Chapter-6

DISCUSSION

A detailed set of hypotheses was formulated by the researcher based on the interplay of the various independent and dependent variables involved. The results of the current research as illustrated in the previous chapter have been encouraging, and therefore are substantiated by the scientific literature that is already available. Also, test anxiety being a distressing and debilitating problem, greater effort had to be put in on the part of the researcher to keep the students committed to the intervention work. Therapeutic intervention Eye Movement Desensitization and Reprocessing (EMDR) was chosen based on research evidence already available that proclaimed its beneficial impact for people having high test anxiety.

Following is a discussion of hypotheses related to results and it is interesting to note that the statistical findings have affirmed majority of the hypotheses thereby conforming to the literature available and consequently providing an Indian perspective to it.

Thus, when people are confronted with an anxiety arousing situation, the most expected response is to avoid the situation and hence the discomfort associated with it. However, in most examination situations, the persons involved should not believe that avoidance is a viable option. Under such circumstances, they are expected to use some strategies to cope with their anxiety.
Hypothesis: 1

There will to be no significant difference in the pre test scores on test anxiety between experimental group (EMDR intervention) and control group (No EMDR intervention).

The present study was carried out to investigate the difference in pre test anxiety scores on Test Anxiety Inventory (TAI). The findings confirmed the hypothesis stating that there was no significant difference found in pre test scores of high test anxious students belonging to experimental and control group. Most of the research on test anxiety has been on its debilitating impact. The findings can also be interpreted in the view of the research studies which indicate that high test-anxious individuals perform poorly when a task is hard or when performance is to be evaluated (Hembree, 1988).

People’s lives are influenced by test performance so much that anxiety during examination has become pervasive contemporary problem (Hembree, 1988; Peckrun, 1992; Sarason, 1980; Sarason and Sarason, 1990; Sharma, 1988; Sharma and Rao, 1984; Spielberger and Vagg, 1995; Sud 2001; Tobias, 1992). One of the most threatening events that cause anxiety in students today is testing. When students develop an extreme fear of performing poorly on an examination, they experience test anxiety.
The concept of general anxiety has generated the need to root the study of anxiety in a definable situational context. Test anxiety has become the most widely studied of specific anxieties (Sarason, 1980, Sud 2001).

Test anxiety is a major factor contributing to a variety of negative outcomes including psychological distress, academic underachievement, academic failure, and insecurity (Hembree, 1988). Many students have the cognitive ability to do well in examinations but may not do so because of high levels of test anxiety. Due to the societal emphasis placed on testing, this could potentially limit their educational and vocational opportunities (Zeidner, 1998). Current theories of test anxiety explain the performance deficit associated with test anxiety as an interfering effect of test anxiety on the retrieval of relevant task-related information (Wine, 1982). Sarason (1975, 1978, 1980) concluded that high test anxious individuals are more self-centered and self-critical than individuals who are low in test anxiety and are more likely to emit a personalized derogatory response that interferes with effective task performance during examination.

Gonzalez (1995) suggested that a comprehensive treatment programme for test anxiety requires a careful evaluation of the student’s motivation to actively cope with anxiety arousing problems as well as the extent to which worry cognitions and intense emotional reactions interfere with studying and academic performance.
Hypothesis: 2

There will be no significant difference in the pre test scores on Test Anxiety Inventory (TAI) in the individual EMDR and group EMDR intervention subjects.

The present study was carried out to investigate the difference in pre test anxiety scores on Test Anxiety Inventory (TAI) in individual and group EMDR intervention subjects. The finding confirmed the hypothesis that there was no significant difference found in high test anxious students belonging to individual and group EMDR subjects.

The mean test anxiety score in the pre test condition for the individual EMDR intervention and group EMDR intervention was found to be above the cut off score of 51.00, indicating that the subjects belonging to both the groups were equated on high test anxiety.

Test anxiety is a debilitating problem, particularly among children and adolescents who constantly face evaluation tasks at school and can be tackled at individual as well as at group level.

Eye movement desensitization and reprocessing (EMDR) is a newly developed psychotherapeutic method for working through traumatic memories and related psychological problems (Shapiro, 1989). EMDR appears to be a promising new resource for helping children and adolescents recover from trauma and loss. EMDR accelerates the treatment of a wide range of
pathologies and self esteem issues related to both upsetting past events and present life conditions.

Controlled studies have indicated that EMDR method is capable of a rapid desensitization of traumatic memories, including a cognitive restructuring and a significant reduction of client symptoms (e.g., emotional distress, intrusive thoughts, flashbacks and nightmares). EMDR's applicability to the treatment of traumatized children and adolescents appears to be quite promising. EMDR has been used in individual as well as group setting for various anxiety and trauma related symptoms.

Jarero, Artigas & Lopez-Lena, (2008) conducted a study on children using group EMDR treatment on victims of disaster and found it to be more effective than results expected from traditional group therapy. The study gave validity to the obtained results showing the effectiveness of group EMDR in reducing PTSD symptoms.

Hypothesis: 3

There will be significant difference in test anxiety scores on post TAI in the experimental group (EMDR intervention) and control group (no EMDR intervention).

The present hypothesis was proposed to see the difference in the level of test anxiety among students belonging to the experimental and control group. The aim was to find out whether experimental intervention EMDR was effective in reducing test anxiety. The findings of the study supported the
hypothesis. The obtained mean scores of the experimental group showed that there was a significant difference found in the level of pre and post condition (see Table: 5.4), suggesting that there was a significant difference in the level of test anxiety of experimental group subjects after they were exposed to the intervention. This depicts that EMDR intervention did have a significant effect in reducing test anxiety in the treatment group.

The results of the control group showed no significant difference in pre and post test anxiety scores. This is very much in line with the belief that test anxiety cannot disappear on its own and needs some kind of attention to reduce its debilitating effects.

Over the past few decades, a number of treatment strategies have been used with test anxious students and the development of new treatment techniques continue to proliferate (Vagg & Spielberger, 1995) as a means of reducing test anxiety and alleviating its negative effects like physiological distress, subjective discomfort and worry.

Among intervention techniques for the treatment of test anxiety, Neuderth-Jabs and Schmidtke (2009), found cognitive behavioral methods to be most effective method.

Eye Movement Desensitization and Reprocessing (Shapiro, 1989) acclaimed as a major breakthrough for a range of anxiety related symptoms. A study on the efficacy of eye movement desensitization and reprocessing (EMDR) in the treatment of test anxiety (Enright, 1995), compared the treatment group with the control group. The former showed a significant
reduction in subjective units of distress, a self reported measure of distress as assessed by the SUD scale, during treatment as well as significant increase in validity of positive statements, where increase in self referential positive statement belief was observed. Reduction in anxiety measures were maintained at a one month follow up. On the similar lines Johnson (1996), in his study on effect of EMDR on test anxiety suggests that EMDR is effective in treating test anxiety when compared with the control group.

The observation in the present hypothesis was congruent with the research findings. This presented the fact that psychotherapeutic intervention EMDR is extremely effective in reducing worry and distress evoked due to examinations. The current research shows that the use of EMDR has been effective in reducing high test anxiety.

Hypothesis: 4

There will be significant difference in post TAI scores in students who were administered individual EMDR as compared to group EMDR intervention.

The present hypothesis was formulated to study the differential effect of individual EMDR and group EMDR intervention in the reduction of test anxiety scores. The findings of the study supported the hypothesis. There was a significant difference found in the post test condition (Table 5.7), suggesting that there was a reduction in test anxiety scores in individual and group EMDR intervention. The mean post test TAI scores (Table 5.7) of subjects belonging to individual intervention was below cut off score (51.00) as
compared to post test TAI scores of group EMDR intervention subjects, suggesting that subjects belonging to group EMDR intervention did not experience the reduction in test anxiety the same way as it was experienced by subjects belonging to individual EMDR intervention.

Eye movement desensitization and reprocessing (EMDR) is a psychotherapeutic method for working through traumatic memories and related psychological problems (Shapiro, 1996).

The subjects belonging to individual EMDR intervention showed two marked changes:

1. Decreased anxiety levels, showing a pronounced desensitization effect

2. A marked increase in the subject’s perception of how true their positive belief was, showing a strong cognitive restructuring.

While processing, subjects often indicated sequential emergence of new memories unrelated to the target memory but these memories surfaced temporarily during the set and the subject shifted back to the initial target memory. In some cases no new memories emerged consciously and the target incident was maintained consistently. The change was verbalized by the subject in different aspects of memory. The subjects reported the change in:

1. Image

2. Emotions

3. Physical sensations and
4. Cognitions.

Most of the image change was reported in content form e.g. sad face changing into a smiley face, some subjects saw a smiley icon on the mobile, or shift in perspective in form of scene change like seeing happiness around or target picture becoming blurred, moving further away or simply target picture looking different. It was interesting to note that with the change in image the client also felt self affirming and talked about positive details of the shift e.g. "I can do it". Since the anxiety was no longer dominant, when asked to retrieve the memory, some subjects spontaneously saw the larger scene.

Shifts in emotions were reported in form of intensity, e.g. showing the magnitude of shift in SUD levels through gestures. Many a times, the SUD scale was used to assess the degree of change in emotions. There were a variety of responses while reporting the shift. Some subjects reported the emotional shift in an overt manner, showing change in facial expressions and appropriate body language, others expressed it with high emotional intensity like "from anger to sadness to acceptance".

Test anxiety can manifest itself in form of physical sensations like palpitations, increased heart rate, sweating, and fainting feeling etc. Most often body sensation was connected to emotions experienced during processing e.g. palpitation sensation associated with diarrhea. Some subjects experienced body sensation associated with dysfunctional cognition e.g. "it is difficult or" "I won’t be able to do it". During processing of information subjects indicated shifts in the location of the body sensations. For instance, subject
initially reporting palpitation in the heart with each set, the sensation moved towards ears or a throbbing sensation in the head. Eye movements were used with all the subjects unless handful subjects reported eye strain during the session or emotional outburst in form of crying, in which case tapping was used.

The positive treatment effects of EMDR were maintained, and were seen in post testing, indicating, maintained substantial desensitization with continued cognitive restructuring of perceptions regarding the examination anxiety. Decrease in primary symptoms had been achieved e.g. complaints of forgetting, blank out during examination, were greatly reduced. Some subjects, who had a history of disturbed sleep, fearful dreams, reported that, “the dreams vanished”. Subjects between the sessions acknowledged that they had occasional intrusive thoughts but claimed “these thoughts have no power anymore”. Subjects also described themselves as feeling elated, more in control and feeling calmer on other related anxiety provoking issues like classroom presentations. So the positive treatment effects were seen at three levels.

One, the SUD levels dropping to 0-1, reporting no or manageable level of disturbance.

Two, a continued self referred cognitive restructuring e.g. “I am o.k.” and also “I am smart”

Three, a generalized effect e.g. subjects reported that they felt confident about participating in their forthcoming college festival because no
longer were they scared of the fear of failure. These results are in line with the study done by Crabbe (1996); Foster and Lendel (1995,1996), who saw the benefit of EMDR on people with performance anxiety and those seeking performance enhancement in business, performing arts, school and sports activities.

There is research evidence to support the view that EMDR as an intervention technique, at an individual level has reduced distress in high test anxious students. A single session treatment of test anxiety with EMDR done by Maxfield & Melnyk (2000) appeared to be effective in reducing physiological distress, worry, and fear of negative evaluation.

The group EMDR therapeutic treatment led to reduction in reported symptoms of distress during the treatment process. Informal feedback from the group members were shared with the researcher. Some subjects reported that they did not feel comfortable in the group especially those who didn’t know the other group members closely. They felt shame and embarrassment in front of other group members in reporting the symptoms. Some reported feeling “being exposed” and this led them to withhold themselves from therapy process. Many subjects felt that it was difficult for them to express themselves in front of others because they were not friendly to other group members and others might make fun of their feelings, if they happen to look at what they had written. Some reported feeling ‘stupid’, ‘awkward’ and “useless in front of others”. The present observations are in alignment with the research done by Spero, (1984) where he describes how shame can permeate a person’s life through which all experience is perceived and seduces the person into
describing (and believing) him- or herself as bad, worthless and hopeless. Balcom (1991) and Nathanson (1992) also state that internalized shame is stored in memory in the form of images, emotions, thoughts, and body sensations that result from specific scenes where the client experience shame.

Group EMDR interventions have been used with people suffering from PTSD symptoms. It is used with children and adolescents to deal with anxiety related symptoms. Study by Adúriz, Bluthgen & Knopfler (2009), supports the efficacy of EMDR group treatment in the amelioration and prevention of posttraumatic stress disorder symptoms experienced in disaster-related trauma during a flood. Group EMDR was seen as an effective and efficient treatment method for trauma-related issues caused by natural disasters. (Jarero, Artigas & Hartung, 2006) On the same lines, Mehrotra (2008), found the butterfly hug to be helpful with children in groups for dealing with PTSD symptoms caused by earthquake. Similarly Fernandez, Gallinari & Lorenzetti (2004) found group EMDR helpful in children who developed symptoms of PTSD, and disrupting school function after trauma caused by incident of plane crash. According to Birnbaum (2009), early group EMDR intervention following trauma may facilitate adaptive processing of traumatic event (s) and help prevent consolidation of traumatic memories following large-scale natural or man-made disasters.

The results of the current study for group EMDR intervention subjects where they reported a sense of embarrassment and shame, it seems inevitable to assume that these same students would have responded
positively if they were given individual EMDR intervention instead of group EMDR intervention as shame would not have interfered in processing the distressing memory about test anxiety.

Besides the above mentioned psychological factors, the other factors responsible for the group EMDR not working, could be that test anxiety is different from PTSD in terms of not being a single event manifestation so the targets for all the subjects in a group were not the same and the group members were at different levels of processing. This might have led the subjects in a group, not to experience cognitive restructuring while they were processing the distressful memory in the group.

Hypothesis: 5

There will be significant difference in A-Trait scores among students who were administered individual EMDR as compared to group EMDR intervention.

The individual and group intervention students were also analyzed on A-Trait (STAI) anxiety scale to observe general anxiety level. The assumption was that subjects belonging to individual EMDR intervention will have significant reduction in test anxiety as compared to subjects belonging to group EMDR intervention. The finding of the study supported the hypothesis.

The mean difference in pre and post test anxiety score on A-Trait scale for the individual intervention and group intervention (Table 5.8) clearly shows that there was a significant drop in post test means of Trait anxiety among
individual EMDR intervention subjects as compared to group EMDR intervention subjects.

The objective of the study was to find out whether experimental intervention was effective in reducing trait reaction like general anxiety and general tendency in an individual to respond to anxiety prone situation with A-State reaction. Generally it is expected that those who are high in A- trait will exhibit A-State elevations more frequently than low A-Trait individuals because they tend to react to a wider range of situations as threatening. High A-Trait persons are also more likely to respond with increased situational anxiety in situations that pose some threat e.g. circumstances in which failure is experienced or in which individual's personal adequacy is evaluated. Spielberger (1972), in his context of trait –state anxiety theory, conceptualizes test anxiety as a situation specific form of trait anxiety. Although examination situations are stressful and evoke state anxiety (A – state) reactions in most students, the magnitude of the A – state response will depend on the student’s perception of a particular test as personally threatening. Persons with high test anxiety generally perceive examinations as more threatening than low - test anxious persons and respond with greater elevations in state anxiety to the evaluative threat that is inherent in most test situations.

In the present study, students who underwent individual EMDR intervention reported marked improvement in A- Trait reactions like changes in symptoms e.g. flashbacks, sleep disturbances, fear, recurrent nightmares etc. Also, they reported feeling more relaxed otherwise in other day to day anxiety provoking circumstances like feeling upset on negative comments
passed by fellow students or teachers. They also reported their comfort level while participating in intercollegiate competitions. State and trait anxiety are linked to specific situation characteristics by perceptual and cognitive appraisal process. A particular situation may be appraised as a physical danger, which is threatening and can be evaluated negatively. The result of this study was supported by Shapiro's (2006) belief that EMDR brings trait change. She differentiated between state change and trait change. According to her, EMDR is a trait change and the client changes how he/she views the event, as a result can view it differently. According to her, when a client changes his/her perspective about the event and has the needed skill, he/she is able to function more appropriately. In the present study, change was reported verbally by the subject e.g. "I am no longer scared by the volume of the text book and number of text books, when the teacher tells me to refer to these books in front of the class."

The same results were not achieved in students belonging to group EMDR intervention. These subjects showed relief like feeling good and relaxed during the session but in the following session again reported high SUD levels. Taking into consideration the comfort level of group members amongst themselves, students reported that they felt, it was a private work for which group setting was not appropriate. They owned that this belief (individual v/s group setting) was a good enough reason for them to withhold themselves from experiencing therapy.

The result was a clear indication of the effectiveness of the intervention in individual EMDR setting as compared to group EMDR intervention.
Hypothesis: 6

The type of experimental conditions (individual EMDR, group EMDR and no intervention) will have independent effect on post test anxiety scores and will not be having interaction effect with different academic streams (arts, students preparing for management, science, and commerce) selected by the students.

The present hypothesis was formulated to investigate the experimental effectiveness of EMDR intervention (individual EMDR, group EMDR and no EMDR) in reducing high test anxiety in students belonging to different academic streams (arts, students preparing for management course, science and commerce) selected by the students. It was assumed that the post test anxiety scores of students belonging to different academic streams (arts, students preparing for management course, science and commerce) will not differ as a result of different types of EMDR intervention (individual EMDR, group EMDR and no EMDR).

The $p$ value for EMDR intervention effect is significant whereas for the streams and interaction it is non significant (Table 5.9). This is a strong indication that there was pure effect of intervention in reducing post test anxiety mean scores among the students. The post Hoc analysis (Table 5.10) shows that the subjects belonging to individual EMDR intervention benefitted the most in managing test anxiety than group EMDR intervention subjects.
whereas for the no intervention subjects (control condition), the TAI score increased after the time span.

The subjects in group EMDR across streams did not show the same results as individual EMDR subjects (table 5.11) and one of the reasons could be that subjects found it difficult to express themselves in front of others because they were not friendly to other group members and felt awkward in front of other group members.

The control group students were not attended any which way and did not show any reduction in test anxiety, suggesting that test anxiety, if not addressed can show its negative effects whenever the person faces evaluative situation.

There does not appear to be any main effect of academic streams on test anxiety. The $p$ value indicated that post test anxiety mean scores did not differ for students across the various streams.

There does not appear to be any interaction between streams and EMDR intervention. The $p$ value depicts that when academic streams interacted with EMDR intervention the effect on the test anxiety was found to be non significant. The aim of finding out interactional effect was to find out, do students test anxiety scores differ in post test condition based on the academic course they are pursuing?
Taking effect of each intervention across four streams separately, it was observed that individual EMDR intervention subjects across all four streams showed the maximum reduction in post test mean anxiety scores.

Results of post test anxiety mean scores in individual EMDR intervention (see Table 5.11) clearly shows the positive effects of intervention irrespective of the stream student belong to. Individual EMDR intervention subjects from all four academic streams (arts, students preparing for management, science and commerce) showed a considerable gain in reduction of test anxiety in post-test phase. Their post test mean scores were below cut off point (51.00). These students also showed significant decrease in subjective units of disturbance (SUD) during the treatment and these effects were maintained even later on, which was seen during post testing indicating substantial desensitization, pronounced cognitive restructuring of perceptions regarding the examination anxiety.

Most of them reported that, because of earlier examination failures they developed a negative belief of themselves and started believing that they cannot handle examinations and started fearing examinations. The verbal reports after each session did not differ much across four streams. Most subjects reported “feeling good” and believing, “they can manage examinations”.

Results of post test anxiety mean scores in group EMDR intervention across four academic streams (see Table 5.11) shows that arts students responded to group EMDR intervention primarily because of two reasons:
One, that the group members were very cohesive with each other as they knew each other and the other reason was their relaxed state of mind. These students were fortunate enough to not have to undergo any further entrance examinations in order to enhance their career prospects after XII standard and so, their upward mobility had certain smoothness without further hindrances. These students were planning to continue in the same college which means they would not go through any further competition.

Students from the management group also responded to the intervention. The researcher attributes this success to the fact that they no longer needed to face further entrance examination for management course which previous batches had to deal with. This naturally helped the intervention to further soften the anxiety levels.

Although students from arts and management group showed post test reduction in test anxiety yet the score was much above the cut off score (51.00) which means that there was some decrease in anxiety but not good enough to appear for examination without test anxiety. According to the verbal report given by the subject from both these groups (arts and students preparing for management course), they showed definite improvement in primary symptoms but as far as cognitive restructuring was concerned, there was not a definite decrease in that so a symptom free body allowed them to have higher levels of concentration and interest in studies but did not allow them to feel confident enough to believe that they can manage examinations.
The other two groups consisting of science and commerce students did not show any significant decrease in test anxiety after the group intervention. The possible reasons for failure to respond were:

Science students were perpetually under stress and showed higher level of both frequency and amount of stress as compared to their counterparts in other streams also science students' output become reduced because of high stress levels (Kashyap & Sidhu, 2005)

In the present study, students from science stream admitted that they were feeling stressed out because of many reasons, one of them being that they were simultaneously preparing for entrance examinations to enter into technical colleges along with their board examination. The other reason being that they felt awkward and embarrassed to express themselves in the group setting as they did not know the other group members personally and reported that they might do better in individual session.

Commerce students admitted that accounts being a technical subject needed basic background. Most of these students didn't have commerce subjects in the school and reported that subject like accounts and languages caused the maximum fear in them.

Students belonging to the No EMDR intervention group, on post testing did not show significant difference in reduction of test anxiety. Informal feedback given by these students across all streams showed no decrease in subjective units of disturbance in fact students belonging to arts, science and commerce showed an increase in post test mean scores. Students belonging
to the group which was preparing for management entrance had shown some
decrease in post test TAI mean score but not enough to come below the cut-
off points (cut-off mean= 51.00)

Students from the arts stream showed an increase in test anxiety
levels. This was due to the fact that most arts students did not take tuitions or
go for coaching classes. As such, they were very much on their own, without
the confidence that a tutor or a coaching class teacher could instill into them.
This made them more stressed out and as they were approaching their final
board examination, already existing anxiety became more pronounced (see
figure 5.5).

Students from the science stream also showed an increase in test
anxiety. The reason for this was different from the arts students. Most of the
science students reported that memorizing formulas and diagrams was a
problem for them. They also reported that the syllabus was too vast. Science
students were additionally preparing for their practical examinations and they
had to face external examiner(s) who is/are unknown to them, this was also a
reason reported by the science students.

Students from the commerce stream also showed increase in test
anxiety. Commerce students’ anxiety stems from other sources. Although
most of them were taking tuitions yet they felt that accountancy and language
were their weak subjects and they faced some block towards these subjects,
especially accountancy. Inputs from the students clearly shows that the block
is largely because of the fact that accountancy is not taught at school level
and is introduced only from 11\textsuperscript{th} std. which involves a home examination. Thus, the 12\textsuperscript{th} standard examination brings about all the test anxiety that originates from the following reasons:

- Unknown paper setters
- Unknown examiners
- Unknown examination centre

Students from the management groups, when post tested, showed some decrease in the anxiety levels, but the scores did not reach below the cut-off points (cut-off mean = 51.00). These students when interviewed reported that there were vital reasons why the post test scores of these students in particular had some drop despite not have gone through any therapy. The entrance examination for BMS (Bachelor of management studies) was scraped and they did not have to write, pass and score well in yet another examination. This went a long way towards reducing their anxiety levels.

Students who plan to enter into management course, pay a higher fees as compared to students who enter into the arts, science and commerce stream. Generally, it is observed that these students invariably come from a secure socio-economic strata, thus they are not touched by any financial pressure. So other demographic variables were taken care of, which is why when some amount of examination pressure was not there (scrapping of entrance examination and secure economic status to pay higher fee), they felt more relaxed.
The above explanation clearly suggests that test anxiety, if not addressed, can increase over a period of time and can show its debilitating effects whenever the person faces an evaluative situation.

EMDR is a structured psychotherapeutic methodology developed by Shapiro (1989, 1995). It is effectively used in dealing with distress produced by test anxiety (Stevens and Florell, 1999). There are research studies to show that EMDR can produce more positive results as compared to other therapies like biofeedback/stress inoculation training in treating test anxiety (Vienot, 1998) the comparisons have shown a tendency toward greater improvement from pre to post test, outperforming B/SIT. On similar lines, a comparative research study done on eye movement and finger tapping by Bauman and Melnyk (1994) suggests that one source of attenuation of elicited anxiety may be as effective as eye movement in reducing anxiety. There was a significant decrease in Test Anxiety Inventory Emotionality Scale scores from the pre test to follow up.

The effectiveness of individual EMDR intervention in the reduction of high test anxiety score could be attributed to the fact that adolescents don't feel free to express themselves when they have any external pressure like being in a group and adhering to group norms, rather when they are in safe set up like individual therapy.

Hypothesis: 7

There will be no significant difference between demographic variables and high test anxiety in students appearing for 12th standard board examination.
There is a great emphasis given to academic achievement in the society, students experience more pressure to meet societal expectations. Demographic variables like gender, socio economic status of the family, birth order, employment status and age of the parent have a direct or indirect effect on the academic achievement of the student. The present hypothesis was formulated to study the differences in demographic variables and test anxiety.

Hypothesis: 7.1

There will be significant differences between gender and high test anxiety among 12th standard students.

In the present study, there was no difference seen in male and female subjects in experiencing test anxiety. One reason could be that urban male and female students largely have equal opportunities in exploring further study options as compared to students studying in rural area or during earlier times. So both genders compete with each other and experience similar situation specific anxiety.

There are studies that find significant differences between the genders (Everson & Millsap, 1991; Hembree, 1988; Mwamwenda, 1994; Wigfield & Eccles, 1989). A study done by Everson and Millsap (1991), shows that females have higher levels of worry as well as higher levels of emotionality.

Chapell, Blanding, Silverstein, Takahashi, Newman, Gubi & McCann (2005) investigated gender difference in test anxiety in male and female
undergraduates. The findings of the study indicated that female undergraduates had significantly high test anxiety than male undergraduates.

Some of the differences in test anxiety have been attributed to societal expectations. Some research has indicated that males are less likely to be completely honest on reporting test anxiety (Hill & Sarason, 1966; Silvestri, 1986; Sowa & LaFleur, 1986; Zoller & Ben-Chaim, 1990). This societal pressure on males, not to admit weaknesses may be the cause of the differences sometimes found in general test-anxiety measures (El-Zahhar, 1991).

Some studies have indicated that there are significant differences in test anxiety specifically with regard to mathematics and science courses (D’Ailly & Bergering, 1992; Onwuegbuzie, 1995; Williams, 1996; Yates, Hannell & Lippett, 1985; Zoller & Ben-Chaim, 1990).

A study done by Singh and Broota (1995) on Socio-personal variables and examination anxiety, indicates that girls are more test anxious, more worrisome and more emotional as compared to boys, also parental pressure elevate the test anxiety levels of school children; parent’s occupation and educational background also effects the test anxiety of their children.

Previous research findings have indicated that there are differences in how the students study which result in experiencing anxiety when attempting to recall that information. This may indicate that the cause of the anxiety is not necessarily gender or test driven, but the etiology being how the individual
studies in the first place.

With this type of research, one may be able to infer that it is not only because of the gender difference that test anxiety can be determined, but there could be additional factors like societal pressure, learning styles, type of stream chosen by the student etc., that cause test anxiety.

Hypothesis: 7.2

There will be no significant difference between birth order and test anxiety scores among 12th standard students.

In the present study, there was no difference seen in first born, second born, third born and fourth born subjects in experiencing test anxiety. The reason could be that all students irrespective of their birth order give a lot of importance to the examinations so will experience test anxiety irrespective of the birth order they belong to.

Although the view that birth order is the sole predictor of development across the lifespan has never been widely accepted, an individual's birth order is a possible influence on relationships with parents and siblings, which may affect personality formation and social behavior across the lifespan (Buckley, 1998). Birth order does not directly influence a person's anxiety level. The importance of birth order on a child's personality was first introduced by Alder (1956). He suggested that the first-born child never recovers from trauma of being dethroned and losing the attention of his or her parents when the second child is born. This leads to higher needs for recognition and
achievement. First-born children are considered to be in the most favorable position in the family.

Ability to negotiate and cope with stressors has been associated with children's development, emotional adjustment and physical wellbeing. There are great individual differences in children's vulnerability or resilience when confronted with stress. Age, health status, temperament, heredity, cognitive appraisal of stressors and birth order contribute a lot to personality development and through the years, researchers have examined whether birth order has influenced anxiety levels. Being born into a certain birth order may predispose a person into having higher levels of anxiety. Anxiety is described as an emotional state in which people feel uneasy, apprehensive, or fearful. People usually experience anxiety about events they cannot control or predict, or events that seem threatening or dangerous. Anxiety may also be a way to handle stressful situations. Trait anxiety is anxiety proneness and/or frequency of the manifestation over a long period of time (May, 1977). Those experiences that are most influential in raising the level of trait anxiety may date back to childhood and involve parent-child relations.

Research suggests that when the second child is born, the first born may feel that his or her status is threatened and may react with anxiety and fear (Morales, 1994).

It has been researched that academic performance can be tentatively attributed to the socio cultural factors than the birth order in a family. The
former may affect the intellectual environment of the student (Munroe & Munroe, 1983).

Being born into a certain birth position may predispose a person into having higher anxiety levels. In the present study, there was no difference seen in test anxiety between first born, second born, third born and fourth borns. The reason could be that all students irrespective of their birth order give a lot of importance to the examinations. With this type of research, one may be able to infer that it is not the test anxiety is not directly associated with birth order, but there could be additional factors like relationships with parents and siblings, which may affect personality formation and social behaviour that may cause test anxiety.

Hypothesis: 7.3

There will be no significant difference between test anxiety in students and the employment status of the parents.

The current results show that there was no difference found in test anxiety of the students and the employment status of the parent.

Working parents spend more time outside home. Research on parental employment and its effect on children's outcomes has proliferated over the past many years. However, majority of these research studies were conducted on maternal employment and emphasized two major areas: effects of maternal employment on family wellbeing (i.e. marital satisfaction, family happiness, family conflicts) and effects of maternal employment on emotional

Adolescents feel free to direct their own activities when parents are out of the house. Thus, unsupervised children could engage in other behaviors than engaging in academic activities.

It is interesting to note that children’s academic performance and test anxiety levels are related to their relationship with the mother. Investigation on adolescent’s relationship with mother and its relationship with levels of test and trait anxiety has indicated that adolescent’s relationship with the mother was negatively correlated with test and trait anxiety and positively correlated with cognitive performance. The impact of mother’s work outside the home may depend on whether there are two parents or only one in the household. Often a single mother must work to stave off economic disaster; how her working affects her teenage children may hinge on how much time and energy she has left over to spend with them, how well she keeps track of there whereabouts, and what kind of role model she provides (Barber and Eccles, 1992).

The findings of the current study suggest that, it is not necessary that the employment status of the parent affects test anxiety among adolescents; other factors like relationship with the parent, family conflicts and wellbeing of the family could be some of the reasons for test anxiety.
Hypothesis: 7.4

There will be no significant difference between examination anxiety and economic status of the family.

In the present study, there was no difference seen between examination anxiety and economic status of the family. The reason could be that all students irrespective of the economic status of the family give a lot of importance to the examinations so experience test anxiety irrespective of the economic status the family belong to.

Socioeconomic status can be a powerful factor in educational achievement through its influences on family atmosphere, on choice of neighborhood, and on parent’s way of rearing children (National Research Council (NRC), 1993a). Children of poor, uneducated parents are more likely to experience negative family and school atmospheres and stressful events (Felner, Brand, DuBois, Adan, Mulhall & Evans, 1995).

Families under economic stress are less likely to monitor their children’s activity, and lack of monitoring is associated with poorer school performance and school adjustment (Bolger, Patterson, Thompson & Kupermidt, 1995).

In the present study, there was no difference seen in test anxiety and socioeconomic status of the family. With this type of research, one may be able to infer that it is not the test anxiety that might appear because of socio-
economic condition of the family, but there could be additional factors like home influence (Fehrmann et al., 1987; Blooms, 1984), deliberate effort by the home to reinforce academic performance, (Fehrmann et al., 1987; Fontana, 1981; Karraker, 1972) and general academic guidelines and support by the family (Blooms, 1984).

Therefore one could conclude from the discussion by saying that individual EMDR intervention findings of the current study have been immensely encouraging for the researcher and more important for the participant as the scores of test anxiety, post intervention decreased significantly, indicating positive impact of planned EMDR intervention.