CHAPTER FIVE

DISCUSSION
DISCUSSION

The present study contributes to the psychological literature by examining variables hypothesized to serve as protective factors that predict resilience among adolescence in Aligarh, India. Specifically, the present study investigated the relationships among resilience, home environment, school environment and certain demographic variable. In this chapter, the results of the study are discussed in relation to previous literature on adolescent resilience. First, the findings from analyses including the chi-square, ANOVA, multiple regression and intercorrelations are discussed. Second, conclusions with implications are addressed and lastly limitations and recommendations for future researches are presented.

5.1 Discussion of the results

In order to examine whether resilience differs with respect to gender, chi-square test was conducted (see Table 3.4.1). The chi square value obtained was not significant, which implies that there is no significant difference in resilience between boys and girls. Although prior research findings have revealed significant gender differences in resilience, they have not been conclusive of whether resilience is higher among boys or girls. While some studies show adolescent girls to be more resilient (Hampel & Petermann, 2005; Milgrim & Palti, 1993), other studies have proved boys with high resilience in comparison (Ge, Lorenz, Conger, Elder, & Simons, 1994). A recent Indian study by Deb & Arora in 2007 revealed that adolescent boys were more resilient to adversity than the girls. However in the present study there was not much difference in resilience scores between the two gender groups, which is in contrast to available research evidence. Lack of gender difference in resilience level in this research may be a reflection of the new changing Indian society with new parenting norms and other cultural values. Gender biases and other forms of discrimination are slowly being
replaced by provisions of equal opportunities to both boys and girls. Adolescent boys and girls today receive similar support from their social environmental conditions, thus the old myth that girls are more vulnerable and lesser resilient than the boys is being eroded since adolescent boys are as much resilient (or vulnerable) to stressors as their female counterparts.

Chi-square was conducted to examine difference in resilience between adolescents coming from joint and nuclear families. Table 3.5.1 depicts that resilience did not significantly vary between the two family types. This finding throws light on the cultural transformation, which our traditional society is going through. Amongst the several transformations in recent times, the most striking one is the breakdown of Indian joint family system into several nuclear families (Nagaswami, 2008). Moreover, the belief that adolescents have better mental health in joint families than in nuclear families is not acceptable due to increasing similarities in the psychosocial functioning of both the family systems. The finding obtained can be considered as a result of the similar psychosocial environment provided by both the family types.

In order to examine whether resilience differs across the three socio economic groups (low, moderate, high) chi-square test was conducted (see Table 3.6.1). The result shown in table reveals that resilience did not differ significantly with respect to the socio economic backgrounds of the adolescents, indicating that socio economic status does not necessarily affect resilience in this population. This finding however is different from the available research evidence that have shown this construct to be higher among adolescents coming from sound socio-economic background than those coming from the lower stratum (Masten, 2001; WestEd, 2002; Garmezy, 1983; Rutter, 1988). The present results highlight that the level of adolescent’s resilience is more or less the same across the three socio economic groups. It can be concluded from the
present result that resilience in adolescents is not necessarily related with their socio-economic status in the current Indian context.

On the whole, it can be concluded that there is no significant relationship between the three demographic variables i.e. Gender, Family type and Socio-economic status, investigated in the present study with resilience in adolescents.

ANOVA test was conducted to see the difference in resilience scores with respect to home and school environment. Difference in resilience means scores were also seen across three levels i.e. good, moderate and low classifications of the two measures (i.e. home and school scales) based on their norms. Table 3.7 depicts the proportions of participants in each level of home and school environment. Majority of participants had good home environment (N=159), followed by moderate home environment (N=94). Only 7 respondents were in poor home environment category. In case of school environment, majority of participants (N=155) reported to have come from moderate school environment, followed by good (N=78) and poor (N=27) school environment. This implies that for the current study the sample participants mostly perceived to receive a combination of overall good home environment and moderate school environment. It is evident from Table 3.7 that home environment has a significant main effect on resilience. It is also clear from the results obtained that resilience is significantly differing across three levels of home environment for the total sample.

Since $F$ value has been found to be significant in the case of home environment, Gabriel's post hoc analysis was conducted to see the extent of mean differences in resilience across different levels of home environment (see Table 310). Gabriel's post hoc results indicate that the resilience scores were highest for level one, followed by level two and then level. All the mean differences were significant except for resilience
between moderate and poor home environment levels. From these results it can be concluded that resilience is highest in good home environment, moderate in the moderate level and lowest in the poor environment category which is in accordance with previous studies where adolescence from healthy home environments are found to be more resilient than those coming from unfavorable home conditions (Werner & Smith 1982; Garmezy, 1983; Demos, 1989; mills, 1990; Bennett, 1988; Clair and Genest, 1987).

ANOVA results in table 3.7 also show significant main effect of school environment on resilience in the total sample. It is therefore clear that resilience also significantly differs across the three levels of school environment as well. Mean difference in resilience scores for three school categories were examined through Gabriel’s post hoc analysis (see Table 3.10). On account of mean differences in resilience, it can be concluded that resilience scores significantly varied in decreasing order in good, moderate and poor school categories respectively. This finding is also in favor of prior studies where schools with abundant protective factors served as important source of resilience for the adolescents (Garmezy, 1991; Werner, 1990).

ANOVA results for the overall sample (Table 3.7) are similar as both the environments emerged to have significant effects on resilience, thus underlining that both the contexts are major protective storehouses of adolescent resilience in the Indian context as well. Table 3.7 also shows the interaction effect of home and school environment on resilience. The results indicate a significant interaction effect of these variables on resilience, which means that the development of resilience among adolescents is certain if they get to live and spend time in favorable home and school conditions (Benard, 1991; Werner & Smith, 1982). The interaction effect is displayed graphically in figure 1.
ANOVA tests were further conducted to investigate the effects of home and school environment on resilience in girls and boys separately. In case of both the gender groups, significant main effects of both the variables on resilience were obtained. However interaction effect of home and school environments on resilience was not significant for this demographic variable. The two post hoc results for boys and girls are similar to that of overall sample. See table 3.11 for boys and 3.12 for girls.

The main research question raised in this study was to see whether a relationship exists between home environment, school environment and resilience. To answer this question Pearson Product-moment correlations were computed to examine correlations between overall resilience, home and school environments. The r values presented in Table 3.14 show a positive significant relationship between home environment and resilience ($r=.50$ at $p<.01$). There was also a positive significant correlation between school environment and resilience ($r=.52$ at $p<.01$). Scatter plots graphically display the positively linear relationship between the three variables (see Figure 2 and 3).

Correlations were also computed among dimensions of home environment, school environment and overall resilience. It was found that all the dimensions of these environment scales share a significant positive relationship with each other. The trend of relationship obtained between resilience and the two extrinsic protective environments are consistent with previous literature, which documents that chances of adolescents displaying resilience traits are higher if they live in positively protective homes and schools (Werner & Smith, 1982, Cairns & Dawes, 1996, Garmezy, 1983; West Ed, 2002). A positive home environment meets the three basic needs of the adolescents, namely caring relationships (Egeland et al, 1993), high expectations (Steinberg, 2000) and meaningful participation (Steinberg, 2000), and thus, plays a
very crucial role in the development of resilience in adolescents (Benard, 1991). The relationship between a positive school environment and resiliency development has also been documented by Benard in great detail (Benard, 1991). Since the dimensions of home and school environment are positively and significantly correlated with resilience, inference can be drawn that adolescents will be more resilient to life stressors when they feel adequately supported by their family members and school teachers. Correlations between the three above-mentioned variables in the case of boys and girls were also analyzed separately. The results for boys and girls are presented in Table 3.15 and Table 3.16 respectively. Linear positive correlations were also obtained for both the gender groups emphasizing that better the home and school environment, higher will be their resilience. For boys, the results show that there is a significant positive correlation between their overall home environment scores and resilience and also between overall school environment and resilience. For girls the result is similar as in the case of boys. Correlations between home environment and resilience and school environment and resilience have been found to be positively significant.

It was further revealed by Table 3.15 for boys, that Equanimity was not correlated with meaningful participation at home and caring relationships in school. Self-reliance and perseverance in boys were also not correlated with meaningful participation in school. The rest of the r-values were significantly positive indicating that higher these protective factors in school and home, higher is the resilience among adolescent boys. In case of girls (see Table 3.16) resilience dimension of equanimity was not correlated with high expectations and caring relationships at home. Caring Relationships at home was also found to be weakly associated with the dimension of perseverance in adolescent girls. Aloneness was also found unrelated with caring relationships and high expectations at home for girls. However the other dimensions of
resilience were strongly and positively correlated with the other home and school dimensions.

Although the correlation values highlight the pattern of relationships between resilience and home and school environment, it cannot be concluded whether or not resilience is well predicted by the environmental factors used in this study. In order to find out the predictive nature of home environment and school environment (predictor variables) in the context of resilience (criterion variable), step-wise multiple regression analyses were done. It also provided a good indication of the relative importance of one predictor variable vis-à-vis the other one. The results are presented in Table 3.17. The results of the step-wise multiple regression revealed that, for the total sample participants, both home and school environment are predictive of resilience in adolescents. These predictor variables, together, accounted for 38% of the variance in adolescents’ resilience scores. Results further revealed that school environment alone accounted for 27% of the variance in total resilience scores and came out to be the strongest predictor variable as compared to the home environment, which accounted for only 10% of the variance of the total resilience score and thus reiterates the role of school in determining resilience in this population as shown in several research studies (Austin, 1991; Brook et al, 1989; Cauce and Srebnik, 1990; Rutter, 1984; Rutter, 1979; Berrueta-Clement et al, 1984; Coleman and Hoffer, 1987; Comer, 1984; Nelson, 1984). Significant role of the school in predicting resilience is also confirmed through the standardized coefficient. Research reveals that adolescent students are more likely to thrive in schools that provide them with responsible roles, clear and high academic standards, resources, and opportunities to participate in a variety of extracurricular activities (Benard, 1991; Henderson & Milstein, 1996; Rutter, 1984; Werner, 1989). Safyer (1994) and Hauser (1999) identified participation and achievement with school
as a source of resiliency. Benard (1991) further suggested that the critical factor in developing resiliency in youth is participation and active involvement in decision-making, dialogue, and empathy in the school environment.

Home environment, in the present study, has also been found to have significantly predicted resilience for the total sample. Although this finding is consistent with findings that show positive home environment as a protective factor of resilience (Werner & Smith, 1982, Rutter, 1987, Garmezy, 1985), in the present study the contribution of home environment was relatively small (i.e. 10.2%) in comparison to school environment. This may be possibly because in the Indian society adolescents spend a major portion of their daily lives in schools (Rutter, 1979) and it is in schools that adolescents mostly build their social network, are under maximum peer pressure and engage in both curricular and co-curricular activities to prove their caliber at home and outside. Schools thus serve as the second home for the school going youth in our country and play a major role in determining their overall mental health and well-being.

Step-wise multiple regression was further made use of to see which predictor variable significantly predicted resilience in the case of boys and girls separately. The results for boys and girls are presented in Table 3.18 girls in Table 3.19. In the case of boys and girls, both home and school environment significantly predicted resilience. However home environment is the most significant predictor and accounted for approximately 35% of the variance in the resilience scores for boys. On the other hand, school environment has been found to be the strongest predictor of resilience in girls and accounted for 28.5% of the variance. Research has proved that boys tend to show more severe and prolonged family disturbances like parental discord and divorce than females (Chess, 1989) due to which their chances of suffering from psychiatric disorders are quite high. Such familial disturbances often create obstacle in the
The above discussed results predicted resilience from overall home and school environment but not from their specific dimensions. Since caring relationship, high expectations and meaningful participation have been proved to be essential protective factors in both home and school context (Benard, 1991, 2004), this study also tried to explore the role of these three dimensions (predictor variables) in predicting resilience (criterion variable). Therefore, stepwise multiple regression analysis was done to specifically predict resilience from the dimensions of home and school environment. The results are presented in Table 3.20. The table shows that meaningful participation in home, high expectations in schools, meaningful participation in schools and caring
relationships in home have positively and significantly predicted resilience. Out of all these dimensions which were found to predict resilience significantly, meaningful participation in home proved to be the strongest predictor accounting 19.5% of the total variance in the resilience. Previous literature in the field of resilience has proved meaningful participation in family matters to have a significant relationship with resiliency development. Meaningful participation at home depends on the parents being able to provide adolescents with a good balance of both psychological control and autonomy (Benard, 2004) and in making them think beyond self-centric need fulfillment as pointed out by Cohn in *Raising Compassionate, Courageous Children in a Violent World* (Cohn, 1991). Parents who create opportunities for their adolescents' to have some decision making power and to solve problems on their own help meet their basic need for psychological autonomy, an important ingredient of meaningful participation and an important contributor in the development of resilience in adolescents (Benard, 1991, 2004; Eccles et al. 1993). It must be mentioned that even though school environment on the whole may strongly determine adolescent resilience, extent of opportunities given to adolescents at home helps them carve out an identity of their own which they constantly keep struggling for in this phase of identity crisis (Erikson, 1960).

The next predictor that entered in the model as shown in Table 3.20 is the high expectations in schools, accounting for 10.6% of the variance in resilience, thus validating the role of this component of school environment in determining resilience among adolescents. There is no dearth of evidence that this component of school environment plays an important role in building adolescent resilience (Rutter, 1979; Judith Brook, 1989; Oakes, 1985; Jonathon Kozol, 1990, O'Neil, 1991, Benard, 1991, Weinstein et al., 1991 & Delpit, 1996) and the present finding is no different. The third
The strongest predictor of resilience which accounted for 7% of the variance in resilience is meaningful participation in schools. The importance of meaningful participation as an important protective factor in schools has also been supported in the literature. Rutter's research (1979, 1984) on successful schools provided a significant proof of the importance of meaningful participation as a protective factor for the development of resilience in adolescents. He found that schools with low levels of problems had children “who were given a lot of responsibility and participated in all sorts of things that went on in the school. They were treated as responsible people and reacted accordingly”. Research has found that students who experience autonomy-supportive school environment are more likely to be curious, mastery oriented, problem solvers in addition to having a higher sense of self efficacy (Barber & Olsen, 1997; Chirkov & Ryan, 2001; Deci, 1995), which helps them to become resilient to problems and other life stressors (Benard, 2004). Researches done by Brooks (1989) and Roger Mills (1990) have further validated Rutter’s findings. Maton (1990) conducted a research on older adolescents and at-risk urban teenagers and found that their involvement in “meaningful activities” was significantly related to their life satisfaction, well-being, and overall self-esteem. The last predictor of resilience to make entry in the stepwise model is caring relationships in home accounting for only 2% variance in resilience. Previous literature has supported the role of caring relationships in home to be an important predictor of resilience. Werner & Smith (1982) contended on the basis of a longitudinal study that, having a caring relationship with any adult in the home is the most powerful source of resilience in children and adolescents. Similar findings have also been obtained by researchers like Steinberg (2000), Barber & Olsen (1997), Anthony (1974), Rutter (1979) etc, where caring relationships in home environment
have been found to have a positive effect on the development of resilience in children and adolescents.

The results of school environment as an important source of resilience in girls and home environment being important in case of boys got further consolidated as the dimension, meaningful participation in schools and caring relationships at home emerged to be significant predictors of resilience in girls and boys respectively (see Table 3.21 for boys and 3.22 for girls). In the case of boys all dimensions of home and school environment predicted resilience except the one of caring relationships in school. Caring relationships at home proved to be the strongest predictor in their case and accounted for 26% of the variance in resilience.

It is very important to note that all the three dimensions of home environment significantly predicted resilience in adolescent boys. This finding highlights the importance of home environment as an important external protective factor of development of resilience in adolescent boys and is in accordance with the result in Table 3.18 where overall home environment significantly contributed to adolescent resilience.

Results obtained from step-wise multiple regression analysis done to predict resilience in girls from all the dimension of home and school environment underlines the importance of meaningful participation in schools as the strongest predictor of resilience in them, accounting for 24% of the total variance in resilience scores. High expectations in schools and meaningful participation in home are the other two dimensions that have significantly predicted resilience in them accounting for 8.2% and 6.7% of variance respectively. Table 3.22 indicates that meaningful participation of the adolescent girls is the primary protective factor that needs to be encouraged by elders at home and schools so as to increase their resilience.
5.2 Conclusions with Implication

In context of the above discussed current research findings it can be concluded that the research questions regarding relationship between home and school environments and resilience, were successfully addressed by the present study. On the basis of the obtained results it can be assumed that instead of the demographic characteristics like gender, family type or socio-economic background, it is the quality of home and school environment of the adolescents that is responsible for their resilience.

Since youth in India today mostly are prone to getting affected by risk factors around, there is a great need to enhance protective aspects of family and school environments. Home and school environment in their own rights contribute to the development of resilience in the Indian adolescents. Family in India is the primary social institution wherefrom one learns basic values and norms. The role of family becomes excessively important even during the phase of adolescence as well. It is during this phase that adolescents try to create a balance between parental expectations and their own expectations. Being involved in an ‘identity crisis’ as pointed by Erikson, (1968), the adolescents strive for independence and an identity of their own. Therefore, adequate family support particularly from elders is required so that they can successfully cope with stressors like board examinations, getting admission in their desired schools and colleges, dating relationships, etc. Improper parental behavior and disturbed family atmosphere may increase their vulnerabilities to emotional disorders and divergent behaviors like substance use, delinquency and suicide. It therefore is important for them to have a proper home environment conducive for building resilience.
School on the other hand is equally an important institution as it is responsible for further personality and cognitive development of children and adolescents. School life in adolescence can be considered as one of the most critical phases in one’s life. Academic stress particularly in India is mostly experienced during the phase of adolescence. Hence, school authorities should make extra efforts in making the learning environment stress-free and in helping them develop positive coping strategies to handle stressors like examinations, career indecision, etc.

In a nutshell, this study emphasizes on enhancing those aspects of school and family that minimize risks of succumbing to adversity in this population.

5.3 Limitations and recommendations for future researches

Why some of the dimensions of home and school environment failed to predict resilience has not been explained in the present research investigation and can be considered as one of its major limitations.

The current study due to its co-relational nature managed to present the relationship between resilience and the other proposed research variables. However the study did not focus on how resilience is predicted by demographic variables, conducive home and school environment. Researches on adolescent resilience in future should also examine the relationship between resilience and these protective and demographic variables in a pathway perspective.

As far as the school and home environment variables are concerned, only the psychological protective components (i.e. caring relationships, meaningful participation and high expectations) were under consideration. Studies in future should also address the role of ‘physical aspects’ of homes and schools (like location, sanitation, size, availability of facilities, etc), not considered by this study.