CHAPTER III

METHOD
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**Selection of subjects:** A total 900 (boys and girls) with the mean age of 14.9 years and SD = 1.05 years were randomly selected from various public schools (English medium) of Patiala, Ludhiana and Fatehgarh Sahib after due consent of the respective Principals and participants. Three public schools were randomly selected for inclusion in the study. Out of 900 participants, 200 participants who scored low on academic resilience, high on academic stress and showed dysfunctional attributional style were screened in with the help of student motivation scale, academic stress and academic attributional style questionnaire.

**Research Design:**
Pre-Post Experimental-Control group design was used to enhance academic resilience with the help of reattribution training of adolescents.

**Tools used in the study**

**The Student –Life stress Inventory (SLSI) (Gadzella, 1994)** – It is a self report inventory designed to study student’s stressors and their reactions to the stressors in academic settings. This inventory is a 51 item, based on 5-point Likert scale (1=never, 2=seldom, 3=occasionally, 4=often and 5=most of the time). The inventory focuses on five categories of academic stressors (frustrations, conflicts, pressures, changes and self-imposed stressors) and four categories of reactions to stressors (physiological, emotional, behavioural and cognitive) (Morris, 1990). A total score as well as separate scores for each category of stress and section of stress reaction is obtained.

Reliability (internal consistency) of Cronbach’s apla of .76 was established by Gadzella (1994). Construct validity was reported by Gadzella & Balogln (2001). The highest correlation (r=.64) among the various categories of the SLSI was between the scores of emotional and physiological reactions to stressors, for the whole inventory, the highest correlation (r=.86) was found between the scores on physiological
reactions to stressors and the sum score on the SSI (Gadzella & Balgoglu, 2001)

**Academic Attributional Style Questionnaire (AASQ) (Higgins & MacGregor, 2005)**- this questionnaire was designed to assess two main points (a) whether dysfunctional academic attributional style was linked to lower success expectations, hope and behavioural persistence in a difficult academic task (b) whether dysfunctional academic attributional style predicted differences in perceptions of self-mastery and beliefs about intelligence. The AASQ is specifically designed to measure dysfunctional academic attributional style, the AASQ was based on the causal Dimension scale-II developed by McAuley, Duncan & Russell (1992). The AASQ has six hypothetical negative outcomes which were drawn form Peterson & Barrett (1987) explanatory style questionnaire. For each negative outcome on the AASQ, the attributional dimensions (locus, internal control, stability, external control) are measured by three ratings scales. The rating scales are 9-point Likert type scale, bipolar and anchored so that, after reverse scoring the stability items, internal (locus), internally controllable, externally controllable, and unstable attributions receive higher scores. Scores for each scale (e.g. locus-1) are averaged or summed across the six negative outcomes, resulting in 12 continuous scale scores. AASQ scales have good internal consistency (locus ($\alpha=.78$), personal control ($\alpha=.91$), stability ($\alpha=.70$) and external control ($\alpha=.90$) moreover, Peterson et al. (1982) found good internal consistency ($\alpha=.72$) and test-retest reliability ($\alpha=.76$) for similar negative outcomes.

**Academic Resilience: Motivation and Engagement Scale High School (MES-HS) (Martin, 2012) 12th edition.** The motivation and engagement scale measures six motivation and engagement boosters, three mufflers and two guzzlers. It assesses motivation through three adaptive cognitive dimensions (booster thoughts), three adaptive behavioural dimensions (booster behaviours), three maladaptive cognitive dimensions (mufflers) and the two maladaptive behavioural
dimensions (Guzzlers) of motivation and engagement. Each of the eleven factors comprises of four items—thus in total 44-items. Motivation and Engagement boosters are the thought and behaviours that reflect enhanced motivation and engagement. They include self-confidence, being focused on learning, planning and persistence. Mufflers reflect impeded motivation and engagement. They are anxiety, failure avoidance, and uncertain control whereas guzzlers reflect reduced motivation and engagement. They are self-sabotage and disengagement. Students are always encouraged to increase the boosters and reduce mufflers and guzzlers. There are total 44 items based on 7 Likert type scale ranging from Disagree strongly (1) to Agree Strongly (7). Each student's answers to the four items on each motivation area were then aggregated and converted to a raw score out of 100. Hence each student was assigned eleven raw scores out of 100. The reliability of all boosters thoughts is as follows: Self-belief (Cronbach’s alpha=.77), valuing ($\alpha$=.77), learning focus ($\alpha$=.81) boosters behaviours planning ($\alpha$=.77), task management ($\alpha$=.82), persistence ($\alpha$=.81); mufflers: Anxiety ($\alpha$=.77), failure avoidance ($\alpha$=.79), uncertain control ($\alpha$=.79) and Guzzlers: Self-sabotage ($\alpha$=.81), disengagement ($\alpha$=.81)

**Procedure**

The study was conducted in two phases: screening phase and intervention phase. The screening phase started with building up rapport with all the 900 participants. With the standardized instructions Academic resilience scale (Student Motivation Scale, 2001), Academic Attributional Style and Academic Stress scales were administered to the participants. After scoring of scale, the participants scoring low on academic resilience, high on academic stress and having dysfunctional attributional style (N=200) were further selected for the intervention phase. The selected participants were given reattribution training. Thus, this phase served the screening purpose. Further these 200 participants were randomly assigned to Experimental (N=100) and Control group (N=100). Experimental group was given 4 sessions of
reattribution training designed specifically for adolescents to enhance academic resilience, reduce academic stress and enhancing functional academic attributional style whereas participants in Control group were not given any kind of intervention however, keeping in mind the ethical consideration, the researcher had general discussion on parenting styles, family environment and day to day life activities with the participants of Control group. Adolescents in experimental group were given reattribution training in the particular school premises. All the sessions were conducted in the separate classroom. A standard curriculum (described in next section) of reattribution training was applied to all the participants in experimental group in each school. In all there were ten groups. There were 10 participants in each group. Each session was conducted twice a week with duration of 45-60 minutes. The intervention program was completed in duration of two months. After 4 sessions of reattribution training all the participants both in Experimental and Control group were again administered academic resilience, academic stress scale and academic attributional style questionnaires to assess the efficacy of reattributional training. Pre-Post intervention comparison for all the variables was done for both experimental and control group using one-way ANOVA. However, for dependent variables experimental and control groups were compared by applying one-way MANOVA and series of univariate ANOVAs.

**Reattribution Training**

Four session reattribution training was designed specifically for high school students (13-16years). This curriculum was based primarily on Weiner’s (1979) theory of attribution and research work by Perry et al. (2005) and Forsterling (1980).The detailed session wise curriculum of intervention is presented below.

**Session-1**

First session of reattribution training was started with the rapport building. The researcher introduced himself and a general introduction of all the participants was sought. They were instructed as follows:
“*I would like each of you should introduce yourself. Also tell about your routine activities, likes, dislikes and hobbies*”

Initially the participants were reluctant to share their feelings, but after the researcher assured the confidentiality of their responses, they started opening up. As the participants were made comfortable, the rapport building proceeded with introduction and benefits of the intervention program. Researcher gave examples to help the participants to open up more on the topic of academic resilience. Researcher also focused on the technique which the participants use in the face of adversity particularly in academics.

**Session-2**

In the second session the concept of attribution and reattribution training was introduced. The participants were asked questions regarding the way they explain their academic success and failure experience. The significance and consequences of type of attribution was discussed. It came to the light that majority of the participants attributed failure outcomes to internal, stable global and uncontrollable factors like lack of ability. They were guided and helped to change their explanatory style by substituting lack of ability attributions for failure with lack of effort and poor strategy attributions. The participants were motivated to restructure their cognitions with an aim to enhance their sense of control. Students were encouraged to generate examples showing dysfunctional attributional style, the investigator then showed it to the participants how these attributions can be made functional by simply substituting other factors. The researcher demonstrated few examples of functional and dysfunctional attributions and also highlighted how this simple process was significant for an individual’s affect, thoughts and subsequent performance.

e.g., “I failed in my internals because I do not have the ability. I simply cannot do this”---Dysfunctional attributional style.

“I failed in my internals because I did not make sufficient efforts or I used poor strategy for making notes or planning my time. I should make more efforts next time”----Functional attributional style.
The researcher explained the difference between the two types of attributions mentioned above. Though both examples are blaming the individual for failure but in the second example, unstable, specific and controllable nature of the cause makes the attribution more adaptive and likelihood of future success possible. As part of home assignment, the participants were instructed to rehearse functional attribution at home. They were also instructed to write down two to three examples of real life events related to academics wherein they showed dysfunctional attribution.

**Session-3**
Session three was started with a discussion of home assignment. The investigator randomly asked participants to read out the examples that they have jotted down. It was then followed by asking the participants to volunteer for reframing the dysfunctional attributions into functional ones. Each participant was given a chance to read out the cause and reframe it in functional attributions. After each participant was through with his or her turn, they were randomly asked as to how they felt after making functional attributions. Invariably, all the participants reported a positive affect state and motivation.

The concept of academic stress was discussed during the session. The participants highlighted various factors leading to academic stress. The investigator then helped the participants to focus on the factor that they themselves can change. This factor was their attribution style. The framework of Weiner’s theory was highlighted. During this session participants were made to relax with ‘OM’ chanting. As part of their home assignment the participants were instructed to repeat their previous session task with one addition. This time they were required to write the events showing dysfunctional along with their reframing.
**Session-4**

This was the last session of RAT. Around fifteen minutes were devoted to the discussion of the home assignment. Some participants were randomly selected for phrasing the attributions into dysfunctional and then functional. This was done in order to reinforce the significance of positive attributions. Feedback of the participants for all the sessions was taken. Some participants were also asked to share the difference they felt after intervention. The investigator again stressed upon the concept of functional and dysfunctional attributions with the help of factors like ability, strategy, effort etc. In order to obtain post scores on all the dependent variables, academic resilience, academic stress and academic attribution style scales were administered. The participants were thanked for their participation and assured of any future assistance by the investigator.