



to express their aggression physically. They also showed that females tend to show their aggression in less overt and less physical ways. For example, females may display more verbal and relational aggression such as social rejection. In another study regarding the effects of gender on adolescent aggression, Cowan and Underwood (1995) found that girls perceived social aggression as less harmful than physical aggression. Similarly, Crick *et al.* (1996) reported that relational insults and verbal threats were the most frequently cited harmful behaviours for girls. But physical aggression and verbal insults were most frequently cited harmful acts by boys. Again, Crick and Dodge (1994) showed that boys are more instrumentally oriented to aggression. But girls tend to be more interpersonally oriented. In addition, boys are more power oriented, outwardly aggressive and may control external events. On the basis of these findings investigators concluded that adolescents view relational manipulative acts as angry and harmful leading to aggressive behaviours.

Stages of development are also important variable for aggression in children. Observations suggest that physical aggression is mostly not a learned behaviour and that stages of development provide opportunities for learning of self regulation. Bongers *et al.* (2004) showed that self-regulatory abilities may be regarded as important variable of aggression. The results showed that adolescents who fail to acquire the necessary self-regulatory abilities tend to show a typical level of physical aggression across development. In another study related to the effects of stage of development on adolescent aggression Leschied *et al.* (2000) found social network of adolescents are influential determining factor for their aggressive behaviour. Socializing in delinquent behaviour will increase the likelihood that an adolescent will engage in aggressive behaviours. This means that opportunities help them to behave aggressively. Thus, adolescents rejected by their social network will engage in aggressive behaviour. It is also important to note that an adolescent may engage in aggressive or violent behaviour is an attempt to obtain validation from a group. Similarly, Baer (1999) said that delinquency, lowered social competence and decreases in academic performance are highly correlated with negative experiences in the family environment during adolescence.

An overview of relevant studies described above regarding tribal community with reference to their gender and developmental stages of life span during adolescent period shows that there are many factors responsible for aggression of adolescent youth. Most of the studies have reported that aggressions in adolescence originate at

individual, social and community levels. There are historical events, social phenomena, cultural isolation and economic constraints connected with aggressive behaviour of boys and girls during adolescence. The present study would take into consideration all these events to account for aggressive behaviour of Chakma tribal boys and girls at their early and late adolescence.

## Materials and Methods

*Samples:* The participants in this study constituted 160 Chakma tribal students from different schools and colleges of Khagrachhari and Rangamati Districts. They were equally divided into boys and girls. Each category was again subdivided into early adolescent and late adolescent. Age of early adolescent group ranged from 11 to 14 years and late adolescent group ranged from 15 to 18 years. First, institutions were categorized and secondly early and late adolescent boys and girls were identified. Then they were selected randomly. Thus a stratified random sampling procedure was taken for the selection of the participants in this study.

*Instrument:* The study used Measure of Aggressive Behaviour (Rahman 2003) was selected for the data collection of the present study. This Measure includes five dimensions. These are: a. Physical Aggression (5 items), b. Verbal Aggression (9 items), c. Hostile Aggression (5 items), d. Anger Aggression (3 items) and e. Indirect Aggression (3 items). The Measure of Aggressive Behaviour contained 25 items. Each item was followed by 5 alternative answers ranging from totally true to totally false. Totally true was given 5 points, true was given 4 points, neutral was given 3 points, false was given 2 points and totally false was given 1 point. The criterion of split-half was used for determining the reliability of the Measure of Aggressive Behaviour. The correlation coefficient for split-half reliability was found 0.37. When Spearman-Brown Prophecy formula was used, the correlation coefficient was found to increase from 0.37 to 0.54. The Measure of Aggressive Behaviour was confirmed by validation at several stages. Items were constructed through open-end questionnaire. This indicated the content validity of Measure of Aggressive Behaviour. Secondly, the scrutiny of each item was done by the judges. This procedure provided face validity for the Measure of Aggressive Behaviour.

*Experimental design:* The study used two independent variables such as gender and stage of development. Gender was divided into boy and girl. Stage of development included early adolescence and late

adolescence. Accordingly, the study utilized a factorial design. Thus, a 2×2 factorial design representing two levels of gender (boy/girl) and two levels of stage of development (early adolescence/late adolescence) was used as design of the study.

## Results and Discussion

Analysis of variance (ANOVA) was computed on total scores of the Measure of Aggressive Behaviour. The summary of ANOVA is presented in Table 1. The results on analysis of variance showed that the main effect of gender was statistically significant ( $F = 7.62$ ,  $df = 1/156$ ;  $P < 0.01$ ). Again, main effect for stage of development was also found statistically significant ( $F = 24.28$ ,  $df = 1/156$ ,  $P < 0.01$ ). Moreover, a two-way interaction involving gender and stage of development was also statistically significant ( $F = 3.93$ ,  $df = 1/156$ ,  $p < 0.05$ ).

An inspection of mean scores (Table 2) showed that regardless of stage of development, it was found that boys (89.03) reported significantly ( $F = 7.62$ ,  $df = 1/156$ ;  $p < 0.01$ ) higher rates of aggression than girls (85.65). It was also found that regardless of gender, the respondents belonging to early adolescent stage (90.35) expressed significantly ( $F = 24.28$ ,  $df = 1/156$ ,  $p < 0.01$ ) higher rates of aggression than the respondents belonging to late adolescent stage (84.33).

**Table 1.** Effects of gender and stage of development on the total scores of the measure of aggressive behaviour in Chakma students.

Sources of variance	Df	SS	MS	F-values
Gender	1	455.62	455.62	7.62**
Stage of development	1	1452.02	1452.02	24.28**
Gender × Stage of development	1	235.23	235.23	3.93*
Experimental Error	156	9330.36	59.81	
Total	159	11473.23		

\* =  $P < 0.05$ ; \*\* =  $P < 0.01$

**Table 2.** Mean scores and mean differences between boys and girls, and early and late adolescence in Chakma students.

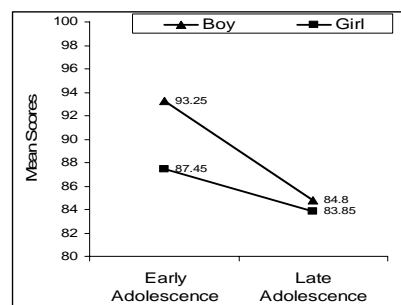
Gender	Boy	89.03
	Girl	85.65
Stages of development	Early Adolescence	90.35
	Late Adolescence	84.33

**Table 3.** Mean scores and significant mean differences of two-way interaction involving gender and stages of development in Chakma students.

Gender	Stages of development	
	Early Adolescence	Late Adolescence
Boy	93.25 <sub>a</sub>	84.80 <sub>b</sub>
Girl	87.45 <sub>c</sub>	83.85 <sub>b</sub>

Common subscripts do not differ significantly by Newman-Keuls tests.

An observation of mean scores reported in Table 3 showed that in case of boys, it was found that early adolescent (93.25) expressed significantly ( $P < 0.01$ ) higher rates of aggression than the late adolescent (84.80). Similarly, in case of girls, it was found that early adolescent (87.56) expressed significantly ( $P < 0.01$ ) higher rates of aggression than the late adolescent (83.85). Results also showed that in case of early adolescence, boys (93.25) expressed significantly ( $P < 0.01$ ) higher rates of aggression as compared to girls (87.45). However, in case of late adolescence, no significant mean difference was obtained between boys and girls. This interaction effect has been graphically plotted in Fig. 1. The present study has focused on aggression as a psychological phenomenon. Consequently, it has carried out an empirical investigation on different forms of aggression in tribal students in Chittagong Hill Tracts. The participants were boys and girls at their early and late adolescent stage of life span.



**Fig. 1.** Two-way interactions involving gender and stage of development in Chakma students.

The results have reported significant main effect on gender and showed that boys have expressed higher rates of aggression than girls. This finding has relevancy with several theoretical imports. Theories on aggression have stated that biologically considered, hormonal effects lead the males to express higher aggression than the females. It is the responsibility of the males to provide protection for homeland and family members. In case of human beings, it is supposed that males will

provide protection, security and shelter to the females. In these acts of self-preservation of species, males use instrumental aggression. Some social theories of aggression support this viewpoint (Burbank, 1987; Cook, 1992; Glazer, 1992). These investigators described sex differences as natural developmental course and suggested that sex difference is an aggressive style that appears during all the stages of life such as childhood, adolescence and adulthood. They claimed that human males are more aggressive than females. These findings provide empirical support to the findings of the present study. In fact, gender differences in aggression for boys and girls in tribal and non-tribal people are based on cost/benefit ratio and effect/danger ratio depending on ecological and social context of Chittagong Hill Tracts. The cost/benefit ratio and the effect/danger ratio may be regarded as an expression of the subjective estimation of boys and girls that may occur as the consequences of an aggressive act. It is, perhaps, important to note that the boys and girls as aggressors may assess the relation between (a) the effect of the intended strategy and (b) the dangers involved. This assessment is made with reference to physical, psychological benefit or danger for him or her and for people important to him or her. In fact, the boys and girls follow a technique of aggression that will be effective and at the same time, will incur as little danger as possible. In other words, both boys and girls as aggressors try to maximize the benefit and to minimize the risk of danger involved in the process of aggression. The findings of the present study on aggression may be explained in the perspectives of these theoretical explanations and personal observations of aggressive style in the context of Bangladesh. It is, perhaps, the aggressive styles adopted by boys and girls that might be responsible for gender difference in the present study.

The results also reported significant main effect on stage of development and showed that respondents at early adolescence would express significantly higher rates of aggression as compared to the respondents at late adolescence. Many researchers have reported empirical findings in support of this finding. For example, Baumrind (1972), Dornbusch *et al.* (1987) and Steinberg *et al.* (1991) described developmental course as the source of hostile and aggressive behaviour of boys and girls. They investigated patterns of aggressive behaviour among school children at their adolescent stage of life span. It was found that children at their early adolescent stage conceived harassment and school bullying as serious problem. It was found that these aggressive acts severally affected the lives of those

children who were exposed to such situations. But with the increase of age, when the children reached at their late adolescent stage, harassment was found to take the form of interpersonal aggression and they conceived it as less harmful in the traditional sense. These findings regard aggression at developmental stage to take different forms depending on the styles of aggressive behaviour. These empirical findings provide confirmation to the findings of the present study on aggression of boys and girls at their early and late adolescent stage of life span. These psychological functioning may be regarded as important and significant moderating variables of aggression at early and late adolescent stage of development in the context of Bangladesh. It is, perhaps, these theoretical explanations that might be applicable in case of lower aggressive behaviour of the respondents at their late adolescent stage.

Results on interaction effect between gender and stage of development have provided some important and significant findings in the present study. It was found that early adolescent boys expressed higher aggression as compared to early adolescent girls. Again, early adolescent boys expressed higher aggression as compared to both late adolescent boys and girls. However, no significant difference in aggression between late adolescent boys and girls was found. Moreover, early adolescent girls expressed higher aggression as compared to both late adolescent boys and girls. A common thread running under these findings appears to exhibit that male status as well as early adolescence status has greater influence in the act of aggression.

Related to the findings about the interaction effect between gender and stage of development Chandler and Lalonde (1998) have suggested that aboriginal communities should be given opportunity to restore their culture in the areas of self-governance. Thus, comprehensive community initiatives may reduce aggression of aboriginal youth. Historical context is another important factor to understand aggressive or violent behaviour of aboriginal adolescents. For example, Barton *et al.* (1997) and Blechman (1992) reported that collaborative partnership between citizens, primary institutions; service providers and public officials should be engaged in promoting the health and well-being of adolescents and their families. Thus, in order to reduce aggression of aboriginal adolescent boys and girls, it is important to implement these at the individual, family, school and community levels.

## Conclusion

It may be concluded that this study contributes substantially to the literature regarding aggression effected by gender influence and developmental process. That means, the study has focused on gender and developmental stages at early and late adolescence as moderators for the nurturing of aggression. However, the study has suggested further investigation for meaningful explanation and understanding of aggression prevailing among tribal people in their ecological context.

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