CHAPTER VI
DISCUSSION

Discussion of Results

In the present study, an attempt was made (a) to explore the nature of relationships of intelligence, parenting styles (viz., authoritative, authoritarian and permissive), classroom environment dimensions (viz., student cohesiveness, teacher support, task orientation, involvement, investigation, cooperation and equity) and autonomous / controlled regulations with academic achievement among Iranian and Indian students (b) to further examine the role of intelligence, parenting styles and classroom environment variables on Iranian and Indian adolescents’ academic achievement as mediated by academic self-regulation. Besides discussing the results of above said basic research queries, the discussion over differences of all the study variables (excluding intelligence and academic achievement) across two cultures and gender is also presented.

6.1 Inferential Analysis

6.1.1 Cultural differences in parenting styles

An overview of results of the cultural differences in parenting styles revealed that there was no significant difference between maternal authoritative as well as paternal authoritative style among Iranian and Indian samples. It was found that Indian female students reported higher maternal as well as paternal authoritarian styles than Iranian female students. But, there was no significant difference between maternal and paternal authoritarian styles among Iranian and Indian males. When Iranian and Indian students were compared on maternal and paternal permissiveness, it was found that Indian female students reported higher maternal permissiveness than Iranian female students. But, there was no significant difference between maternal permissiveness among Iranian and Indian males. On paternal permissiveness, Indian males were higher than Iranian males whereas females of the cultures reported equal paternal permissiveness (Table 1).

A further probe with mean trend (Table 1, Figure IV) of parenting styles across two cultures suggests that in both cultures, students are more exposed to authoritative (both maternal and paternal) than authoritarian and permissive parenting styles. The present trend is contrary to earlier findings where Asians were reported to be practicing...
more authoritarian parenting style, whereas western parents were using authoritative parenting style (Dornbusch et al., 1987; Steinberg et al., 1989; Chao, 1994, 2001; Steinberg et al., 1994; Yedwab, 1997; Dawson, 1997; McNeely, 1999; Chen et al., 2000; Ehrle, 2000; Attaway & Bry, 2004). The above trend has questioned the individualized and collectivistic societal patterns as proposed to differences in family climate and its consequences on several outcome behaviors among Asian cultures.

Interestingly, the present study has revealed that cultural differences in parenting styles are gradually diminishing and it appears that the globe is moving toward individualized patterns of society where more freedom and independence are being practiced and fostered among children by the parents.

The authoritarian and permissive parenting styles are being practiced more by Indian parents than Iranian parents. Keeping in mind the emerging trends of authoritative parenting style in India and Iran, one can imply that although both cultures are fast moving toward authoritative parenting style, yet Indian parents are less warm and responsive and have high maturity demands (intolerant to inappropriate behavior) than Iranian parents.

The present findings are more or less conforming to Baumrind (1991) factor analyzed data of three parenting styles and reducing into two dimensions: responsiveness and demandingness as reported by Spera (2005). Both cultures seem to indulge in responsiveness behavior that intentionally foster individuality, self-regulation and self-assertion in their children, whereas demandingness is more among Indian parents (i.e. the extend to which parents hold maturity demands for their children, provide supervision and enact disciplinary efforts when needed) than Iranian parents.

6.1.2 Gender differences in parenting styles

With regard to gender differences in parenting style, comparison of means (Table 2, Figures V-VI) revealed that Iranian as well as Indian girls reported higher maternal and paternal authoritative styles as compared to boys. However, results showed that Iranian boys, compared with girls, reported higher maternal / paternal authoritarian and permissive styles.

In case of Indian sample, results show that there were no difference between Indian males and females in maternal / paternal authoritarian and maternal permissive
styles. But, Indian boys, reported higher paternal permissiveness than their girl counterparts.

Gender differences in perceived parenting styles have been reported by other studies (Siegelman, 1965; Sinha et al., 1989; Khetarpal, 1990; Dwairy, 2004, Dwairy & Menshar, 2006).

The female findings in two cultures of their perceptions of parents being more authoritative than males may indicate the importance of specific aspects of authoritative parenting style such as high levels of family cohesion and parent concern. Gender differences were found for parental concern, family discussion and higher level of involvement for the education and occupation of females in both cultures. The results indicate that in both cultures family functioning is not nearly so male oriented and reflect an increasing value placed on certain aspects of development of females (Garg et al., 2003).

Another plausible explanation for this could be rapid social changes in Iran and India and this seems to have changed strict, obedience and power asserting parenting styles toward their girls to warm and responsive style. They are providing affection and support in their explanation. They have high maturity demands (e.g., expectations for achievement) for their daughters but foster these maturity demands through bi-directional communication and induction.

Dwairy, Achoui, Abouserie, and Farah (2006) studied parenting styles in Arab societies. The parental authority questionnaire was administered to 2,893 Arab adolescents in 8 Arab societies. Results demonstrated that the mean score of the authoritarian style was higher among males, whereas the mean score of the authoritative style was higher among females.

Iranian males reporting of higher authoritarian parenting style than their female counterparts may be accounted by the fact that gender-role socialization in Iran remains quite strong despite gradual social change. Sons are socialized to be more achievement-oriented and treated more firmly than girls (Carson, Chowdhury, Perry, & Pati, 1999). The Iranian parents seem to be more demanding and controlling of their sons than their daughters as they are expected to be more aggressive and later family decision makers which is instilled in them through discipline and control.
Whereas in certain aspects of parenting Iranian males are still enjoying more permissiveness than females, especially in dress code and engagement more in social and physical activities.

Indian males as well as females are being treated at par in shaping, controlling and evaluation of the behavior and attitudes in accordance with set rules. Parents emphasize obedience, respect for authority, work and tradition from both sons and their daughters. The only exception found in the study was that Indian males are enjoying more paternal permissiveness than their female counterparts, implying that Indian fathers are more tolerant and accepting and make few demands of mature and regulated behavior from their sons.

6.1.3 Cultural differences in classroom environment dimensions

A glance at the means of Iranian and Indian sample on classroom environment dimensions (Table 3, Figure VII) showed that Indian classrooms were higher than Iranian classrooms on student cohesiveness, task orientation and cooperation. Also, Indian males reported more involvement in classrooms than Iranian males. But, Iranian students reported higher teacher support than Indian students. Moreover, Iranian females showed higher investigation than Indian females in classroom situations.

Lots of cross-cultural studies have shown similarities and differences in classroom environment in different countries (Chapman & Kelly, 1981; Steven & Stigler, 1992; Fraser & Aldridge, 1998; Fisher & Rickards, 1998; Aldridge et al., 1999; Li, 2000; Khine & Fisher, 2001).

The above results show that students in India perceived their classroom environment more positively than students in Iran. These differences can be attributed to a number of different factors. The learning environment created in each country was influenced by the nature of the curriculum. In India, there is pressure related to an examination-driven curriculum. The examination-driven curriculum leads to more teacher-centered approaches in the classrooms. Indian students spend more time on task, both in formal and informal hours. The classrooms in India are teacher centered and students appear to have a very passive role. This is mostly due to the fact that curriculum is of an examination driven nature and teachers have to finish the content in a given
frame of time. It is extremely difficult to finish all the course content and teacher has to press students hard. Also, content of books is very heavy. Therefore, Indian teachers try to be more tasks orientated. The research of Steven and Stigler (1992) showed that Asian teachers and students were more task-oriented, with more time actually spend on tasks.

In India, class sizes are larger and support service such as guidance and counseling is much lower than in Iran, but these conditions could not change positive classroom environment perceptions. More student cohesiveness and cooperation show that teachers could prepare a supportive environment for enforcement of these dimensions. Therefore, Indian students prefer help and cooperation rather than competition with one another on learning activities.

In Iran, ministry of education establishes the high school curriculum. This ministry also selects the textbooks and instruction materials to be used in the schools. Classroom pedagogy tends to emphasize memorization and recitation. Nowadays, more dimensions of investigation in Iranian females show more emphasis on the skills and process of inquiry and their use in problem solving in classroom environment. Also, the number of students in Iranian classes is less than in Indian classes and this factor may affect the perception about teacher support in Iranian classes.

6.1.4 Gender differences in classroom environment dimensions

In Iranian sample (Table 4, Figure VIII), girls perceived teacher support, task orientation, involvement, cooperation and equity in classes more than boys. In Indian sample (Table 4, Figure IX), girls perceived student cohesiveness, task orientation, cooperation and equity in the classes more than boys. But, only Indian boys reported more investigation than Indian females. Results show that females viewed the classroom environment more positively than males in both the cultures.

Several studies identified gender as a significant variable in students’ perceptions of classroom climate (Fraser, Gidding, & McRobbie, 1992; Treagust, Hand, & Vence, 1997; Fraser, 1998; She, 1998; She & Fisher, 2000).

In both cultures female students prefer participation in contrast with male students, who prefer competition. Cohesiveness and cooperation among girls show that these students are friendly with one another in the class and they work cooperatively
across the two cultures.

Following researches also show that girls have more positive perception of classroom environment than boys.

Owens and Straton (1980) indicated that girls preferred more cooperation than boys but boys preferred more competition and individualization than girls. Overall, these studies have shown that girls generally hold more favorable perceptions of their classroom learning environments than boys in the same classes.

Quek, Wong and Fraser (2002) studied 312 boys and 185 girls in 18 secondary 4 (year 10) chemistry classes from 3 independent schools in Singapore. With regards to actual rule clarity, boys perceived fewer rules and restrictions being imposed in their actual chemistry laboratory environment. This could imply that boys were usually more task oriented and therefore paid less attention to the physical environment compared to girls.

6.1.5 Culture differences in academic self-regulation

With regard to cultural differences on autonomous regulation, results showed that Iranian students were more autonomous than Indian students; as Iranian females were higher on autonomous regulation than Indian females whereas males of the two did not differ from each other (Table 5, Figure X). Apart from this, Indian students reported more controlled regulation than Iranian students; as Indian males were higher on controlled regulation than Iranian males but females of the two did not differ from each other (Table 5, Figure X).

A plausible explanation for Iranian students being high on autonomous regulation whereas Indian students being high on controlled regulation may be that although in both cultures parental expectations are high, the most important things are education, good grades and finding good jobs in both cultures and this belief is rooted in every family. Yet when Iranian students reach high school they internalize these educational values (autonomous regulation) whereas Indian students do not integrate values and remain externally regulated.

Also, In Iranian schools there are two or more counselors in each high school. They provide variety of counseling facilities for students such as educational counseling,
teaching study skills and etc. More autonomous regulation in Iranian students may show the effect of this factor.

Some of the studies have shown that Asian cultures attribute success to effort, and failure to lack of effort rather than to ability (Holloway, 1988; Hess & Azuma, 1991). This attribute leads Asian students to find internal reasons for evaluating their activities rather than external reasons.

Indian educational system insists on perceived examination system. Discipline in Indian schools is higher than Iranian schools and researches show that these factors have negative effect on self-regulation. Students who are overly controlled not only lose internal motivation but also learn less well (Benware & Deci, 1984; Grolnick & Ryan, 1987).

6.1.6 Gender differences in academic self-regulation

Results showed that there were no gender differences in autonomous and controlled regulation for Indian sample. However, in case of Iranian sample, girls reported more autonomous regulation than boys (Table 6, Figure XI). One possible reason is that Iranian families traditionally are very strict towards their daughters. These restrictions in all dimensions of life could lead girls to internalize educational interests and values. Moreover, some researches demonstrated that girls know more about cognition related to self-regulation, they use more metacognitive strategies and also are more intrinsically motivated, they express more feelings and use more strategies for controlling effort in learning situation (Como, 1986; Zimmerman & Martinez-Pons, 1990; Dresel & Haugwitz, 2005).

6.2 Correlational analysis

6.2.1 Intelligence and academic achievement

Findings showed that there is a positive and significant relationship between IQ and academic achievement for both cultures and sexes (Table 7). Therefore, the hypothesis that states, “intelligence and academic achievement of Iranian and Indian male and female students will exhibit a positive relationship” was supported for Iranian as well as Indian sample.
Intelligent adolescents comprehend things faster, retain them effectively, and are more capable of making profitable use of past experiences and knowledge in future learning context. Since they have better cognitive strategies and sharper analytic skills that make them memorize, retain and reproduce facts more effectively, they tend to excel in academic performance.

Positive relationship between intelligence and academic achievement has been supported by other studies (Heinrich, 1979; Riedel, 1980; Keith, 1982; Singh & Sinha, 1986; Wesley, 1994; Sabherwal, 1995; Grenninger, 1997).

6.2.2 Parenting style and academic achievement

The results revealed (Table 7) a positive and significant relationship between maternal and paternal authoritativeness with academic achievement in both sexes and countries. Thus, the hypothesis that states, “authoritative parenting style and academic achievement of Iranian and Indian male and female students will exhibit a positive relationship” was supported for Iranian as well as Indian sample.

Apart from this, authoritarian parenting style showed significant negative correlation with academic achievement in boys and girls of Iranian sample. As regards the Indian sample, authoritarian parenting style had insignificant correlation with academic achievement in girls and boys samples. Thus, the hypothesis that states, “authoritarian parenting style and academic achievement of Iranian and Indian male and female students will exhibit a negative relationship” was supported for Iranian male and female students. It was, however, not supported in case of the Indian sample.

Permissive parenting style showed a significant negative correlation with academic achievement across two cultures (Table 7). Therefore the hypothesis that states, “permissive parenting style and academic achievement of Iranian and Indian male and female students will exhibit a negative relationship” was supported for Iranian as well as Indian sample.

Authoritative parenting style was associated with academic achievement in adolescents across both cultures. But, authoritarian and permissive parenting styles were associated with poorer academic achievement. A lot of studies in Euro-American
countries have shown same results (Dornbusch et al., 1987; Steinberg et al., 1994; Dawson, 1997; Jones et al., 2000). The present results are in line with Euro-American findings. The results are not the same as some findings in Asian countries (specially in China).

One plausible explanation for these contradictory results could be that the most of the studies on Asian samples have been done on Asian American or immigrant Asian who are living in Euro-American countries (Chao, 1994, 2001). Few researches (similar to the present study) have studied these variables and its correlates on native Asian or Asian countries.

Positive relationship between authoritative parenting style and academic achievement implies that in Asian cultures, parents provide a high level of emotional security that provides the children with a sense of comfort and independence and helps them succeed in school. Authoritative parents engage in bidirectional communication with their children, they provide their children with explanations for their behavior. Explanations provide children with a sense of understanding their parents’ goals that, in turn, affects their academic performance.

Moreover, researches showed that parenting processes featuring high levels of involvement, support and monitoring have revealed positive associations with academic success. These characters are available in authoritative parenting style more than in other styles (Taylor & Roberts, 1995; Brody & Flor, 1998; Murry & Brody, 1999).

One plausible explanation for negative relationship between authoritarian parenting style and academic achievement in Iranian sample refers to neglect of children’s needs in the period of adolescence. Adolescents have special needs and demands. Autocratic parents do not pay attention to these demands and parents express their expectations through rules and orders that have negative effect on academic achievement of adolescents.

The dictatorial parents expect and demand obedience, but without a climate of warmth. Children with dictatorial parents have lower self-esteem and are less skilled socially (Maccoby & Martin, 1983; Baumrind, 1991). These traits lead adolescents to low performance in school.
A plausible reason for negative relationship between permissive parenting style and academic achievement in Iranian sample as well as Indian sample refers to the relation of permissive parenting style and personality traits. Findings show that characteristics of adolescents with permissive parents have lower self-esteem, lower persistence on completing school tasks, increased dependence on adults and easily frustrated (Melby & Conger, 1996; Steinberg, 1996). These characteristics can affect negatively on academic achievement.

Another reason could be that permissive parents provide loving and nurturing care but do not set clear standards and rules neither do they enforce their rules consistently. However, so many researches showed that academic achievement depends on high standards and expectation of parents for these children (Stevenson, Chen, & Lee, 1993; Chao, 1994). Very few parental expectations and standards lead students to poorer academic performance.

In conclusion, authoritative parenting style (parents are described as responsive and demanding; warm and involved; and consistent in establishing guidelines, and appropriate expectations) has significant positive relationship with academic success in Iran and India. Authoritarian parenting style (parents are described as demanding, using power-assertive practices and being low in responsiveness) and permissive parenting style (parents are described as being somewhat responsive but not demanding) showed negative relationship with academic achievement.

Positive relationship between authoritative parenting style with academic achievement and negative relationship between authoritarian and permissive parenting styles with academic achievement have been reported by other studies (Dornbusch et al., 1987; Steinberg et al., 1989; Steinberg et al., 1994; Yedwab, 1997; Dawson, 1997; McNeely, 1999; Ehrle, 2000; Attaway & Bry, 2004).

6.2.3 Classroom Environment and academic achievement

All seven-classroom environment dimensions (student cohesiveness, teacher support, task orientation, involvement, investigation, cooperation and equity) showed significant positive correlation with academic achievement in boys and girls of Iranian sample (Table 7). In Indian girls, six dimensions of classroom environment (student
cohesiveness, teacher support, task orientation, involvement, investigation, and equity) were found to be significantly correlated (positively) with academic achievement. In Indian boys, there were positive and significant links between four dimensions of classroom environment (students cohesiveness, teacher support, task orientation and cooperation) with academic achievement (Table 7). Therefore the hypothesis that states, “classroom environment dimensions (teacher support, involvement, investigation, equity and task orientation) and academic achievement of Indian male and female students will exhibit a positive relationship” was by and large supported.

The classification of these subscales according to Moos’s (1979) three general categories for conceptualizing classroom environment (viz. relationship, personal development, and system maintenance and system change) showed that the components of three broad dimensions of classroom environment are positively related with academic achievement for Iranian male and female students and Indian female students. But, the components of relationship and personal development dimensions are positively related with academic achievement of Indian boys. In other words, dimension of system maintenance and system change was not related to academic performance of Indian boys.

In examining education systems in different cultures, there is strong evidence that there are some fundamental differences in the systems. Schools in Asia are more examination-oriented and teachers are seen as authority figures. As such, students from an Asian background seem to perceive their teachers significantly more positively in the classroom as compared with students from other cultural backgrounds (Fisher & Rickards, 1998; Khine & Fisher, 2001). The findings of present study replicate those of past studies reporting association between the learning environment and student outcomes in Asian countries.

Western researchers (Biggs, 1979, 1991; Bourke, 1986; Crooks, 1988; Ho, 1981) have duly reported that in Asian countries classroom environment encourages rote learning and low performance on tasks requiring high-level cognitive engagement. The present findings, however refute these reporting and lead us to conclude that Asian students are more likely than westerners to use meaning oriented to learning produces by healthy classroom environment and academic performance at higher cognitive level.

Teachers in Asian culture seem to spend more time with each student and have
more interaction with students. Teachers stay on the subject matter, encourage students to participate in discussion and perform additional work. These learning environments increase academic achievement of adolescents and it may show one of the reasons in that Asian students, both at home and abroad, achieve significantly higher than western students (Sue & Okazaki, 1990; Hess & Azuma, 1991; Medrich & Griffith, 1992; Steven & Stigler, 1992).

Koul and Fisher (2002) on the basis of research on science classroom learning environment in India believed that the teachers enjoyed an ultimate unquestionable authority position in the classroom. Also, the practice of written homework and weekly tests were examples of rote learning and the major aim of the students was towards getting good scores. But, findings of present study show that classroom environment in India has some educational specific components that have not been studied.

Each country has much to learn from the other with regard to the development of a learning environment that fosters positive attitudes and a love of learning (Aldridge et al., 1999). Therefore, it seems that student cohesiveness, teacher support, task orientation and cooperation are important for boys’ academic performance in comparison with other dimensions. Boys’ performance is dependent on less equity in the class and participation in discussion (involvement and investigation).

Other investigators have provided evidence for the positive relationship of classroom environment with academic achievement (e.g., Costello, 1984; Upadhyaya, 1984; Cabello & Terrell, 1994; Dewan, 1996; Riah & Fraser, 1998; Kim et al., 2000; Baek & Choi, 2002; Barth et al., 2004; Connor et al., 2005).

6.2.4 Academic self-regulation and academic achievement

Autonomous regulation showed significantly positive relationship with academic achievement in Iranian as well as Indian sample (Table 7). Therefore, the hypothesis that states, “autonomous regulation and academic achievement of Iranian and Indian male and female students will exhibit a positive relationship” was supported for Iranian as well as Indian sample.

As it has been explained in second chapter, so many studies have indicated that more autonomous motivation is associated with better performance (Miserandino, 1996;
Koestner & Losier, 1996) less dropping out (Vallerand & Bissonnette, 1992) & higher quality learning (Grolnick & Ryan, 1987). These findings support self-determination theory. On the basis of this theory, humans in different societies learn and adopt different values for the issue of autonomy and competence.

Asian students attribute success and failure to their efforts and attempts. The top 5 attributes for success of Hong Kong secondary students were effort, interest in study, mood, study skill and ability (Hau & Salili, 1991). Apart from ability all the others are more or less controllable. In other words, Asian students tend to evaluate their behaviors and performances on the basis of internal factors. This trend leads them to autonomous regulation.

Hess and Azuma (1991) believed that Japanese socialization practices produce internalized dispositions that create “a sense of diligence and receptiveness (which) fit uncomfortably into the more familiar American concepts of intrinsic and extrinsic motivation” (p. 7). This characteristic may have same function in Iran and India.

Koestner and Zuckerman (1994) demonstrated that autonomous students are likely to adopt learning goals, while controlled students are likely to adopt performance goals. Thus, when information is acquired in an autonomy-supportive context, there are more chances that it may be processed appropriately, and accompanied by greater interest and personal relevance.

Students in every culture may benefit more when they strive because they enjoy and identify themselves with the process of learning rather than because they feel they must. Relationship between self-regulation (specially autonomous regulation) and academic achievement has been supported by a large number of studies conducted by McGraw & McCullers, 1979; Whitmore, 1980; Grolnick & Ryan, 1987; Ryan & Connell, 1989; Grolnick & Ryan, 1989; Vallerand & Bissonnette, 1992; Grolnick & Slowiaczek, 1994; Koestner & Zuckerman, 1994; Koestner & Losier, 1996; Ruban, 2000; Heastie, 2001; Broder, 2003; Zealant, 2004.

But, there was no relationship between controlled regulation and academic achievement in Iranian as well as Indian samples (Table 7). Therefore, the hypothesis that states, “controlled regulation and academic achievement of Iranian and Indian male and female students will exhibit a negative relationship” was not supported for
Iranian as well as Indian sample.

There are contradictory results in the area of controlled regulation and academic achievement in Asian countries. The researches of Hayamizu (1997) and Yamauchi and Tanaka (1998) showed that controlled regulation was negatively related to academic achievement in the sample of Japanese undergraduate students. However, d’Ailly (2003) has revealed that controlled regulation positively predicted academic achievement in a Taiwanese student sample. The present findings, in contrast with previous findings, show that there is no relationship between controlled regulation and academic achievement of students. Hence more research is needed on controlled regulation and academic achievement.

6.3 Mediational Analysis

6.3.1 Academic self-regulation as a mediator

The second goal of the study was to examine models in which male and female students’ (across two cultures) self-regulation resources (autonomous and controlled) are mediators between intelligence, parenting styles, classroom environment and their academic achievement (Figures XII-XIX). Path analysis was applied to examine such mediational links amongst the variables mentioned above. Both parents’ and classrooms’ models (Figures II & III) were framed and analyzed for the four groups of subjects (viz., Iranian girls, Iranian boys, Indian girls and Indian boys).

6.3.2 Parents’ model across two cultures

It was proposed that intelligence and parenting styles affect children’s achievement by influencing their academic self-regulation (Figure II). This study provided support for a model linking individual ability and parenting styles into a common framework that explains path coefficients showed that the environment differences had effects on autonomous regulation in addition to intelligence. The results for intelligence were generally consistent with the proposed models for both males and females in Iran and India; there were indirect associations between intelligence and academic performance through the autonomous regulation. Therefore, the hypothesis that states, “the relationship between intelligence and academic achievement of Iranian and Indian male and female students would be mediated by autonomous regulation” was supported.
The results suggest that higher intelligence students are more likely to have higher internalization of regulation than lower intelligence students in both cultures and gender. The finding that autonomous regulation mediates the relation between the intelligence and academic achievement supports emerging literatures in which intelligent children’s attitudes and beliefs about themselves are powerful determinants of school success (Grolnick, 1990).

Intelligent adolescents are capable of doing academic activities on their own without depending upon external factors; they tend to become more and more confident, and self-reliant. These independent and self-determined efforts are consistently reinforced directly and indirectly, which lead intelligent adolescents toward intrinsically motivation (autonomous regulation) and later academic achievement.

Another possible reason for the link between intelligence and academic achievement through autonomous regulation may be due to the link between intelligence and other motivational variables, viz., control understanding and perceived competence, etc. (Davis & Connell, 1986; Trama, 1998). Intelligent children view events and outcomes as more controllable and this would foster in them feelings of confidence and which in turn tend to regard themselves as academically competent.

However, the results for intelligence and controlled regulation were not consistent with the proposed models for both males and females in Iran and India. Only in Iranian high school girls, path from intelligence to controlled regulation turned out to be significant (Figure XII). But, controlled regulation did not emerge as a mediator between intelligence and academic achievement.

Less intelligent children display high levels of controlled regulation in their behaviors. They are not sure of their capacities and performance, they tend to depend more on other external reasons (Risemberg & Zimmerman, 1993; Vallerand et al., 1995). McCoach and Siegle (2001) compared 122 gifted achievers with 56 gifted underachievers in 28 different high schools. The results of an analysis suggested that gifted underachievers differed from achievers on four factors: attitudes toward teachers, attitudes toward school, goal valuation, and motivation / self-regulation. The results showed that gifted underachievers did not value school goals and reported low motivation / self-regulation.
When the parents' models for Iranian and Indian adolescents were probed (Figures XII, XIV, XVI, & XVIII), the results for authoritative parenting styles were generally consistent with the proposed models for both males and females in Iran and India; there were indirect associations between authoritative parenting styles and academic performance through the autonomous regulation.

Parents’ models for Iranian and Indian adolescents were scrutinized (Figures XII, XIV, XVI, & XVIII), it was found that authoritarian parenting styles were not linked to autonomous regulation and, in turn, to academic achievement of students. However, in Iranian girls, paternal permissiveness exerted a negative effect on autonomous regulation. Among Indian boys, maternal permissiveness also had a negative effect on autonomous regulation of students.

Therefore, the hypothesis that states, “the relationship between authoritative parenting style and academic achievement of Iranian and Indian male and female students would be mediated by autonomous regulation” was supported for Iranian as well as Indian sample.

The results imply that higher maternal and paternal authoritativeness are more likely to have higher internalization of regulation than lower on maternal and paternal authoritativeness in both cultures and gender.

Positive relationship between authoritative parenting style and autonomous regulation has been supported by Baumrind, 1971, 1991; Grolnick & Ryan, 1987; Gottfried et al., 1994; Trama, 1998; Leung & Kwan, 1998; Yamauchi & Tanaka, 1998; Black & Deci, 2000; Vansteenkiste et al., 2005.

Authoritative parents are warm and responsive, providing their children with affection and support in their most of the activities and encouragement of independence. It seems that these interpersonal skills affect internal motivation in form of autonomous regulation and later in school performance. Both parents i.e. mothers’ and fathers’ healthy and promotive parenting style and internal motivation of children in form of autonomous regulation independently and perhaps even interactively fuel academic performance (Grolnick & Slowiaczek, 1994).

Secondly, the level of parental involvement during adolescence period transits the adolescents from the highly dependent and controlled period of children into a period marked by an increasing sense of self-exploration and autonomy. Since authoritative
parenting style has a moderate involvement not over-involvement, it may have an affect
on increasing of academic related autonomous motivation in adolescents and which in
turn influences their academic performance (Trama, 1998). Steinberg et al. (1992a)
showed that parental involvement such as attending school programs and monitoring
student progress accounts for improvement internal motivation and academic
performance.

Of particular interest are the findings concerning Iranian girls where maternal and
paternal authoritativeness exerted a positive effect on autonomous regulation, whereas
paternal permissiveness had a negative effect. The results suggest that Iranian girls with a
higher maternal and paternal authoritativeness are more likely to have higher
internalization of regulation than Iranian girls lower on maternal and paternal
authoritativeness. On the other hand, these girls with higher permissive fathers are likely
to have lower internalization of regulation (autonomous regulation) than those girls
whose fathers are less permissive. Fathers’ permissiveness does not appear to have direct
effect on academic achievement, only an indirect effect through autonomous regulation.

Thus, autonomous regulation was found to lead to high academic achievement.
For intelligent Iranian girls enhancing maternal and paternal authoritative styles and
lowering paternal permissiveness may thus prove to be useful to increase autonomous
regulation and ultimately the academic performance of Iranian girls.

Of particular interest are the findings concerning Indian boys where maternal and
paternal authoritativeness exerted a positive effect on autonomous regulation, whereas
maternal permissiveness had a negative effect. The results suggest that Indian boys with a
higher maternal and paternal authoritativeness are more likely to have higher
internalization of regulation than Indian boys lower on maternal and paternal
authoritativeness. On the other hand, these boys with higher permissive mothers are
likely to have lower internalization of regulation (autonomous regulation) than those boys
whose mothers are less permissive. Mothers’ permissiveness does not appear to have
direct effect on academic achievement, only an indirect effect through autonomous
regulation.

Thus, autonomous regulation was found to lead to high academic achievement.
For intelligent Indian boys enhancing maternal and paternal authoritative styles and
lowering maternal permissiveness may thus prove to be useful to increase autonomous
Deci (personal communication, July 17, 2006) believed that permissive parenting is negatively related to autonomous regulation, because permissive parenting does not provide the support that is necessary for internalization and thus autonomous regulation and further academic achievement.

Controlled regulation did not emerge as a mediator between parenting styles and academic achievement. Also, there were no significant relationships between authoritative, authoritarian and permissive parenting styles with controlled regulation in Iranian as well as Indian samples. Only in Indian high school boys maternal permissiveness was influencing controlled regulation.

It seems that maternal permissiveness has positive effect on controlled regulation of Indian boys (Figure XVIII). Permissive parents make fewer demands, and allow the children to regulate themselves for the most part using little discipline. Parents exhibit high level of nurturance and low level of control. These parents’ behavior may lead students to adopt a tendency to attribute their performance to external factors, which they think are acceptable.

In conclusion, authoritative parenting style featuring high levels of involvement, support and monitoring would be linked to children’s ability to regulate own behavior and, in turn, to their academic performance. Empirical analyses of authoritative parenting style have also revealed positive associations with self-regulation and academic achievement in other countries (Dornbusch et al., 1987; Lamborn, Dornbusch, & Steinberg, 1996; Brody & Flor, 1998; Murry & Brody, 1999). It seems that authoritative parenting style has same function in Asian countries (at least in Iran and India).

Present findings confirm the claim of self-determination theory (Deci & Ryan, 1985, 1991) that autonomy-supportive predict optimal functioning, because such practices satisfy the universal need for autonomy. Many correlational and experimental studies have indicated that the advantages of autonomous compared with controlled regulation for studying among western populations are manifold, including internal motivation, deep-level learning, higher grades and lower dropout rates (Grolnick & Ryan, 1987; Vallerand et al., 1997; Black & Deci, 2000; Grolnick, 2003).

The present findings are in contradiction to the earlier findings of collectivistic societies of Eastern countries that practice and promote less autonomy. (Markus &
The new emerging trend among parents in Eastern collectivist societies is now seems to increase and adopt authoritative parenting style and autonomous regulation that helps their children to perform well academically.

The values of $R^2$ came out to be substantial in parents’ models (.328, .533, .456, & .492), i.e. the results showed that self-regulation through intelligence and parenting styles accounted for 32% to 53% of the variance in academic achievement for Iranian as well as Indian samples.

### 6.3.3 Classrooms’ model across two cultures

Classrooms’ model was proposed (Figure III) to examine the role of **intelligence and various dimensions of classroom environment** in adolescents’ academic achievement as mediated by self-regulation (autonomous & controlled regulations). This study provided support for a model linking individual ability and classroom environment into a common framework that explains path coefficients showed that the environment differences had positive effects on autonomous regulation in addition to intelligence. The results for autonomous regulation as mediator of intelligence and academic achievement was similar to parents’ model and all the discussion offered there holds true in this model.

The results for classroom environment dimensions were generally consistent with the proposed models for both males and females in Iran and India; there were indirect associations between some dimensions of classroom environment and academic performance through the academic self-regulation, yet these pathways were only in evidence for autonomous regulation and some dimensions of classroom environment (Figures XIII, XV, XVII & XIX). Therefore, the hypothesis that states, “the relationship between classroom environment dimensions (teacher support, involvement, investigation, equity and task orientation) and academic achievement of Indian male and female students would be mediated by autonomous regulation” was by and large supported.

In Iranian girls, there were indirect relationships between three dimensions of classroom environment - task orientation, student cohesiveness and equity - and academic performance through the autonomous regulation. In other words, results suggest that classroom environment for Iranian girls with higher task orientation, student cohesiveness and equity are more likely to have higher internalization of regulation than
Iranian girls lower on task orientation, student cohesiveness and equity. It seems that to complete activities and stay on the subject matter, students’ support and cooperation to one another in the class and equally treated by teachers including distribution of praise, questions’ distribution and opportunities to be included in discussions have important roles in autonomous regulation which in turn contributed to academic success of Iranian girls.

In Iranian boys, there were indirect relationship between three dimensions of classroom environment – student cohesiveness, task orientation and teacher support – and academic achievement through autonomous regulation. In other words, results suggest that classroom environment for Iranian boys with higher student cohesiveness, task orientation and teacher support are more likely to have higher internalization of regulation than Iranian boys lower on student cohesiveness, task orientation and teacher support. It seems that students’ help and support to one another in the class, focus on the syllabus in teaching practices and teachers’ support and interest in students can improve autonomous regulation and lead these students to better academic performance. In other words, classroom environment characterized with student cohesiveness, teacher support, and task orientation would be linked to Iranian male adolescents’ ability to regulate their own behavior (autonomous regulation) and in turn to academic success.

In Indian girls, it has emerged that student cohesiveness, task orientation and involvement are autonomy supporting teaching styles. In other words, results suggest that classroom environment for Indian girls with higher student cohesiveness, task orientation and involvement are more likely to have higher internalization of regulation than Indian girls lower on student cohesiveness, task orientation and involvement. A review of these factors shows the essential role of teachers in providing an environment to encourage autonomous regulation among these students. The concept of teachers’ autonomy versus control orientation is drawn from cognitive evaluation theory (Deci & Ryan, 1985). They believed that teachers who attempt to motivate behavior through the use of external control as rewards are considered controlling, while those who attempt to take the student’s internal frame of reference with respect to problems, ideas and initiatives are considered as autonomy supportive. Indian teachers emphasize on task, interaction and responsiveness to class that lead students to autonomous regulation and in turn leading to academic achievement.
On the basis of research of Brody et al. (2002), classroom environment characterized by high levels of organization, rule clarity and student involvement would be linked to children’s ability to regulate their own behavior and in turn, to their academic performance. Roeser et al. (1998) found that clear teacher expectations and student involvement in decision-making were associated with students’ belief about their school motivation and emotional functioning. This kind of relation has been supported by other studies (Deci & Ryan, 1985; Connell & Wellborn, 1991; Eccles et al., 1993).

In Indian boys, there were indirect relationships between three dimensions of classroom environment – student cohesiveness, teacher support and task orientation – and academic achievement through autonomous regulation. In other words, results suggest that classroom environment for Indian boys with higher student cohesiveness, teacher support and task orientation are more likely to have higher internalization of regulation than Indian boys lower on student cohesiveness, teacher support and task orientation. When students support one another in the class, teacher’s help and interest in students and complete activities planned and stay on the syllabus prepare an autonomy-supportive environment for Indian boys. This classroom-learning environment increases autonomous regulation of students, which leads students to academic success.

On the basis of self-determination theory and previous researches, there are so many factors influencing on autonomous regulation in classroom situation. For characterizing a classroom climate as autonomous, it is necessary to address if the conditions of the classroom facilitate the fulfillment of the three basic psychological needs of students (Deci, Vallerand, Pelletier, & Ryan, 1991). There is a need for competence, autonomy and relatedness. They believed that the need for competence could be satisfied when teacher gives precise information about precise aspects of the quality of student’s behavior or about the way to achieve an outcome. In other words, the teacher gives praise for an action that was initiated by the student and not for an action that the student has to do. Another important factor is optimal challenging, interesting and meaningful tasks (Nicholls, 1984; Rigby, Deci, Patrick, & Ryan, 1992; Deci et al., 1994) through which students can understand the reason for their action. The need for autonomy can be promoted by the support of children’s freedom to determine their behavior. Children’s freedom refers to choices and shared decision-making (Reeve et al., 1999). The need for relatedness may be fostered by teacher involvement that refers to
unconditional involvement of the teacher in teacher-child interactions (Skinner & Belmont, 1993).

Present findings show that classroom environment in Iran and India can satisfy the need for competence, autonomy and relatedness. It seems that Iranian and Indian classroom environment were shown to lead to autonomous regulation, which in turn contributed to academic performance.

According to Western standards, the classroom environment for teaching and learning in Asian countries is not so good, because classes are large, students' relations with teachers are hierarchical, teachers are the authority, teaching methods are mostly expository, learning material is by rote rather than thinking, and teachers teach routine problem solving only. But the present findings have shown contradictory results and Asian students seem to perceive their teachers significantly more positively in the classroom. Asian students surely appreciate hearing how they have successfully performed their work. They generally expect the teacher to point out shortcomings and offer guidance for improvement and mastery of the subject. Teachers who recognize these expectations will be better able to build and maintain trust with their Asian students. These characters showed that classroom environment in Asian countries has some special factors which may increase self-regulation and, in turn, academic achievement of students.

The results of the present study have also revealed that there were no indirect associations between classroom environment dimensions and academic performance through the controlled regulation.

The values of $R^2$ came out to be substantial in classrooms' models (.363, .543, .336, & .450). These results showed that intelligence, classroom environment dimensions and self-regulation explained 33% to 54% of the variance in academic achievement of Iranian as well as Indian sample.

In addition, authoritative parenting style and classroom environment revealed positive associations with autonomous regulation and academic achievement in Iranian and Indian adolescents. Parenting characterized by high levels of involvement, demandingness, responsiveness, and monitoring, and classrooms characterized by high levels of rule clarity, task orientation and encouraging student involvement would be linked to autonomous regulation of students and, in turn, to their academic achievement.
in both cultures. In other words, these parenting and classroom environment processes provide the support that is necessary for internalization and thus autonomous regulation and further academic achievement for both Iranian and Indian adolescents.

Moreover, parental authoritativeness support self-regulatory activities and the effect of parents’ influence in helping their children become self-sufficient and self-confident learners. However, some parents are unable to provide the type of modeling and support their children need. These students have a special need for their teachers to become more involved in teaching self-regulatory skills that will enable them to function effectively on their own.

The results confirm the claim of self-determination theory that autonomous regulation predicts optimal functioning, because such practices satisfy universal need for autonomy. Autonomous regulation appears as fruitful for predicting Eastern students’ academic achievement as it has been in Western students.