SUMMARY, CONCLUSIONS, AND IMPLICATIONS

CHAPTER Vll
CHAPTER VIII

IARY, CONCLUSIONS, AND IMPLICATIONS

Academic achievement holds a very crucial position in an individual's life. One's future plans, avenues for probable professions, are to a large extent on one's performance in exams, entrance interviews, which in turn, take into account the past scholastic achievements. Thus, what an individual is capable of becoming and actually becomes is much dependent on his academic achievements. Due to this importance that is attached to academic achievement, it was considered relevant to explore this process of achievement and the various variables that may foster/promote it.

A recent study by Grolnick & Slowiaczek (1994), mediational examined amongst several aspects of parents' involvement in (viz., behaviour, personal, and cognitive/intellectual stimulation), children's control understanding, perceived competence, motivation and school grades. Based on this work, the present chapter attempted to explore such mediational links among influencing academic achievement. It, however, took into he intellectual ability of children too. It was hypothesized (p. 133) that intelligence and diverse aspects of parents' (viz., behaviour involvement, personal involvement, stimulation, and cognitive behaviour) would be related to control understanding, perceived competence, and self-, and these, in turn, would be related to their scholastic achievements. In other words, the relations of intelligence with each, and those of parental involvement indices with achievement would be mediated by the three motivational resources above. Since both mothers and fathers were considered to be
ly contributing towards child-related outcomes, separate
t mothers and fathers were outlined. This was done in order to
iper understanding of the roles played by mothers and fathers
ing child-related variables. Moreover, the multidimensional
lization of involvement would be indicative as to which
ctions would have a significant bearing on the child’s
and achievement. The investigation was planned to be
on upper elementary and secondary school children (boys and
s was done to examine if differing models of achievement
or children varying with respect to gender and age.
st of all, scales measuring diverse aspects of parental
ent were constructed due to the unavailability of the same.
asuring four diverse aspects of parental involvement, viz.,
volvement, personal involvement, cognitive stimulation,
itive behaviour were evolved. Each scale had separate mother
r forms. The questions were in the form of statements with
anging on a four-point scale. This was deliberately included
the tendency of social desirability that usually occurs in a
or “Like/Unlike me” kind of a response format. Children’s
is of child rearing were obtained, rather than parents’ reports
me, because it was believed that children’s perceptions of
ther than reality itself, would be more imperative in
ng their scholastic outcomes. So, emphasis was laid on
phenomenological view of their parent-related variables. The
nd reliability of the scales was established for upper
y and secondary school children separately.
e reliability of the scales/sub-scales measuring control
ing, perceived competence, and self-regulation were also
before using these on the Indian population.
er establishing the reliability of the scales, data collection for verification of the present problem was undertaken. Data from coming from intact families was finally considered for The collection of data was restricted to English-medium here one would tend to find children coming from middle to dle class families. Children studying in fifth and sixth classes ded at the upper elementary school level, while those studying and tenth classes were included at the secondary school level. and girls were included in the sample. scales measuring both maternal and paternal behaviour ant, personal involvement, cognitive stimulation, and cognitive were administered to the subjects. Apart from these scales, coloured Progressive Matrices test (Raven, 1956) and Raven’s Progressive Matrices test (Raven, 1958) were administered to elementary and secondary school children respectively. children also responded to the unknown control subscale in ive domain of the Multidimensional Measure of Children’s us of Control (Connell, 1985), cognitive subscale of the Competence Scale for children (Harter, 1982), and the Self- questionnaire (Ryan & Connell, 1989). Data were collected three-four sittings, and the scoring for different tests was done ned in their respective manuals. Average of the percentage of ained by the children in the past two consecutive examinations dered as an index of academic achievement. this way, the scores of each subject on intelligence, mothers' rs' behaviour involvement, personal involvement, cognitive n, cognitive behaviour and on children’s own control ding, perceived competence, self-regulation and academic nt were obtained. The data finally retained were from 212
elementary school girls, 284 upper elementary school boys, 206 school girls, and 245 secondary school boys.

Data were then subjected to analyses. Means and standard were obtained, and inter-correlations were computed. Path was conducted to examine the proposed mediational links the variables. Since somewhat different patterns of paths were depending on the child's age and gender, all four groups of were retained in the analyses. Moreover, since the mothers' and models were separately assessed for each of the groups of t resulted in a total of eight models, with a mothers' and a model for each of the four groups considered in the present on. The major findings obtained from path analyses in the search endeavour are as follows:

Across all the eight models, the mediational links between achievement through motivational resources (of control understanding, perceived competence, and self-regulation) were, by and sported. Intelligence was found to affect academic achievement well as indirectly through the motivational variables. Its effects were stronger than the indirect effects across all the eight mediational links between parental involvement variables len’s academic achievement through their motivational (of control understanding, perceived competence, and self- ) were partially supported.

A substantial proportion (varying from about 41% to 64%) of the academic achievement was explained by the hierarchy of viz., intelligence, parents' (mothers’ or fathers’) behaviour ent, personal involvement, cognitive stimulation, cognitive
intelligence emerged as the most potential predictor of academic achievement for upper elementary school children. For the secondary children, however, most of the motivational resources emerged as predictors of achievement than intelligence. Control understanding, perceived competence, and self-regulation were positively and significantly related with academic achievement. Out of these, perceived competence was consistently exerting the maximum influence on academic achievement. This was followed by control understanding, and next by self-regulation for school subjects. However, for the older ones, self-regulation was found to be more deterministic than control understanding in achievement.

Analyses revealed the salience of parental cognitive monitoring in affecting girls' motivational resources, while in case of boys, cognitive behaviour was found to do so. Others' involvement indices were found to play a significant role in influencing motivation/achievement of secondary school girls, while in the case of secondary school boys, paternal involvement were found to do so. Others' involvement indices were found to contribute in diverse ways to the motivation/achievement of their grown-up rather than school children. Same was found to hold true for fathers and sons. Children's motivational qualities were influenced more by behaviour involvement than by fathers'. Mothers' personal involvement was found to directly affect the achievement of secondary school boys.
s research work, thus, is an effort towards highlighting the role played by intelligence, parents' involvement and children's personal resources of control understanding, perceived competence, and self-regulation in determining the academic achievement of upper primary and secondary school children.

**Conclusions**

Based on the findings obtained in the present investigation, we safely concluded that academic achievement is significantly influenced by intelligence, parental involvement, and children's personal resources - control understanding, perceived competence, and self-regulation. The role of intelligence in predicting scholastic achievements cannot be undermined. Intelligence exerts a direct influence on achievement, and has in fact, emerged as the most important factor of the same for upper elementary school children in the present study. Parental involvement also influences achievement indirectly by means of affecting children's motivational qualities of control understanding, perceived competence, and self-regulation. An intelligent child can very well achieve significant outcomes, and his sense of competence and self-regulation gives him all the more reason for being autonomous in tasks, and all this may, in turn, ameliorate his scholastic performance.

Apart from intelligence, parental involvement too, exerts a considerable influence on children's achievement directly/indirectly by influencing their motivational resources. These links, however, do not hold for only some forms of involvement and for some of the developmental levels.
al resources. They may also vary with respect to the parents’
1 the child’s gender and age.
articular, the present results highlight the importance of direct
parental involvement, viz., cognitive stimulation for girls,
of indirect ones, viz., cognitive behaviour for boys. Moreover,
ren grow up, their motivation/achievement is more affected
ent strategies exhibited by parents of the same sex than
the opposite sex. In other words, senior boys'
achievement is affected by paternal involvement more, while
girls, mothers’ involvement may be more deterministic in
the same. The present results, in fact, point out that older
motivation/achievement is not much affected by involvement
by parents of the sex opposite to theirs. That is, mothers'nt may not contribute in a big way for their adolescent sons'
achievement, and the same seems to hold true for fathers and
scent daughters.
ental involvement influences may vary, not only according to
gender, but also according to the child’s age. For instance,
volvement seems to contribute in a bigger way towards the
achievement of their daughters when they grow up as
to when they are small, and the same seems to be applicable
and sons. Thus, although parental involvement apparently
ecline with the child’s age, it seems to be more meaningful and
tic in predicting scholastic outcomes for older rather than
children (for parents and children of the same gender).
behaviour involvement by mothers may affect children’s
achievement more as compared to that displayed by fathers.
; adequate interaction with the school, mothers may be in a
position to guide and help their children as compared to fathers,
may not be in a position to display adequate behaviour due to time constraints (because of their longer working hours, may not be in a position to display adequate behaviour due to time constraints (because of their longer working hours, may not be in a position to display adequate behaviour due to time constraints (because of their longer working hours).

le cognitive stimulation, cognitive behaviour, and behaviour seem to be crucial in determining children's motivation in": the other, personal involvement in the academic and social activities of the child doesn’t seem to actually enhance children’s motivation. Such strategies may convey a feeling of warmth, care, and concern for the child, but it may not really foster feelings of control, perceived competence, and self-regulation. Nonetheless, such involvement of monitoring on the part of fathers may be beneficial in achieving the goals of academic performance in grown-up boys. That is, when fathers take an active role in their adolescent sons' usual whereabouts, what they do, and the like, it may make their grown-up sons use their strategies judiciously and in a more constructive way, which may help to improve their scholastic accomplishments.

s, the ways in which parents may be involved in their child's schooling may be diverse, with different types of involvement depending on the parents’ gender, the child's gender and motivational resources exert a significant influence on scholastic achievement, with children showing higher levels of control, perceived competence, and self-regulation doing better in school. By showing adequate understanding of the behaviour-linkage, children may be better able to see how significant outcomes are related to their own behaviour, and consequently, continue to display those behavioural patterns that are leading to positive outcomes, and give up those that are leading to undesirable ones. Also, children who perceive themselves to be “competent
I may fare well in academics, since their feelings of adequacy dilute their sense of confidence and independent action. Such will also tend to be autonomous in their behaviour. They will self-regulated in their thought and action, and this would further their mastery-oriented achievement strivings, and consequently their learning and learning-related outcomes.

In fact, in the case of secondary school children, motivational factors, by the large, turned out to be stronger predictors of intent than intelligence. Such findings reveal the salience of dispositional control understanding, perceived competence, and self-regulation especially when children grow up.

Out of these three motivational qualities, perceived competence seems to affect achievement most potentially. It is followed by understanding, and then by self-regulation for younger school but for the older ones, self-regulation may contribute in a way than control understanding in determining the same. less, the role of these motivational resources in ascertaining achievement cannot be undermined.

One can thus conclude that intelligence and parental variables influence children's academic achievement and/or indirectly by means of influencing their motivational factors of control understanding, perceived competence, and self-regulation.

CATIONS

The present study has multiple implications in the field of psychology and education. First and foremost, such information will be in broadening parents' and teachers' understanding of the child, planning instruction so as to achieve the objective of diminishing
ievement-related problems for upper elementary and secondary school children.

Parents usually feel ill-prepared to help children. The present findings emphasize that parents can and do contribute in a significant way to the child's schooling, and offer meaningful ways in which they do so. In particular, stimulating surroundings and opportunities should be provided to children not only at home but also in school in order to promote their wholesome cognitive development. By providing enriched, stimulating learning environments, parents and teachers may facilitate children in sharpening their intellectual and analytical skills; may promote their academic performance. Although the limitations to intelligence by heredity cannot be overlooked, yet the importance of an enriched curricula and environmental context cannot be denied, and this can be made use of to help children achieve up to the best of their abilities.

Parents too, must involve themselves in such activities (such as reading books, discussing political and social issues, etc.) which can elucidate the value and worth of "knowledgeable" outcomes in children. As, parental cognitive behaviours may permit modelling of appropriate behaviours to occur on the part of their children.

Moreover, parents must be motivated to interact adequately with school so that they may be provided with useful information as regards their child. This may help parents in viewing their children more realistically, and they shall be better able to realize the goals and targets that teachers have in mind for the child. This parent-teacher communication may thus, help these agencies in assisting children in achieving their scholastic objectives.

Paternal personal involvement in the academic and social lives of child should be encouraged, especially in fathers of grown-up sons,
may be better able to see how their actions (such as keeping track of how much time the child spends doing homework, watching TV, etc.) are related to the latter's scholastic outcomes.

Besides, one involvement strategy may be more beneficial for one child than another one may be so for girls, and these may also vary with the child's age. Parents may be made aware of these variables so that they may motivate their children appropriately by the applicability of diverse involvement strategies. Moreover, such variables are susceptible to educational intervention. So, it-aided and non-government-aided agencies may organize such programs, discussions, etc. so that parents and teachers are made to play a more effective role in the child's education.

Apart from this, appropriate control understanding must be inculcated in children right from the elementary school years so as to avoid problems such as amotivation and learned helplessness which may stem from a lack of control understanding. Feelings of competence and self-esteem may be encouraged, especially so for the under-achieving student so that they are able to achieve up to the best of their abilities. Parents and teachers hold a very crucial role in the formation of self-perceptions of ability. So, they must be made aware of the need of encouraging feelings of self-worth, self-confidence and self-esteem in children, rather than making the latter feel that they are inferior and incompetent. Moreover, educational strategies that foster the "spoon feeding" and "controlled orientation" in children (such as "spoon feeding" reward and punishment systems) should be given up by parents as well as by educationists so that children are able to achieve autonomy in their behaviour. Even if extrinsic incentives, rewards, punishments, etc. are used, they should be given judiciously and appropriately so that the cue value of incentives is not lost. Besides, extrinsic incentives may be replaced by intrinsic ones.
by lesser extrinsic ones so that the child moves from an externally-controlled to a more internally-controlled orientation. This will help them in achieving autonomy in their behaviour in the long run. Besides, such information may be made use of in counselling parents, teachers, and children. They may be made aware of the ways in which each may contribute in a more meaningful way in achieving educational targets and objectives.

LIMITATIONS

The present study had a few limitations which have been cited below:
1) Path analysis suggests "weak causal" ordering amongst a set of variables. So, the results suggest that if the variables are affecting each other, the causal relationship is in the direction of the arrow rather than the reverse. Since the data involved was correlational, the direction of causality could not be exactly determined.
2) The mediational model proposes one possible way in which the variables considered in the present context could be related.
3) The parenting variables were limited to those pertaining to involvement. Other parenting variables such as parental attitudes of authoritativeness, autonomy versus control, etc. may also be relevant.
4) Incidental sampling was done in the present context. Hence, the findings must be considered taking into account this weakness of the present investigation.
5) Since the present study was based on children's reports of parenting variables and their own motivational qualities, the present findings must be considered taking into account this fact of using child-report of variables.
Although it was tempting to interpret variations in parenting and i’s motivational resources as indicating age or developmental s, such interpretations must be considered speculative in light of kness of the cross-sectional design of the present investigation.

**QUESTIONS FOR FURTHER RESEARCH**

A few suggestions for further research and enquiry in this field en cited below:

One major sampling problem was the difficulty in collecting da, resulting in a sample size that was minimal as far as the xity of the model tested was concerned. So, although the total size was quite large (947 subjects), the sizes of the four groups jects were relatively small. This study can be replicated by ing the model by using a larger number of subjects at a particular e (and of the same gender).

Such a model may also be examined for children coming from and upper socio-economic class families separately, for which tial relationships may emerge.

Apart from parental involvement, other parenting variables may e included such as parental authoritativeness, autonomy, , etc.

Other child-related mediator variables may also be included, such spent on homework, watching television, etc., which may further e the impact of parental involvement on children’s academic ement.

Other measures of motivation may also be included, such as or intrinsic/extrinsic motivation, and their role in the mediational may be examined.
6) This study was based on child-report of parenting variables. In a future study, data collected from parents could also be supplemented to analyze the practical implications of parental reports of child rearing, and children's reports of the same.

7) The present investigation was retrospective in nature, and may be replicated by a longitudinal study that examines the impact of involvement on children over a widespread length of time.

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