction between the participant-observer model and the older model is often discussed in terms of one-person and two-person models (Aron, 1996; Frank, 1999; Modell, 1984).
In the one-person model, the crucial events are considered to take place within the patient’s head, and the patient is observed as a kind of closed system whose properties can be studied from the outside. In the two-person model, the therapist’s, or observers, influence on the relational field is crucial. Both people, the therapists and the patient, play a role in creating the psychological phenomena— including the patient’s subjective experience—that constitute the focus of study of the analysis.

The difference between the two models is evident in the work of the late Merton Gill, one of the most distinguished and influential analysts of recent decades. In the 1950s, Gill offered perhaps the best articulated argument in the psychoanalytic literature for the one-person model. Several decades later, he became one of the most influential proponents of the two-person model and considered appreciation of that model’s implications as essential, for successful psychoanalytic practice (Gill, 1954, 1994).

The embrace of a two-person model contributed to the possibilities of coherently combining psychoanalytic exploration and attention to the transference on the one hand and the use of active techniques, including EMDR, on the other (Frank, 1999, and Wachtel, 1997). However, it also increased the divisions between the psychoanalytic view and the EMDR perspective in certain ways. EMDR is largely practiced from a version—in this case a cognitive—behavioural version—of the one-person model. EMDR therapists are cautioned against interrupting the flow of clients’ thoughts and images or imposing their ideas on clients.
Shapiro (1995) described EMDR as "a highly interactive, client-centered procedure". This description reflects a dialectical polarity, which is at the heart of EMDR, and indeed, of all good therapy. EMDR, reflecting its cognitive-behavioural origins, is highly structured. It consists of a set of protocols for different kinds of clients and problems, and has a sequential, stepwise approach, that is directed and overseen by the therapist. At the same time, each client's treatment is different and unpredictable, following the flow of the client's own associations and images; the therapist operates under the injunction, "Stay out of the way of the client during successful processing" (Shapiro, 1995)

2.6.4 EMDR and "working through"

The concept of working through is one of the most crucial in the psychoanalytic conceptualization of therapeutic change. It is in the working-through phase of treatment that EMDR's greatest contribution may lie. Case reports and some of the preliminary research on EMDR (Marcus, Marquis, & Sakai, 1997; Rothbaum, 1997; Scheck, Schaeffer & Gillette, 1998; Wilson, Becker & Tinker, 1995, 1997) have suggested that EMDR may accelerate the working-through process. In the psychoanalytical tradition, there has been much discussion of the distinction between intellectual and emotional insight. In accord with some theorizing about EMDR, the question arises that the bilateral stimulation associated with EMDR contributes to reconnecting neural pathways that had become dissociated from each other.
The reaction tendencies towards the maladaptive patterns, manifested by clients, are not simply a product of material locked in the brain’s neural network, rather, these tendencies are maintained by the ways they lead to consequences, and life experiences that strengthen the internalized inclinations. Thus, although traumas can leave powerful marks on the psyche, and even alter structures in the brain, the impact of the trauma is not limited to the deeply etched memories or the emotional reaction patterns that continue to disrupt the person’s life years after the event. When, in reacting to those memories, the patient is wary with other people, is prone to emotional outbursts, has difficulty functioning effectively on the job or maintaining intimate, trusting relationships, experiences anxiety or absence of pleasure in sexual activity, or manifests the consequences of the trauma in countless other ways, those reactions have further impact on the patient’s life.

The enduring effects of the trauma do not just reside in the patient’s brain, they reside as well in his or her way of life. A way of life that may have originated from a trauma can itself become a continuing source of traumatization that further perpetuates the same problematic way of life.

In these and other patterns, the impact of the trauma lies not just in memory, but also, in how the experience is “stored” in the brain. It also involves new experiences, that might not have occurred in the present if the patient had not had the earlier unfortunate experiences in the past.

Therapists must also help patients change the current patterns that make their present lives resemble the traumatic circumstances of the past and
pay active attention not only to what patients feel, think, and remember, but also to what they do—to the ironic ways in which reactions to the traumas of yesterday lead to behavior that increases the likelihood of further traumatization tomorrow. It also means the therapist must pay heed, not only to what the patient does, but also, to what the patient’s behaviours evoke in others.

Both, the psychoanalytical method and EMDR evoke the associative processes of the mind. EMDR is more like traditional analysis, in letting associations flow from the patient with minimal interruption by the therapist—the one person model. Modern psychoanalysis, influenced by Harry Stack Sullivan’s interpersonal theory of psychiatry, tends to be interactive. The therapist-patient dyad focuses on problems of life and relationships—a two person model.

For Freud, as for Shapiro, psychopathologies (and dreams) are constructed out of networks of memories; the original troubling memories of childhood experience being subject to strategies of avoidance, yet ever ready to be triggered, with accompanying physiology, when an associative cue is encountered—this is the psychodynamic mind. Therapy consists of accessing and reassessing, with adult awareness, the desires and the memories or fantasies of pain associated with them. Both EMDR and Freudian based psychoanalysis do this.
2.7 EMDR and Hypnosis

Representatives of various schools of psychotherapy selected to compare EMDR with their own approaches. EMDR and hypnosis is same or different, and can be understood by looking at the similarities and differences, wherein, the three approaches are compared on three levels, the approaches of direct hypnosis, Ericksonian hypnosis, and EMDR.

Level 1 involves a special learning state that is activated when identity is destabilized.

Level 2 is a symbolic-procedural level that frames the way this learning state is understood and formally developed.

Level 3 involves the larger context (e.g., psychotherapy) in which the special state is used.

Although all three approaches share the special learning state of Level 1, EMDR and Ericksonian hypnosis differ markedly from direct hypnosis at Levels 2 and 3. From these comparisons, a general model is proposed of the way identity moves through cycles of stability and instability during its growth and development, and the role of trauma and trauma-related therapies in this growth process.

Three approaches to healing traumas

2.7.1 Direct Hypnosis

Hypnosis is the mother of all modern treatment modalities (Ellenberger, 1970). It starting in the late 18th century moved through the 19th century and
entered the 20th century. Presently hypnosis has developed into an effective treatment modality for various ailments.

The common understanding (and fear) about hypnosis is that it is a process whereby the practitioner takes control of the client’s consciousness and “plants” suggestions or other (presumably therapeutic) ideas. A general loss of connection to the outside world develops, and this narrowed state of attention is considered a “special learning state” in which people are more open to ideas and possibilities.

### 2.7.2 Ericksonian Hypnosis

In contrast to this operator-controlled hypnosis, a more client-centered approach was developed by the late psychiatrist Erickson (1980).

Like his predecessors, Erickson (1980) emphasized hypnotic trance as a special learning state that could be very helpful in reaching therapeutic goals. In other words, the hypnotic trance became an artificial state constructed by the hypnotist, completely divorced from the identity values and emotional experiences of the client. The Ericksonian emphasis on the client's experience makes it more similar to EMDR than traditional hypnosis.

Another feature of Ericksonian hypnosis is its emphasis on the creative and healing potential of each client. A trance is a special learning state, in which these resources may be accessed and actualized.
EMDR has been described by its founder, Francine Shapiro (1995), as an "an interactive, interactional, intrapsychic, cognitive, behavioural, body-oriented therapy". It rests on the assumption that, as the experiences of life flow through a person, an innate psycho-physiological capacity exists for processing, transforming, and integrating each experience. However, some events can be so extreme and traumatizing that this innate, integrative system is disturbed or overwhelmed, causing the event to become “frozen” into a state-dependent form that is “stuck” in the nervous system. This disruption creates an antagonistic state of affairs, in which the event is trying to process through into a resolved or completed form, while the nervous system is shut down by a neuromuscular lock that inhibits all such integrative processing (Gilligan, 1997). This process is experienced by those with PTSD-related symptoms that include intrusive phenomena, hyperarousal and hypervigilance, and a constriction of the normal sense of self (Herman, 1992).

The efficacy of EMDR is inherent in its development of new techniques for resolving such experiences. At its most basic level, EMDR relies on a special learning state that is referred to as accelerated information processing. According to Shapiro (1995), the “accelerated information processing model opens up new territory by defining pathology as dysfunctionally stored information that can be properly assimilated through a dynamically activated processing system”.

42
The intent of standardized EMDR procedure is twofold: the first goal is to desensitize the experience, freeing it up from its initial context so that when the image comes up, it brings no corollary negative somatic disturbances or negative self-talk; the second part of the process would be to build a new context, where a person can relate to originally traumatic event, using a centered and in a more mature context.

Moving from the original experience to a full resolution would likely take numerous “sets” involving numerous different experiences.

All three approaches to healing trauma have some similarities and the similarity is that, there exists a special learning state, in which disturbing experiences may be transformed into integrated states. In direct hypnosis and Ericksonian hypnosis, the terms hypnosis and trance are used to describe this state, in EMDR, the new and somewhat unwieldy term of accelerated information processing is used. Although the terms differ, the approaches involve the same basic state of accelerated learning, that is intrinsic to human beings. This is not to say, that the state is experienced and used in the same way with all approaches. In fact, the way people view and connect with this basic state makes a tremendous difference in its consequent form, meaning, and behaviour. Indeed, the more authoritative and traditional direct hypnosis therapist views the state as an extension of hypnotic suggestion and thus, primarily emphasizes the control of the hypnotist.

EMDR is a more recent arrival to this scene, and seems to have been deliberately separated from hypnosis. Part of this reason seems to be a wise
public relations move, because many people may be put off, scared, or misled if EMDR were couched in hypnosis terms. In addition, by freeing itself from the tradition of hypnosis, EMDR can be involved in new ways of understanding and working with the age-old phenomenon of traumas and their sequel. As Shapiro (1995) stated, "If EMDR is defined simply as hypnosis, its usefulness will be limited to those effects already available to the therapist".

In other words, the traditions of hypnosis, direct or Ericksonian, have no exclusive hold on healing. Reducing EMDR to hypnosis, as some do, is inaccurate and unhelpful. Laying emphasis on the common special learning state that hypnosis and EMDR tap into is a more helpful position. It suggests that this special state has multiple levels:

Level 1 involves the intrinsic capacity of human beings to transform and heal their psychological identities.

Level 2 involves the social-symbolic structures surrounding the special learning state. It involves a description of the state, the procedures by which the state is accessed and worked with, and the values underlying the work. Thus, traditional hypnosis reflects traditional Western medical understandings, which do not consider clients’ own consciousness and skills to be relevant to the healing process. Accordingly, the special learning state is considered as the one in which clients’ consciousness is psychologically anesthetized, allowing the doctor to surgically implant better ideas into the mind. In addition, hypnosis generally reflects a Western orientation to the empirical world of the
senses, hence, the special learning state of the trance is one in which phenomenology ("the world of appearances") is amplified dramatically.

EMDR therapists, perhaps reflecting Shapiro's personal discovery of the ways it worked for her (Shapiro & Forrest, 1997), strongly value clients' own innate healing potential. They attempt to activate and guide this potential through safe, structured, repetitive processing cycles. They assume clients have a natural drive toward integration and growth. Hence, the techniques that evolved to express these values are client-centered and naturalistic, yet, structured and rigorous. The experience of a special learning state in EMDR work is not a trance. Although related to hypnotic experiences through a shared Level 1 state, the basic experience and values of the accelerated information processing state of EMDR are distinct. In this sense, EMDR is a significantly new way to experience healing processes.

Level 3 involves the larger context of the therapeutic work. As stated previously, therapists of any of the three approaches agree that the Level 2 experience is insufficient. To be effective, a trance or accelerated information processing must be grounded in a wider therapeutic context. The experiences that arise must be talked about, connected to other contexts in the person's life, and combined with additional tasks such as behavioural assignments and relationship work. Thus, to some extent EMDR and Ericksonian hypnosis may be used within different therapeutic modalities and approaches.

At a primary level, EMDR and hypnosis emphasize a special learning state that is activated when identity needs are to be recognized (e.g. in
response to trauma, developmental transitions, extraordinary performances etc.), on the secondary level, the approaches differ in the symbolic-procedural approaches they use, to activate and work within this learning state and on the third level, hypnosis and EMDR work within a larger therapeutic context that draws from many additional therapeutic resources to achieve their clinical goals. Therapies of both approaches emphasize the innate healing capacities of the client and seek to provide a space where client can learn to trust these capacities on their path to greater wholeness and integrity.

2.8 The Schema-Focused Therapy Model

Young’s SFT was developed to expand Beck’s original model of cognitive therapy. According to Beck, emotional problems were a result of biased evaluations made by the client. Beck believed that these distortions were based on core assumptions made about the self and the world formed in early childhood. Thus, Beck’s version of cognitive therapy focused primarily on correcting distorted patterns of thinking.

2.8.1 Early Maladaptive Schemas

Segal (1988) conceptualized schemas as the residue of past reactions and experience, that often affects subsequent perception and appraisals. In his work, Young focused on a specific subset of these schemas, which he refers to as early maladaptive schemas. He defined these schemas as "broad pervasive themes, regarding oneself and one’s relationship to others
developed during childhood and elaborated throughout one’s lifetime, and dysfunctional to a significant degree” (Young, 1999). It is assumed that these schemas develop through interplay of the child’s innate temperament; everyday noxious experiences with parents, siblings, and peers; and the cultural context in which the child grows up. Schemas are representations of these early life experiences and serve as filters through which later experiences are processed. Thus, schemas contain patterns of distorted thinking, painful affect, and disturbing memories.

When triggered, schemas frequently generate high levels of affect. In an attempt to cope with these painful emotions, many clients develop behaviours that are ultimately self-defeating, such as addictive behaviours and avoidance. Due to the long-standing nature of many clients’ problems and the painful affect associated with their schemas, SFT focuses more attention on creating affective experiences within and outside the therapeutic relationship, than the standard cognitive therapy does.

Schemas are usually perceived to be irrefutable, which makes them difficult to change. They are intrinsically linked to people’s concepts of themselves and the world. Also, since they are formed so early in life, schemas are often ego-syntonic.

Schemas are triggered under conditions relevant to a particular schema (e.g., a person with a defectiveness/shame schema asking someone out on a date, someone with an abandonment/instability schema dealing with
a partner leaving to go on a business trip) or biological changes such as premenstrual syndrome (PMS) or sleep deprivation.

2.8.2 Weaving together SFT AND EMDR

SFT is a complete therapeutic method. As effective as it is, it can be even more effective when combined with EMDR. This section shows some of the ways in which EMDR can increase SFT's effectiveness and how the two approaches complement each other.

SFT has two major phases:
(a) Assessment and education; and
(b) Change.

SFT and EMDR can be used together even if people have intellectual understanding of issues and schemas, but affective connections can't be made so easily. EMDR can increase emotional understanding, how past affects present. Following are the techniques which are used in SFT to deal with disturbances.

2.8.3 Floatback Technique

SFT and EMDR assume that one of the reasons current events are so disturbing is that they activate previous, still painful memories. This often happens in a session when clients' responses seem out of proportion to an event they are describing, (i.e., when an event has "hit a nerve").

In SFT, the nerve is called a schema; in EMDR it is called opening a childhood file folder in which painful information resides (Shapiro, 1995). The
float back technique is a strategy for activating a specific problem as vividly as possible, to determine whether a schema has been activated and a method for educating clients about the way the problem is connected to past experiences. Once the material is activated, clients are encouraged to think of other similar events.

For clients who have difficulty tolerating increased affect, other procedures borrowed from EMDR have proved to be very helpful to the SFT/EMDR clinicians; two such procedures are, the safe place exercise and resource development, and installation (RDI).

### 2.8.4 Safe Place Exercise

Clients using SFT and EMDR often experience a significant amount of affect in and between sessions. Those who have been severely traumatized, or who, by temperament, are somewhat fragile, may be overwhelmed if steps are not taken to protect them. The safe place exercise is used to create an imaginary refuge for these clients. Clients simply imagine a place where they feel safe. Ideally, this place currently exists and is accessible to the client—such as a beach, sitting on a couch with a partner or friend, or with a pet. If no such place is currently available, clients can use a safe place from the past, such as memories of being with a loving grandparent. For clients who do not have any positive memories from the past, therapists can help them create an image of the safe place that they would like to have. When painful affect becomes too intense, clients can imagine being in their safe place and decrease the pain. Having a safe place allows clients to modulate the amount
of affect they are experiencing. This increased ability to tolerate affect is crucial in SFT because clients who avoid thoughts, memories, or situations that trigger their significant schemas are likely to make much progress.

### 2.8.5 Resource Development and Installation

Although the safe place helps many clients decrease anxiety, some clients do not have the ability to develop one in the initial stages of treatment. For these clients, another procedure borrowed from EMDR, Resource Development and Installation (Leeds, 1998) has been used with SFT to help them tolerate increased levels of affect and increase their feelings of self-efficacy.

In RDI, clients are initially asked to focus on the place where they have stalled and the qualities that they lack to succeed. Using a step-by-step process, clients are then asked to think of a time, either in the present or past, when they had those qualities. When clients cannot do this, they are asked to think of a person they admire, real or imaginary, who can help them surmount their problems. These images are then used to generate an image of success on cognitive, affective, and physiological levels. To enhance the power of this image, eye movements are used repeatedly.

Thus, during the assessment and education phase of SFT, therapists frequently use aspects of EMDR, especially the procedural step questions and the safe place exercise, to help them determine which schemas need to
be addressed, educate clients, and increase clients’ ability to tolerate painful affect.

Early recognition of client’s schemas and maladaptive coping styles enhances the effectiveness of EMDR in various ways in every stage of EMDR treatment.

2.9 EMDR and Experiential Psychotherapy

For both EMDR and experiential approaches, psychotherapy is focused on client self-healing. Therapists supply interaction and procedures, but the steps of healing are generated by, and emerge from, the client’s process. EMDR and experiential psychotherapy have many things in common. EMDR, in many cases, seems to be quite efficient in facilitating the operation of self-healing process found in experiential psychologies. In addition, because it can work quite rapidly, some of the self-healing processes found in experiential therapy seem to telescope so that they can be more clearly observed and studied.

2.9.1 Differences between EMDR and Experiential Psychotherapy

Although EMDR and experiential therapy have many similarities, also have many distinctions. A major difference involves the role of the relationship. In all three of the experiential approaches (focusing-oriented psychotherapy, client-centered therapy and process-experiential psychotherapy), therapists’ deep empathic understanding is an important
healing element. In EMDR, although therapists certainly convey respect, compassion, and acceptance to clients, they do not systematically use empathy as a therapeutic tool. In fact, Shapiro (1995) actively discouraged the use of empathic listening responses, believing that they focus clients on therapists' words, rather than on the clients' own internal experience. Similarly, the genuineness of the therapist and the idea of therapy as the "meeting of persons," which was valued so much by Rogers, is also not a major component of EMDR.

A second difference is that EMDR does not rely on the articulation or symbolizing experience as an important step in the change process, which is a key component in most psychodynamic and experiential therapies.

A third difference is that EMDR provides a greater degree of structure and prefigures the resolution by specifying in advance the belief clients would like to have about themselves to reduce distress. This step provides both a framework for change and a sense of direction, however, it could also create a false change, or one that will not endure, especially for clients sensitive to the demands of the situation. Good EMDR therapists guard against this by asking clients whether the originally specified positive cognition fits or something better could be used. This step helps clients focus on what spontaneously emerges.

2.9.2 Integrating Experiential Procedures into EMDR

Experiential techniques could be used to supplement EMDR. For instance, an initial stage of the EMDR protocol is getting clients to come up with a negative
cognition about their problematic experience. If a client is not able to come up with appropriate negative cognition, empathetic reflection or focusing can help the client to construct appropriate negative cognition.

Empathic reflections may also be useful at the end of sessions. Even after attaining resolution with EMDR, some clients like to discuss what happened. Considerable evidence has shown that a significant healing factor in recovering from trauma is productive rumination and narrative reconstruction, in which clients make sense of trauma and incorporate it into their life story (Tedeschi, Park & Calhoun, 1998). Building on early observations (Shapiro, 1989), ongoing clinical work pointed the way to an information-processing model as it became clear that the anxiety reduction was merely a by-product of the learning that was taking place.

Summary

This chapter brings out the theoretical and historical development of test anxiety and EMDR. The phenomenon of test anxiety was discussed from various viewpoints. EMDR, as well, was discussed from the viewpoint of its similarities and differences with various schools of thought like CBT, Psychoanalysis, Schema-Focused therapy and Existential approach.

The theoretical viewpoints and the importance of EMDR to move to resolution have been explored in this chapter.
A major contribution of EMDR is to offer a useful perspective and tool for helping young adults who are experiencing test anxiety. In the present research, EMDR was applied on young adults having high test anxiety.