ABSTRACT

Human aggression is any behaviour directed toward another individual that is carried out with the proximate (immediate) intent to cause harm (Bushman & Anderson, 2001). Aggression among adolescents is a growing problem. The consequences of hostility and aggressiveness continue to be a burden not only on the perpetrators and victims but also on the development of society at large. Thus, it is the need of the hour to understand the specific dynamics of aggression and devise intervention plans for this behavioural problem so that the deterioration of society can be prevented. Research in psychological fields is providing plausible explanations of underlying psychological mechanisms of aggression. This research has shown that aggression is a highly complex behavioral phenomenon with multiple triggers and inhibitory factors. During the past few decades, there has been an increased interest in the role that cognitions play in negative social interactions and problem behavior. This interest stems in part from the hypothesis that humans respond primarily to cognitive representations of their environment and experiences rather than to those experiences themselves. The manner, in which one processes social situation, is a strong determinant of one’s reaction to that situation. In this vein, Dodge and Crick’s Social Information Processing (SIP) model (e.g., Crick & Dodge, 1994) and General Aggression Model (GAM; Anderson & Bushman, 2002) are considered the most generative models in understanding individual differences in such reactivity processes.

Aggression depends on how an individual perceives and interprets his or her environment and the people therein, expectations regarding the likelihood of various outcomes, knowledge and beliefs about how people typically respond in certain situations and how much people believe they have the abilities to respond to a variety of events (Dodge, 2010; Huesmann et al., 2010). The social information processing model proposes that to react appropriately to social situations, social information has to be processed in a systematic fashion: (1) the information has to be encoded accurately; (2) the encoded information has to be interpreted correctly; (3) an interaction goal need to be specified; (4) response alternatives have to be generated; (5) these response alternatives have to be evaluated and from these responses, an optimal response has to be selected; and (6) the selected response has to be enacted. Atypical processing during any of these steps may lead to aggressive behaviour.
Individual differences in aggression are attributed to a wide range of factors, one of which is Hostile Attribution of Intent (HAI), a unique social information processing pattern (Crick & Dodge 1994). Individuals who assume hostile attributions to peers’ ambiguous behaviours and generate aggressive, ineffective solutions to social problems are more overtly aggressive than peers without these patterns. Thus atypical or problematic responses to a situation are hypothesized to result from biased or inaccurate interpretations of the situation. These findings of previous researches directed researchers’ attention to study in depth, the role of biased cognitions in problematic social interactions, specifically aggression and develop some intervention to alter these biased cognitions.

The present study was conducted on two parts. Part I of the present study aimed at exploring how aggressive individuals differ from less aggressive individuals in their level of HAI. This difference was also assessed for four dimensions of aggression namely, anger, physical aggression, hostility and verbal aggression. Another variable which seems to be important in aggression and HAI is gender. Differences have been found out in aggressive behaviour of males and females in context of different types of aggression. Males have been reported to be high on physical aggression. On the other hand, females have been found to show more of indirect, verbal or relational aggression (Bettencourt et al., 2006). Thus, Part I tried to assess whether there are gender differences in HAI also. It has also been attempted in the present part of the study to investigate as to how do aggression and gender interact & what effect does this interaction have on HAI of the individuals. The specific objectives of the Part one were to study: the difference between aggressive and less aggressive individuals on HAI; the difference between individuals high and low on four dimensions of aggression (anger, physical aggression, hostility & verbal aggression) on HAI and the gender differences in HAI. Based on the review of literature, following hypotheses were formulated: Aggressive individuals would exhibit more HAI as compared to less aggressive individuals; individuals high on sub-dimensions of aggression i.e. anger, physical aggression, hostility & verbal aggression, would exhibit more HAI as compared to individuals low on these sub-dimensions and males would be higher on HAI as compared to females. A total of 313 subjects (163 males and 150 females) with the mean age of 13.60 years (SD=1.03 years) were randomly selected from various public schools (English medium) of Patiala and Chandigarh (Punjab) after due consent of the respective principals and participants. Out of 313 participants, 250 participants
(125 with high scores on aggression & 125 with low scores on aggression) were screened in
with the help of Aggression Questionnaire (Buss & Perry, 1992). Both males and females were
divided into two group i.e. ‘high on aggression’ group and ‘low on aggression’ group. Hostile
Attribution of Intent Explorer questionnaire was administered to both the groups. Hostile
attribution of intent explorer consisted of five hypothetical social scenarios each presenting a
negative outcome for the respondent. Corresponding scores of these two groups on Hostile
Attribution of Intent Explorer were compared to see whether participants high on aggression
and low on aggression differ significantly on it or not. To test the hypotheses, 2X2 factorial
(Aggression & Gender) design was applied. There were two levels of aggression as well as its
four dimensions (high & low), and two levels of gender (males & female). Results of the part I
of the study were as follows.

- Individuals who were high on aggression scored significantly higher on hostile
  attribution of intent as compared to those who were low on aggression.
- No gender differences were observed for hostile attribution of intent. Males scored
  almost equal to females on hostile attribution of intent. Neither main effect of gender
  nor its interaction with aggression came out to be significant for hostile attribution of
  intent.
- Hostile attribution of intent has been found to be higher among individuals high on
  anger as compared to those who were low on anger.
- Hostile attribution of intent has also been found to be significantly higher among
  individuals who were high on physical aggression as compared to those who were low
  on physical aggression.
- Individuals high on hostility scored significantly higher on hostile attribution of Intent
  as compared to those who are low on hostility.
- Significant higher level of hostile attribution of intent has been found between
  individuals who were high on verbal aggression as compared to those who were low on
  verbal aggression.

The findings of the study were explained within the framework of social information
processing model as it has been considered an important construct in the explanation of human
aggression. In the present study, individuals high on aggression showed more hostile attribution
of intent as compared to less aggressive ones because aggressive individuals’ social
information processing tends to be faulty at encoding and interpretation step. Since, such individuals encode peers’ behaviour as malicious; they experience anger and further insult the peers verbally or physically. On contrary, less aggressive individuals encode non-hostile emotion cues, interpret the peers’ actions as benign, and decide that ignoring the peers’ behaviour would be the most appropriate action. In ambiguous situations, highly aggressive individuals make their social decisions quickly, ignore available social cues, and therefore behave in a maladaptive manner. In a negative situation, aggressive individuals believe that a peer has been intentionally harmful and further retaliate with aggression. Therefore, part I of the study implicated that for controlling aggression, hostile attribution of intent has to be modified. Thus, in the light of other related researches and present findings, a social cognitive intervention based upon a social information processing model was devised and applied on aggressive adolescents in Part II of this study to reduce hostile attribution of intent and other aggressive tendencies.

As found in Part I, aggressive individuals tend to have distorted interpretations of the relevant social interactions especially in negative ambiguous situations. They believe that such aversive situations are caused intentionally by others. This assumption of aggressive individuals leads them to further behave aggressively. Besides, it instigates more problematic interactions and thereby limits pro-social behaviour. Thus, hostile attribution of intent is considered a key element in the development and maintenance of aggressive behaviour. Therefore, aggressive individuals should be trained to interpret negative ambiguous situations without any biases. They can be trained to replace attribution of hostile intent with benign intent. By reducing hostile attribution of intent, behavioural problems of aggressive individuals can be prevented and interpersonal relationships and adjustment can be enhanced. Part II of the study was thus carried out with a purpose of reducing hostile attribution of intent and aggressive tendencies by applying social cognitive intervention. Social cognitive intervention was devised following the guidelines from Social information processing model (Crick & Dodge, 1994) and General Aggression Model (Anderson & Bushman, 2002). The primary objectives were to study the effect of SCI on: hostile attribution of intent; aggression; irritability; impulsivity; emotional susceptibility and narcissistic features. The effect of intervention on all these variables was also assessed for both males and females. It was hypothesized that social cognitive intervention would be effective in reducing hostile
attribution of intent, aggression, irritability, impulsivity, emotional susceptibility, narcissistic features among both males and females. The sample for Part II of the study mostly comprised of those individuals who were placed in ‘high on aggression’ group in Part I. There were 126 aggressive individuals (70 males & 56 females) having mean age of 13.40 (SD=0.86). These individuals were randomly assigned to experimental and control groups. Experimental group was given a 6-session social cognitive intervention designed specifically to reduce aggression, hostile attribution of intent and other aggressive tendencies. A standard curriculum of social cognitive intervention was applied to all the participants in experimental groups in each school. There were 10 to 12 participants in each group. Each session was conducted once a week with duration of 70 to 75 minutes. To avoid unethical practice, neutral or unrelated issues like study habits, time management & career selection were discussed with the participants in control group. After six sessions of social cognitive intervention, all the aggressive individuals, both in experimental and control groups were administered seven questionnaires, six of dependent measures namely, aggression, hostile attribution of intent, irritability, impulsivity, emotional susceptibility & narcissism and one Post experimental questionnaire. Experimental and control groups were then compared by applying one way MANOVAs and a series of univariate ANOVAs with two levels of Intervention i.e. intervention (experimental group) and no intervention (control group). Separate analysis for both males and females was done using same statistics. Results of the study show that social cognitive intervention was effective in reducing aggressive tendencies among adolescents. Main findings of the study were as follows:

- The difference between control group and experimental group on all the variables has been found to be statistically significant proving effectiveness of social cognitive intervention in reducing aggression and its correlates.
- Individuals who received 6-session intervention showed fewer tendencies to behave aggressively as measured by PEQ than their counterparts in control group.
- The intervention has been found to be effective in reducing hostile attribution of intent among aggressive adolescents in experimental group.
- Individuals in experimental group showed less aggression as compared to control group. Significant difference has been observed between both groups.
- Irritability has been found to be lesser among individuals in experimental group as compared to those in control group.
The effect of intervention is found to be significant for impulsivity as the difference between experimental and control group came out to be highly significant.

Significant difference has also been observed between experimental and control group on emotional susceptibility where experimental group showed less extent of emotional susceptibility.

On narcissistic features also, individuals in experimental group were lower than those in control group. However difference between these two groups is smaller for narcissism as compared to other variables in the study, but it was able to reach to the significance level.

Thus it can be stated that all the hypotheses proved true in present study. Social cognitive intervention has been found to be effective in reducing all the aggressive tendencies measured in the form of six dependent variables i.e. hostile attribution of intent, Aggression, irritability, impulsivity, emotional susceptibility, and narcissism. Experimental group showed significant decrease in all these variables.

In pre-post intervention comparison, no significant difference was observed in control group on aggression and hostile attribution of intent. However, Post intervention scores in experimental group showed marked decline for aggression scores and hostile attribution of intent.

Both males and females in control groups showed more aggressive tendencies as compared to experimental group as they scored significantly higher on all dependent variables as compared to those in experimental group.

This difference in all the dependent variables can be explained with the assertions made by attribution and appraisal theories (e.g., Weiner, 1985, 1986; Lazarus, 1991), Social information processing model (Crick & Dodge, 1994), and the General aggression model (Anderson & Bushman, 2002). Findings can be attributed to specific intervention in which faulty cognitions of aggressive adolescents were modified. In the intervention participants were trained to process social information accurately that resulted in reduced hostile attribution of intent and subsequent aggressive tendencies. Therefore, social cognitive intervention can be applied to aggressive adolescents as the present research work has proved its efficacy in reducing aggressive tendencies. The effective & proper use of social cognitive intervention can
have far reaching positive effects on an individual’s life. Focusing on cognitions & targeting them for change can help an aggressive individual to see aggression provoking scenario from a new perspective and react accurately. By reducing aggression in the early adolescence subsequent adjustment problems can be prevented in the adulthood. Reduced irritability, impulsivity, emotional susceptibility and narcissism would help individuals in controlling their behaviour, enhance intrapersonal skills and improve interpersonal relationships.