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**AN INVESTIGATION OF THE  
INFLUENCE OF FAMILY DYNAMICS  
ON ACADEMIC ACHIEVEMENT**

UNLESS SPECIFICALLY INDICATED TO THE CONTRARY  
IN THE TEXT, THIS THESIS IS THE ORIGINAL  
WORK OF THE WRITER.

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## ABSTRACT

While various family characteristics have been consistently linked to achievement behaviour, there is presently a greater emphasis on linking higher order factors, like family processes, to academic achievement, and a move away from lower order factors, like family structure.

The present study investigated the possible links between Family Dynamics and Academic Achievement behaviour in a mixed sex group of 92 adolescents of South African Indian origin. All subjects were between the ages of 14 and 17 years, and were drawn from predominantly working class communities.

The subjects I.Q. scores were utilized as measures of potential for achievement, and the final marks in English in the Standard Seven Examinations were used as measures of actual achievement. A regression analysis using both these scores was used to identify groups of achievers and underachievers. All subjects then completed the FAMILY ASSESSMENT DEVICE (Epstein, Bishop and Baldwin, 1980) which assessed six dimension of family functioning: Problem Solving, Communication, Roles, Affective Responses, Affective Involvement and Behaviour Control.

The Mann-Whitney U test was applied in order to ascertain whether statistically significant differences existed between families of achievers and underachievers in respect of the above listed

processes. The results indicated that there were significant differences on the:

- (1) Behaviour Control Dimension for both the female and mixed sex samples and,
- (ii) Affective Involvement Dimension for the male sample.

The four remaining processes (Problem Solving, Communication, Roles and Affective Responses) were not significantly linked to Academic Achievement Behaviour.

Firstly, the findings that Behaviour Control and Affective Involvement are significantly linked to Achievement Behaviour is in keeping with previous research in this field. Secondly, Communication and Affective Responses have been consistently linked to Achievement Behaviour in previous studies, but not in this study. Thirdly, this study serves to confirm previous findings which showed that Roles and Problem Solving were not consistently linked to Achievement Behaviour.

This study has implications for those concerned with the Academic Achievement of adolescents as it points in the direction that Family Dynamics is an important factor in this field.

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## CHAPTER ONE

## INTRODUCTION

Over the past few decades there has been an increasing number of studies focusing on academic achievement behaviour. The reason for this appears to lie in the fact that underachievement does not merely restrict itself to the classroom setting but has serious implications for later life career pursuits (Jubber, 1990), adult Psychopathology (Kohlberg in Green, 1989) and other social ills (Jubber, 1990).

That this link has been identified has been borne out by programmes like Operation Head Start. The aim of this programme was to help disadvantaged children overcome their vulnerability to potential social ills by boosting social and cognitive skills at pre-school level in the belief that these children would be less vulnerable to social ills as adults.

The importance of promoting academic achievement as a panacea to social ills has been highlighted by the numerous studies conducted in this field (Boike, Gesten, Cowen, Felner, Francis, 1978; Campbell and Mandell, 1990; Currie and Bowes, 1988; Kemp, 1955; Ladd and Price, 1986; Madden, O'Hara and Levenstein, 1984; Scarr and McCartney, 1988; Shaw and McCuen, 1960; Tamir, 1989). The major focus of most of these studies was aimed at providing an answer to the question, why do children underachieve, in the hope that these answers would provide some assistance towards the

resolution of this problem. Some of the reasons that have been given for underachievement include climatic factors (Huntington in Krige, 1974), body type (Sheldon in <sup>WV</sup>Krige, 1974) and intelligence (Burt in Kemp, 1955).

In providing his reasons for underachievement however, Schonell moved away from a single factor explanation to a more complex hypothesis. He declared that "progress in school is not dependant on only intellectual abilities but also upon emotional stability, interests, physical fitness and the nature of personal contacts in home, school and society". (Schonell, 1952, p. 2).

The question as to why Schonell focused on home factors when discussing academic achievement, which at face value appears to be principally a school based exercise, has been answered by a host of researchers who have linked various aspects of family life to academic achievement. Baumrind (1983) and Dornbusch, and Phillip, Ritter, Leiderman, Roberts and Fraleigh (1987) for example have linked parenting style to academic achievement while Phillips (1987) identified parental expectations as a significant correlate of achievement behaviour in the classroom. Other familial factors linked to academic achievement include family size (Alwin and Thornton, 1984; Myers, Baker, Milne and Ginsburg, 1987), family structure (Kurdek and Sinclair, 1988), father absence (Ibid.), socio-economic status (Carpenter and Hayden, 1987; O'Connor and Spreen, 1988), family organisation (Rimm and Lowe, 1988), and behaviour control (Baumrind and Black, 1967; Dornbusch et al. 1987).

Despite the paucity of local research in this field, the three studies (Jubber, 1990; Krige, 1974; Shawinsky, 1989) that have been identified, all confirmed overseas findings by showing that family variables are linked to achievement behaviour. Jubber (1990) for example, in a study of 267 primary school pupils, revealed that parental praise, parents' occupations, parents' level of education, family structure and family size all affect school achievement, though not always significantly. Shawinsky (1989) on the other hand showed, in a study of a group of first year university students, that problem solving in the family is linked to achievement behaviour in the classroom setting.

Krige (1974), in a PHD thesis showed how family interactional patterns and identification with same sex parents promoted achievement behaviour in a sample of 40 boys and girls.

A common limitation of all three local studies though is that they have all been conducted on samples drawn from South Africa's White population group. No similar research conducted on other population groups could be identified.

Dornbusch et al. (1987) have cautioned against the temptation to generalize these conclusions to South Africa's Black population though, as their own results revealed that while certain parenting practises were linked to achievement behaviour in their White American sample, this did not hold true for Asian Americans. Similar findings were recorded by Trotman (1977).

The question that arises then is, whether certain specific family variables present in South Africa's Non White population groups are linked to academic achievement behaviour as they are in the White population group. This study hopes to make a contribution in this field by comparing families of academic achievers to families of academic underachievers, on six dimensions of family functioning, in order to determine whether these aspects of family dynamics differs significantly between families of achievers and underachievers.

The reasons for focusing on Indian students was prompted by the fact that an intensive literature search revealed that no such studies on the Indian population could be identified. It was hoped therefore that this study would in some small way help to fill this gap in the literature.

In examining the possible link between academic achievement and family dynamics, the undermentioned procedures were followed: Chapter One has been used to introduce this study and identify its purpose. Chapter Two is made up of a clarification of the main concepts embodied in the title of this dissertation. Further, Chapter Two also covers a review of the current literature in this field.

Chapter Three reveals the purpose of this study in greater detail and identifies the six variables upon which this study is based. While Chapter Four focuses primarily on the findings of this study, it also briefly outlines the statistical procedures that

have been utilized and shows why these procedures were chosen above others. Chapter Five on the other hand is devoted entirely to the discussion of the results and indicates very briefly how this study compares to other studies in this field. Chapter Six, which serves as a conclusion, includes the implications of this study, its limitations and ideas for further research.

**CHAPTER TWO****LITERATURE SURVEY****INTRODUCTION**

While various family characteristics have been consistently linked to academic achievement by a number of researchers, a review of the literature has revealed a move away from "lower order factors" like socio-economic status and family structure, and a greater emphasis on "process studies" or "family psychological characteristics". (Dornbusch et al., 1987, p. 1244; Song and John Hattie, 1984, P. 1269).

**PROCESSES WHICH HAVE BEEN CONSISTENTLY LINKED TO ACHIEVEMENT BEHAVIOUR:**

A literature search by the present researcher has revealed that the common family processes or common family psychological characteristics linked to achievement behaviour include:

- i) Parental firm control (Baumrind, 1966; Baumrind and Black, 1967; Dornbusch et al., 1987; Steinberg, Elmen and Mounts, 1989),
- ii) Affective processes (Estrada, Arsenio, Hess and Holloway, 1987; Morrow and Wilson, 1961; Rimm and Lowe, 1988),
- iii) Communications (Green, 1989; Mufson, Cooper and Hall, 1989; Wynn, Jones and Khayal, 1982), and
- iv) Parental expectations of achievement behaviour (Estrada, Arsenio, Hess and Holloway, 1987; Phillips, 1987; Song et al., 1984).

While these findings are similar to those of Hess and Holloway's (in Dornbusch, 1987) review, they (Hess et al.) include verbal interaction between mother and child rather than communication. This difference could be attributed to the fact that their focus was primarily upon younger children.

Nevertheless, in spite of the fact that the present study is based on an adolescent sample, the literature review sometimes draws on studies of younger children as well. The reasons for this are twofold: Firstly, this is due to the dearth of literature in the field of adolescent academic achievement and family processes (Dornbusch, 1987). Secondly, both Dornbusch et al. (1987) and Steinberg et al. (1989) have shown that the processes listed above have been consistently linked to achievement behaviour irrespective of the age of the child.

Having thus explained why this literature survey will cover a wide age range, we shall now focus on each process independently in order to gain a greater understanding of the processes that are linked to achievement behaviour. The first of these processes is behaviour control.

#### **BEHAVIOUR CONTROL**

A survey of the literature on behaviour control and academic achievement reveals that for many researchers behaviour control is the antecedent to academic achievement (Baumrind et al., 1967; Dornbusch et al., 1987; Steinberg et al., 1989). In fact only one article identified in this survey advocated the view that

there was no link between behaviour control and achievement behaviour (Lewis, 1981). In examining both these views it became evident that Baumrind (1966) was amongst the first to link behaviour control to achievement behaviour as many other researchers in this field base their studies on her work.

We shall therefore begin by focusing on her contributions:

In a series of three studies on 273 White, middle class pre-schoolers, Baumrind (in Lewis, 1981) revealed that behaviour control (which she described as "firm enforcement of rules, effective resistance to the child's co-ercive demands and willingness to guide the child by regime and structured interventions" (Ibid., p. 544) ) was linked to maturity and achievement behaviour in children and to competent nursery school behaviour.

Despite the consistency of her findings which covered three studies, her results cannot be generalized to a wider context as her sample consisted entirely of pre-schoolers drawn from a White middle class population.

Dornbusch et al. (1987) who were aware of the limitations of these studies enquired whether these results would hold true for other population and age groups as well. They therefore replicated her study, but instead of using a White middle class population they chose a large cross cultural, socio-economically heterogeneous sample, which consisted of 7 836 subjects. These subjects, who were between the ages of fourteen and eighteen

years, were drawn from America's Black, White, Asian and Hispanic population groups.

The results of this study revealed that:

- (i) democratic but firm control in parents was linked to achievement behaviour in the White population group,
- (ii) while firm control of Black and Hispanic parents was linked to academic achievement in their children, this was not as significant as for the White population group,
- (iii) parental firm control was not linked to academic achievement of children in the Asian population group; a more rigid, autocratic disciplinary style was.

While results (i) and (ii) of Dornbusch et al.'s study are in keeping with Baumrind's findings, result (iii) is not [Result (iii) in fact confirms the findings of Chen and Uttal (1988), who demonstrated that the higher achievement of Chinese Asian students was due to a more rigid control in the home situation. Both Chen et al.'s results and Dornbusch et al.'s third result when compared with Baumrind's findings, points to the fact that students from different cultures react differently to parental practises. These findings have been confirmed by Trotman (1977). This emphasises the fact that as family life is in itself such a complex process no standard rules and procedures can be prescribed to families across the board].

Nevertheless, in spite of this single discrepancy, both Baumrind's (1966) and Dornbusch et al.'s (1987) results are still remarkably consistent in that they both show that generally parental firm control is linked to achievement behaviour. Despite this agreement though Steinberg et al. (1989) believe that Dornbusch et al.'s (1987) findings should be treated cautiously as they (Steinberg et al.) have certain reservations about Dornbusch et al.'s research procedure.

Firstly, they believe that the use of cross-sectional data (that is data collected from a wide sample at only one point in time) is questionable. They are of the view that as parenting style supposedly affects children in the long term, reliable data collection in this field can only be made on a longitudinal basis, that is over a period of time.

Secondly, they enquired how could Dornbusch et al. be certain that it was behaviour control that led to achievement behaviour in children, as they did not focus on this dimension as a separate entity but combined it with parental expectations of maturity, affective processes and communication. Could it not be, they asked, that it was these other processes that led to achievement behaviour and not behaviour control?

Thirdly, they pointed out that it was not clear from Dornbusch et al.'s (1987) study whether behaviour control in parents led to achievement behaviour in children, or whether the achievement

behaviour in children led to parents behaving in the way they did.

Steinberg et al. who believed that these three confounding variables could have affected the reliability and validity of Dornbusch et al.'s results, replicated Dornbusch et al.'s study on a smaller sample but in a more carefully controlled way.

They did this in the following manner:

Firstly, they chose to collect their data longitudinally and not cross-sectionally. Secondly, while they attempted to link three variables (behaviour control, acceptance and psycho-social maturity) to achievement behaviour they chose to link each one separately.

Other controls included the use of only a middle class sample, which was drawn entirely from the White population group. Moreover, their sample consisted only of first born children between the ages of eleven and sixteen years. There were 120 subjects altogether.

The results of this study revealed clearly that behaviour control, as a single entity, was linked to achievement behaviour.

Moreover, Steinberg et al. were of the opinion that as the results of their longitudinal study corroborated the results of Dornbusch et al.'s cross-sectional study, this pointed in the direction that behaviour control did not merely follow from

children's achievement behaviour, but in fact "precedes the development of competence in children". (Steinberg et al., 1989, p. 1433).

While previously greater concern would have been expressed about generalizing these results to a wider context, due primarily to the middle-class sample used, this is of lesser concern now, as Dornbusch et al.'s findings have shown that behaviour control in parents is linked to achievement behaviour in children irrespective of social class, in American society.

The major thrust of all three articles analyzed in this field, is that behaviour control in parents is linked to and precedes achievement behaviour in children. In spite of this common belief though, there is little agreement by the three studies mentioned, and others, on how this is achieved. (Arbuckle and MacKinnon, 1988).

Steinberg et al. (1989) believe for example, that behaviour control influenced psychosocial maturity (which comprises of self-reliance, work orientation and identity) which promotes achievement behaviour in children. Baumrind (1966) on the other hand, maintained that firm control influenced self-reliance which impacted upon achievement behaviour. White (in Arbuckle et al., 1988) disagreed with both these views. His belief is that behaviour control (or "implicit directives" (p. 127)) promoted instrumental competence which affected achievement behaviour. Finally, Dweck and Elliott (in Arbuckle and MacKinnon, 1988)

maintained that behaviour control promoted achievement motivation which influenced achievement behaviour.

It is this indecisiveness in particular, by proponents of this theory, which has led to the most criticism being levelled against the belief that behaviour control precedes academic achievement behaviour.

Lewis (1981) for example declared that if researchers were certain that behaviour control promoted achievement behaviour, they should indicate specifically how this was achieved. As has already been shown though, researchers in this field are not in agreement on this issue.

Nevertheless, in spite of this lack of agreement, Arbuckle et al., (1988) have attempted to consolidate research in this field by proposing a model incorporating much of the research already mentioned. They attempted to show in part how behaviour control impacted upon achievement motivation, psychosocial maturity and instrumental competence to promote achievement behaviour. Their results revealed that all three factors were linked to academic achievement.

In view of the fact that this model was tested on a very small number of subjects (n=30), these results will have to be verified by further research, before any final conclusion can be reached.

Other criticisms that have been levelled against the proponents of this theory in general, and against Baumrind in particular, include Lewis' (1981) view that Baumrind's results, which showed that behaviour control promoted achievement behaviour, were in contradiction of Attribution Theory.

Attribution theory, very simply according to Lewis, states that effective socialization is promoted by inner control and is undermined by compliance to an outside force like parental control. Lewis therefore concluded that as academic achievement was promoted by inner controls, parental control, which is an external control could not have promoted achievement behaviour (in Baumrind's sample).

Baumrind (1983) counteracted this argument by quoting the work of Lepper, an eminent Attribution Theorist, who declared that internalization of norms in children, was dependent upon "mild inducements ... to produce compliance". (In Baumrind, 1983, p. 138). These mild inducements promoted effective socialization, which in turn promoted achievement behaviour in children. Baumrind showed that as her description of firm control (willingness to guide the child by regime and structured interventions" in Lewis, 1981, p. 544) was akin to Lepper's "mild inducement", her results were in keeping with Attribution Theory.

The second criticism by Lewis, was aimed specifically at Baumrind's second study in which Lewis identified 14 subjects out of 146 whose parents were not high on the dimension of firm

control. In spite of this, these fourteen children were as academically competent as children of parents who were high on firm control. On the basis on this comparison Lewis concluded that firm control was not essential for achievement behaviour in children.

Baumrind (1983) responded to this criticism by pointing out to Lewis that she (Lewis) had in fact misread this study and that the fourteen children she identified were in fact "less competent" (Baumrind, 1983, p. 158).

From the aforesaid, and in spite of Lewis' belief, it does seem plausible that behaviour control promotes achievement behaviour in children. This belief stems from three things. Firstly, the sheer weight of arguments in favour of behaviour control as an antecedent to achievement behaviour cannot be ignored. (Baumrind, 1966; Baumrind et al., 1967; Dornbusch, 1987; Steinberg et al., 1989; White in Arbuckle et al., 1988). Secondly, the corroboration of results from Steinberg et al.'s longitudinal study with Dornbusch et al.'s results from their cross-sectional study are particularly convincing. Thirdly, the overall consistency of results linking behaviour control to achievement behaviour has been overwhelming.

Nevertheless, while it seems almost certain that behaviour control is linked to achievement behaviour, as pointed out earlier on, this is not the only process so linked. A second process which has also been consistently associated with

achievement behaviour is that of positive affective relationships.'

#### **POSITIVE AFFECTIVE RELATIONSHIPS**

Positive affective relationships have also been linked to academic achievement by numerous researchers including Baumrind (1967), Estrada et al., (1987), Morrow et al., (1961) and Rimm and Lowe (1988).

While different researchers use different terms to describe a positive affective relationship some common features are warmth, attention, acceptance, flexibility, responsiveness, interest and encouragement.

In a study of ninety-six high school students Morrow and Wilson (1961) found that high academic achievement was associated with encouragement, affection and trust in the home situation and that underachievement was not. Their results also revealed that there were no differences between families of achievers and underachievers in respect of family organization.

While the former result has been borne out by subsequent research, the latter is not keeping with recent findings. (Rimm et al., 1988; Green, 1989). While Morrow and Wilson controlled for factors like socio-economic status and I.Q. variables, their results which showed that a positive affective relationship was linked to achievement behaviour, must be treated cautiously as unlike Baumrind (1966), they gathered their data on parent-child

interaction only by observing children in the classroom situation and they did not interview or gather information from parents.

Nevertheless, despite these reservations, their results linking a positive parent-child relationship to academic achievement have been confirmed by Estrada et al. (1987) who found that the affective quality of the mother-child relationship in infancy was associated with cognitive development at ages four and six years and with academic achievement at age twelve.

These findings by Estrada et al. (1987) are considered to be of particular value as their study which was closely controlled elaborated on previous studies in the following three ways:

Firstly, the longitudinal nature of their study ensured a greater reliability than Morrow and Wilson's (1961) cross sectional study; secondly, their controls for maternal I.Q. and socio-economic factors eliminated these confounding variables; thirdly, by correlating only one variable with academic achievement (that is positive affect) they overcame the criticism of identifying possible spurious correlations as was levelled at Baumrind (1966) and Dornbusch et al. (1987).

In addition to this, Estrada et al.'s conclusions have gained greater validity as a result of other researchers overcoming their (Estrada et al.'s) self criticisms. These included firstly, the issue of bi-directionality. They questioned whether their sample of students achieved highly as a result of positive

parent-child interaction, or whether the high achievement of the students influenced the parents to behave positively towards the children.

Secondly, while their results revealed that positive affective relationships promoted achievement behaviour, they could not account for specifically how this was achieved.

Thirdly, they were not certain whether a positive affective relationship exerted its influence at a particular time in childrens' lives or throughout.

The first and second questions were answered by Steinberg et al. (1989) . Firstly, they showed that a positive parent-child interaction preceded academic achievement, and did not merely follow from it. Secondly, they also showed that a positive affect promoted psychosocial maturity which impacted upon academic achievement behaviour. This was subsequently reconfirmed by Arbuckle et al. (1988). The third question was answered by Rimm et al. (1988) who showed that a positive affective relationship exerted its influence on achievement behaviour throughout the individual's school life. They showed further that a negative change in parent-child relationship at any time could be reflected in the classroom as academic underachievement.

The one question that remains unanswered though, is the role of the father on academic achievement in Estrada et al.'s study.

While other researchers have attributed a significant role to father in the area of academic achievement (Kurdek and Sinclair, 1988; Myers, Milne, Bakers and Ginsburg, 1987) it appears as if Estrada et al. (1987) have not focused sufficiently on this aspect.

Moreover, the limited size of their sample (n=47), drawn entirely from the Caucasian population, makes it difficult to generalize these findings to a wider context, especially as ethnicity has been shown to mediate the effects of parental behaviour on school achievement. (Dornbusch et al., 1987; Trotman, 1977). Despite these reservations though, Estrada et al.'s findings were confirmed by Rimm and Lowe (1989). They compared twenty-two families with gifted underachieving children with family studies of eminent and gifted achievers. They showed that while a positive parent-child interaction was common in families of achievers, this was not true for underachievers. They showed further that extreme amounts of early attention was negative as it could create an "attention addiction" in individuals which if not met could result in poorer grades. (Rimm et al., 1988, p. 356).

This finding is in keeping with findings by Wachs and Gruen (in Estrada et al., 1987) who showed that the affective relationship sometimes influenced children to achieve in the presence of adults only.

Another important finding of Rimm et al.'s study was that achievers emerged from families that were more highly organized. As indicated earlier, while Morrow and Wilson (1961) disagreed with this, more recent studies have confirmed this finding (Green, 1989).

Rimm et al.'s results need to be treated with caution though, as they confirmed that their study was not controlled. Factors like socio-economic status, ethnicity and family size which have been shown to impact upon academic achievement (Alwin and Thornton, 1984; Carpenter and Hayden, 1987; Dornbusch et al., 1987), have been virtually ignored. Secondly, the size of their sample (n=22) makes it difficult to generalize these findings to a wider context.

In spite of these and other reservations though, Rimm et al.'s findings have been confirmed by Arbuckle et al. (1988). They found that a positive affective relationship influenced achievement behaviour both indirectly and directly. The indirect influence, according to them, was through a positive parent-child interaction that influenced social competence, which in turn promoted academic achievement. This has been confirmed by Estrada et al. (1987) and Steinberg et al. (1989). The direct influence on the other hand was via:

- (i) the positive presentations of task to a child,
- (ii) the provision of appropriate feedback, and
- (iii) the availability of the parent as a resource to the child.

While the first two reasons appear to be intuitively sound, according to Arbuckle et al., (1988) they have not been borne out by research. The third reason on the other hand, had been discounted by Baumrind (1983) and Dornbusch et al. (1987). Both have shown that parental availability as a resource (as in permissive parenting for example) did not necessarily promote academic achievement.

The main thrust of all studies focused on in this section thus far is that a positive affective relationship promotes academic achievement. This finding has also been supported indirectly by other research which showed that a negative affective relationship inhibited achievement behaviour. Lareau (1987) for example, found that too much pressure by parents on their children to achieve could result in poorer grades. This was confirmed by Green (1989). Baumrind (1966) on the other hand, showed that a lack of interest between parent and child could also be reflected in the classroom as underachievement.

From the present state of research in this field, it appears that many researchers are in agreement that positive affective relationships promote achievement behaviour. Not all researchers though who have focused on the relationship between positive affective relationships and academic achievement agree that the two are linked. Crandall, Orleans, Preston and Rabson (in Krige, 1974) for example, have shown that positive affective relationships in the home situation was not linked to achievement behaviour in their sample of American female students.

This finding was confirmed by Shawinsky (1989). In a study of thirty university students of both sexes, Shawinsky found that there was no significant difference between families of achievers and underachievers on either the affective involvement or affective response dimensions of the Family Assessment Device.

Shawinsky cautioned against generalizing her findings to other contexts though, as her sample was particularly small. In addition to this, she pointed out that she separated her achievers and underachievers by means of an arbitrary criterion.

Her achievers were students with I.Q. scores of at least 115 and a performance level of at least sixty five percent. Her underachievers on the other hand also had I.Q. scores of at least 115, but had performance levels of less than fifty-five percent. This meant that her achievers' performance scores differed from the underachievers' performance scores by a mere ten percent at the least. As a result of these limitations Shawinsky has recommended that her findings be treated with caution.

It appears to be evident from the above that while there are certain researchers who have not identified the link between positive affective processes and academic achievement, the evidence linking the two processes is overwhelming. Of the nine studies identified which investigated the link between a warm, accepting and encouraging family situation and academic achievement for example, seven believe that positive affective processes are linked to achievement behaviour (Baumrind, 1967;

Dornbusch et al., 1987; Estrada et al., 1987; Green, 1989; Morrow and et al., 1961; Rimm et al., 1988; Steinberg et al., 1989) and two do not (Crandall et al., in Krige, 1974; Shawinsky, 1989).

It is evident that the present state of research indicates very strongly that positive affective relationships in the home are linked to achievement behaviour in the classroom setting.

Another process which is closely linked to positive affective relationships is communication. We focus on this process next. While for the purposes of this study we focus on positive affective relationships and communication as separate dimensions, Wynn, James and Khayal (1982) have pointed out that the two are inter-related phenomena which in reality cannot be separated.

#### COMMUNICATION

In view of the fact that communication and affective processes have been combined as a single variable in many studies, there are fewer studies linking communication specifically to achievement behaviour than any of the other processes.

Green (1989) for example, identified only three studies in this field.

The first study, quoted by Green was by Hassan. He revealed that ineffective communication in the home situation was associated with underachievement in the classroom.

The second study by Fisher and Jones (in Green, 1989) showed how communication deviances between husband and wife and a lack of clear communication in the family were both linked to poorer academic problem solving by the child.

The third study quoted by Green was conducted by Wynne et al. (1982) on fifty-four ten year old boys. This study revealed that in a family where communication was clearly focused, well structured, flexible and task appropriate, there the sons were regarded as academically competent by both peers and teachers alike. Secondly, this study also revealed that in families where there was a balance in the amount of activity between parent and children there also the children proved to be academically competent.

Despite the fact that their findings are in keeping with previous studies, Wynne et al. have cautioned against drawing firm conclusions from these results.

They pointed out that due to the longitudinal nature of their study more data had to be gathered before any final conclusions could have been reached. In spite of this reservation though Wynne et al.'s study lends weight to the growing body of literature which links achievement behaviour to communication processes.

While all three studies focused on thus far have shown that communication processes affect achievement behaviour a fourth

study by Mufson et al. (1989) is different in that it focused more on the content of communication rather than on the process.

This study of 23 seventh grade children drawn from a White, middle class background revealed that while parents of achievers praised their children more than the parents of underachievers, the parents of underachievers corrected their children more than the parents of achievers did.

This finding was confirmed by Jubber (1990) in a local study covering standard four pupils in the Cape Peninsula. The results of this study showed that while parents of high achievers praised their children more, parents of underachievers did not.

The corroboration of findings between Mufson et al.'s middle class study and Jubber's socio-economically heterogeneous study points in the direction that parental praise as an antecedent to achievement behaviour is possibly stable across socio-economically heterogeneous populations.

Perhaps the reason for this stems from the possibility that parental praise promotes a positive self concept which in turn has a positive effect on academic achievement behaviour. This view has been voiced by Song et al. (1984) and confirmed by Phillips (1987) and Forehand, Long, Brody and Fauber (1986).

From the aforesaid it therefore becomes clear that both the process and content of communication are significant variables that affect achievement behaviour in children.

Another process that is closely linked to communication and which also affects achievement behaviour is that of parental expectations for children. We focus on this process next.

A PROCESS WHICH HAS BEEN CONSISTENTLY LINKED TO ACHIEVEMENT BEHAVIOUR BUT WHICH IS BEYOND THE SCOPE OF THIS STUDY.

#### PARENTAL EXPECTATIONS OF ACHIEVEMENT BEHAVIOUR

While this process is not specifically covered in this study, the researcher decided to include a brief theoretical perspective of this process as it overlaps to a large degree with positive affective responses and communication. According to Wynn et al. (1982) it is virtually impossible to separate these three into distinctive family processes in practice. As the review of the literature by the present researcher has indicated very similar findings, it was decided to include this process in the literature overview.

A review of the literature has revealed that numerous researchers believe that parental expectations are linked to achievement behaviour in children. (Jubber 1990; Pallas, Entwisle, Alexander, Cadigan, 1987; Phillips, 1987).

Of all the studies listed above the one by Jubber (1990) has the most relevance for this study as it was conducted on a local sample of 267 pupils drawn from schools in the Cape Peninsula. All pupils utilized in his study were drawn from the White population group and were in standard four at the time of Jubber's research. The subjects were drawn from a socio-economically and intellectually heterogeneous population.

This study, which was aimed at investigating various links between home and family factors and school achievement, concluded that "parental expectations are highly and statistically significantly correlated with school performance". (Jubber, 1990, p. 8).

While Jubber's study has much to recommend it (a large, socio-economically and intellectually heterogeneous local sample consisting of pupils and their parents) his results cannot be generalized to a wider context for the following reasons: Firstly, as indicated earlier on, both Dornbusch et al. (1987) and Trotman (1977) have shown that results extrapolated from one cultural group cannot be generalized to another. As Jubber's study was restricted to South Africa's White population group, his findings have to be restricted to that group until further research confirms that this holds true for other population groups as well. Secondly Jubber's labelling of good, adequate and poor performers was done in an arbitrary manner. This in effect meant that while he labelled pupils as good, adequate or poor significant others like teachers might not have agreed with his assessments. Thirdly Jubber is himself unclear whether the significant correlation between parental expectations and school achievement was due to a high degree of realism of parental expectations or whether the high expectations of parents played a motivating role in achievement behaviour.

Despite these reservations though, Jubber's results have been confirmed by another study which was conducted by Phillips (1987).

Phillips study was conducted on a relatively small sample of 81 students who were in the third grade and who were drawn from the middle and upper socio-economic classes. Her research was restricted further as it focused on high achievers and their parents only and did not include underachievers.

Nevertheless her findings like Jubber's revealed that parental expectations were significantly linked to achievement behaviour. Unfortunately this result remains incomplete in a sense, for while she described the behaviour of parents of achievers, we have no way of knowing from her study, whether this is any different from the behaviour of parents of underachievers.

Should Phillips have chosen a group of underachievers as well, a comparison of her present findings with those of parental expectations of underachievers would have indicated more clearly whether parental expectations were predictive of achievement behaviour or not.

Despite this reservation though, Phillips (1987) study extended upon Jubber's by showing that the link between parental expectations and achievement behaviour was via the "child's perception of academic competence" (Phillips, 1987, p. 1311) or academic self-concept. This in effect meant that parental

expectations influenced the child's perception of competence and it was this perception which impacted upon achievement behaviour.

This finding is in keeping with results revealed by both Song et al. (1984) and Pallas et al. (1987).

Pallas et al.'s study was based on 825 first graders in the United States of America and Song et al.'s research was conducted on 2 297 adolescent Korean students in Seoul. Despite the very different samples both studies have reported that parental expectations impacted upon self-concept which influenced achievement behaviour. That both these studies conducted upon very different samples have reported almost identical findings is significant as they point to the fact that these results when looked at together are not restricted to a single age or cultural group but can in fact be cautiously generalized to the wider community.

While together these studies point to a reliability measure that would otherwise be lacking, these results must be treated with a certain degree of caution for the following reasons: Firstly, Song et al.'s data on parental expectations were collected from their adolescent sample. This means that their sample reported on their perceptions of parental expectations and not on parental expectations per se. Secondly, Pallas et al.'s and Song et al.'s belief that academic self-concept is predictive of achievement behaviour has been criticized by Steinberg et al. (1989) on the grounds that while it is generally believed that self-concept is

linked to achievement behaviour, this belief has not been corroborated by systematic research.

In spite of these reservations though, it appears to be evident that parental expectations are possibly linked to achievement behaviour irrespective of cultural background or socio-economic status. This belief is based on the consistency of results that have emerged from studies conducted on standard four students in the Cape Peninsula (Jubber, 1990), first and third graders in the United States (Phillips, 1987; Pallas et al., 1987) and adolescent students in Korea (Song et al., 1984).

While parental expectations have been consistently linked to achievement behaviour, as has been pointed out earlier on this dimension of family dynamics is beyond the scope of this study. Rather than focus upon this variable, this study will be focusing on all the previous factors mentioned (that is behaviour control, affective processes and communication) and two variables that have not been consistently linked to achievement behaviour - that of family roles and problem solving in the family.

**PROCESSES WHICH HAVE NOT BEEN CONSISTENTLY LINKED TO ACHIEVEMENT. BEHAVIOUR BUT WHICH WILL BE FOCUSED ON IN THE STUDY.**

The two processes which have not been consistently linked to achievement behaviour but which will be focused on in this study include problem solving and roles.

The reasons for including these variables in this study stem from the following:

As the instrument used in this research, the Family Assessment Device, assesses both roles and problem solving, the researcher was left with the choice of either:

- (a) ignoring these areas of the data as neither roles nor problem solving have been consistently linked to achievement behaviour, or of
- (b) utilizing this data to investigate the possible link between these dimensions and academic achievement behaviour.

It was decided to take the latter course as certain researchers believe that there may in fact be links between these variables and achievement behaviour (Boike et al., 1978; Green, 1989; Shawinsky, 1989).

**PROBLEM SOLVING**

Shawinsky (1989) has revealed that families of achievers are more effective at problem solving than families of underachievers. This finding has been confirmed by Boike et al. (1978) whose

results indicated that ineffective problem solving in the home situation has been linked to underachievement in the classroom.

Despite the consistency of these findings though both results need to be treated cautiously as firstly Shawinsky (1989) pointed out that her sample of achievers and underachievers were separated by means of arbitrary criteria. Secondly, Boike et al.'s (1978) sample was chosen from a low socio-economic population and hence they focused more on instrumental problems (lack of food, clothing) rather than on affective problems (issues of emotions) which this study is more concerned with.

In view of the above findings though it would be interesting to see whether problem solving in the family is linked to achievement behaviour in the present sample.

#### **ROLES**

The second variable which has not been consistently linked to achievement behaviour is that of roles.

Nevertheless Green (1989) is of the opinion that role allocation in the family could possibly be linked to underachievement in the classroom situation. He points out, for example, to students with potential who sometimes in the interests of family homeostasis, are either overtly or covertly assigned the role of the underachiever.

This means that in certain cases, families who face severe problems which threaten the cohesiveness of the family unit for example, sometimes create a second less severe problem on which to direct their energies. In such cases the family focuses on the less severe problems which they created and ignore the more serious issues which threaten the stability of the household.

A family threatened by an imminent breakup for example may therefore assign a bright child the role of the underachiever. This child then becomes the main focus of attention. When such a child continues to receive messages underestimating his academic ability, he begins to see himself as lacking. Hence, as a result of the self-fulfilling prophecy, he ends up underachieving in the classroom situation (Green, 1989).

As long as this underachievement can be maintained the threat to the family cohesiveness can be ignored. This has the effect of creating a sense of stability within the family situation.

Green points out however that while there is widespread belief in the negative effects of the self fulfilling prophecy, this has not been systematically researched in the field of underachievement. While this theory therefore appears to be intuitively sound more research is needed to confirm this belief.

In spite of this though, Rimm and Lowe (1989) also believe that role allocation affects achievement in the classroom. They showed that children who were assigned special roles in the

family (only children or first born children for example) had tended to achieve highly in the school situation. When however that special role was withdrawn (due to the birth of a sibling for example) underachievement resulted. In fact 54% of Rimm et al.'s (1988) sample of underachievers, were originally achievers, who had their specialness in the family circle withdrawn.

In spite of the fact then that family roles have not been consistently linked to achievement behaviour, it is evident that certain researchers believe that these variables are linked. Hence this study will, in addition to focusing on the dimensions which have been consistently linked to achievement behaviour, also investigate this link.

Even before we focus on the actual research to investigate this link though, it is important for us to gain some insight into the concepts which will be used in this study.

#### CONCEPT CLARIFICATION

As the terms "Academic Achievers", "Academic Underachievers" and "Family Dynamics" are used inconsistently in the literature, it is necessary to clarify the sense in which each of these is used in this dissertation.

Up to now researchers have focused on given definitions, identified common themes and created functional definitions for use in their studies (Dornbusch et al., 1987; Henning, 1983;

Jubber, 1990; Krige, 1974; Shawinsky, 1989; Steinberg et al., 1989).

The purpose of the concept clarification exercise in this study is to focus on some of the definitions in the literature and to identify common features and differences among them in order to create a functional definition that is both relevant to this study and theoretically sound. We shall focus on each of the three terms separately for this purpose.

#### **ACADEMIC ACHIEVEMENT**

Academic Achievement has been described by Drever simply as "Performance in a standardized series of tests, usually educational" (in Henning, 1983, p. 12).

This in effect means that as there is no criterion variable (that is achieving a minimum standard) achievement, according to Drever, has nothing to do with achieving minimum standards as is required in tests and examinations.

Frank and Frank (in Shawinsky, 1989) while agreeing with this basic premise of Drevers, believe that academic achievement is a more complex behaviour which is "a multi-faceted variable involving motivation, the effort the student expends on a task at hand, his emotional or physical health, his general skills, how he works and thinks and above all the relationship which exists between the student and his parents" (1989, p. 6). Once again no mention is made of achieving minimum standards.

Both the above views are different from Spence's (1988) view. She is of the opinion that a criterion variable, that is achieving a minimum standard, is an important element in defining achievement. She therefore describes academic achievement as "task orientated behaviour that allows the individuals performance to be evaluated according to some internally or externally imposed criterion, that involves the individual in competing with others, or that otherwise involves some standards of excellence" (1983, p. 12).

Both Frank and Frank's and Spence's definitions have relevance to academic achievement as it is described in this study. The relevance of Frank and Frank's definition is obvious as it includes parent variables which is a major aspect of this study. The relevance of Spence's definition on the other hand is derived from her use of the terms "individual performance" which is evaluated according to "some internally or externally imposed criterion" (1983, p. 12).

The individual performance in this study was based on the final English mark attained in the standard seven year and the internally imposed criterion was the potential of the student as predicted by his(her) I.Q. score.

The achievers were identified by using both the English mark (as the performance variable) and the I.Q. scores (as the predictor variable) in a regression equation. A regression line in the form of  $Y = A + bx$  was plotted. In the equation Y was the

dependant variable (or English mark) and  $x$  was the independent variable (or I.Q. score).

(The regression analysis was worked separately for each school)

Once the regression line, using the above formula, was plotted (see lines A on Tables three and four), a line parallel to this line, (line B on Tables three and four), was drawn. This line separated about twenty-five percent of the highest achievers. The students whose scores fell above line B were identified as achievers for the purpose of this study.

The reason for choosing the top twenty five percent of students at each school to be identified as achievers stemmed from Cass and Thomas' and Weisberg's findings (Education Bulletin, 1987) that in each school only one quarter of the students were achievers and a further quarter were underachievers.

The achievers then for the purposes of this study were all those pupils whose scores fell above line B in Tables three and four.

#### **ACADEMIC UNDERACHIEVEMENT**

Thorndike's assertion, that "we can only have underachievement in relation to some standard of expectation or predicted achievement" (in Henning, 1983, p. 16), has been borne out by the numerous definitions which describe underachievement in terms of a discrepancy between potential and performance.

Green, for example, described underachievement as "a discrepancy between the child's potential to achieve in school and his or her actual achievement" (1989, p. 188).

Rimm et al.'s definition of underachievement "school performance below some index of a child's ability" (1989, p. 353) echoes precisely the same view.

Very similar definitions have been found in the works of Kotkov, (in Henning, 1983) and Wall, Schonell and Olson (1962).

Brower in Henning (1983) took the above listed definitions a step further when he declared that "academic underachievement is a significant and sustained disparity between capacity and performance which obtains when measured intelligence contradicts class tests, achievement tests and teachers impressions" (1984, p. 299).

From the above discussion it is clear that underachievement can only occur when a certain standard of expectation is not met.

This failure to meet some minimum standard or expectation was used as a basis to define underachievement in this study. Like in academic achievement a regression analysis using I.Q. scores (as a predictor of achievement behaviour) and the English final examination scores (as the actual achievement score) was used to separate achievers from underachievers. Once again a regression line in the form of  $Y = A + bx$  was plotted where Y was the

dependant variable (or english mark) and  $x$  the independent variable (or I.Q. score).

Like was done for the achievers, a line parallel to the regression line was drawn. (see line C on Tables three and four). This line however was used to separate about twenty-five percent of the lowest achievers from the rest of the sample.

All students whose scores fell below this line were described as underachievers. Here again the choice of identifying twenty-five percent of the lowest achievers as underachievers stems from Cass and Thomas' and Weisberg's findings (Education Bulletin, 1987) that about one quarter of a schools population are likely to be underachievers.

#### **FAMILY DYNAMICS**

Family dynamics is a loose term which covers an entire range of interaction among family members. For Baumrind (1983) family dynamics covered behaviour control, affective processes, communication and parental expectations of mature behaviour. Steinberg (1989) on the other hand referred to family dynamics only in terms of behaviour control and parental acceptance while Shawinsky (1989) defined family dynamics as "patterns of interaction and communication, or transactions between family members" (1989, p. 13). In this definition she encompassed forty-three different dimensions of family interactions.

For the purpose of this study family dynamics covers the following interactions which are assessed on the Family Assessment Device namely problem solving, communication, roles, affective responses, affective involvement, and behaviour control (Epstein, Bishop, Levin, 1978).

#### **LIMITATIONS OF THE ABOVE DEFINITIONS**

The researcher is aware that the above definitions have certain limitations. As functional definitions have been used they are relevant to this study only. This means that a student identified as an achiever or underachiever in this study might not be so described in any other study. Nevertheless as there are no universally acceptable definitions of these terms, the researcher followed the trend set by numerous other researchers (Dornbusch et al., 1987; Shawinsky, 1989; Steinberg et al., 1989) by creating functionally relevant definitions.

#### **SUMMARY**

The first part of this chapter was devoted to discussing, in some detail, the various processes that have been consistently linked to achievement behaviour. It has been shown that various researchers have linked behaviour control, affective processes, communication and parental expectations to achievement in the classroom situation. In addition to this two processes which have not been consistently linked to achievement behaviour, family problem solving and roles, were also discussed. Reasons were provided for including these variables in the present research.

The present state of research in this field shows that communication and affective processes are linked to achievement behaviour cross culturally whereas behaviour control is linked to achievement behaviour in some cultures and not in others. Given this state of affairs it would be interesting to see whether these processes are linked to achievement behaviour in the South African Indian population.

Finally this chapter focused on the clarification of the main concepts utilized in this study and explained why functional definitions of achievement, underachievement and family dynamics had to be used.

The following chapter (Chapter 3) is devoted entirely to research methodology and experimental design.

**CHAPTER THREE****INTRODUCTION**

This chapter will cover the following areas:

- Purpose of study,
- Instrumentation,
- Procedure,
- Sample.

**PURPOSE OF THE STUDY**

The purpose of this study was to investigate the link between family dynamics and academic achievement as defined in this study.

This was done by comparing two groups of families. The first group consisted of families who had at least one child identified as an academic achiever. The second group had at least one child who was identified as an underachiever. These families were compared on the following six dimensions:

- (i) Problem Solving,
- (ii) Communication,
- (iii) Roles,
- (iv) Affective Responses,
- (v) Affective Involvement,
- (vi) Behaviour Control.

As past research has consistently shown that families of achievers ranked higher on behaviour control, affective

involvement, affective responses and communication, similar results were expected in this study. On the other hand as family roles and problem solving have not been consistently linked to achievement behaviour, no specific results were expected in these areas.

### **INSTRUMENTATION**

The following instruments were used in this study:

- (i) The Group Test for Indian South Africans,
- (ii) The Standard Seven Mid-year and Final Examination English question papers and
- (iii) The Family Assessment Device.

Briefly, the instruments were used in the following manner: While the I.Q. score from the Group Test for Indian South Africans was used as a predictor of achievement, the standard seven mid year and final examination English marks were computed together to serve as a criterion for achievement. The Family Assessment Device served to identify patterns of family behaviour.

Each of these instruments is discussed in greater detail below.

### **GROUP TEST FOR INDIAN SOUTH AFRICANS (GTISA)**

The GTISA consists of three series of tests namely:

- a) Junior series for standards four to six,
- b) Intermediate series for standards seven and eight and
- c) Senior series for standards nine and ten.

In this study the intermediate series was used as the sample consisted of standard eight pupils who took the test when they were in standard seven.

The purpose of this test is to measure certain aspects of intelligence. A brief look at the six subtests provides insight into the specific aspects of intelligence which are assessed.

The non-verbal subtests are:

- (i) Figure Analogies - in this subtest the ability to observe relationships or analogical reasoning is assessed.
  
- (ii) Number series - in a given sequence of numbers, students are expected to work out what the missing numeral is. This test involves inductive reasoning on the basis of numbers.
  
- (iii) Pattern completion - students are given a pattern with an empty block which they have to complete. This involves the observation of relationships between figures, reasoning and spatial ability.

The three verbal subtests are:

- (i) Classification of word pairs - this subtest assesses reasoning and insight into relationships between words.

- (ii) Verbal reasoning - this subtest which consists of verbally formulated problems also assess the reasoning and insight into the relationship between words. Further however the numerical factor is also measured as it includes some arithmetically formulated problems.
- (iii) Word analogies - this involves selecting a word from a set of five in order to complete a word pair. This subtest measures reasoning, insight into relationships and linguistic ability.

#### The Reliability of the GTISA

The reliability of a test is described as the extent to which it consistently measures that which it is supposed to - in this case certain aspects of intelligence. The reliability measures for the GTISA have been computed separately for each standard. At the standard seven level the reliability of the non-verbal tests is 0,86, and 0,80 for the verbal tests. The reliability level of the verbal and non-verbal tests together is 0.90 (S.A. Human Sciences Research Council, 1975). This is an indication that the GTISA is a particularly reliable test.

#### The Validity of the GTISA

The predictive validity of the GTISA was determined by correlating the test scores with school examination marks. Once again the validity of the test was computed separately for each standard. At the standard seven level the validity of the verbal score is 0,44 and the non-verbal score is 0,31. The total

validity score for the verbal and non-verbal test together is 0,40 (Ibid., 1975).

#### Administration of the GTISA

The administration of the group tests at secondary schools under the control of the House of Delegates is usually done at the standard seven level. The tests are administered in groups of about thirty students at a time by either the school psychologist for the area or by the school counsellor who has to be an accredited tester.

The tests take between two and a half to three hours to administer. On completion the tests are marked by class teachers. The marking is then checked by a school psychologist.

Once the process is completed the class teachers and subject teachers are given access to the I.Q. scores. These scores are used by the teachers as a guide to the students potential and their) performances in tests and examinations are usually judged against this criteria.

As the I.Q. scores are entered upon the pupil record cards, the students performance scores on these tests are sent to schools to which the pupil may be transferred.

**ENGLISH EXAMINATION PAPERS**

As pointed out earlier, the final mark in English was used as the criterion for achievement. The reason for choosing English rather than any other subject stemmed from Tamir's (1989) finding that any subject which depended heavily upon reading (like English) was more likely to be influenced by home factors. Tamir believes this is so because parents do not need specialist knowledge to promote reading as they would for the promotion of other subjects like Mathematics or Science.

This belief appears to have been borne out by the many studies which focus on the English mark when investigating the link between academic achievement and home and family variables (Alwin and Thornton, 1984).

When using school grades however, problems about the validity and reliability of examination papers arise, especially as these are not standardized instruments. A further problem which arises is that the entire sample does not write the same examination. This certainly holds true for this study. As the final sample was drawn from two schools, pupils from school one had written one examination and pupils from school two another.

Despite these misgivings though, it was decided to use school grades in this study as Fehrman et al., (1987) pointed out that many studies of this nature used grades as the criterion for achievement. Perhaps this is so because grades are more

sensitive to student effort than standardized achievement tests (Terwilliger in Ferhman et al., 1987).

Secondly, it was felt that the use of grades would have been a more valuable measure than standardized achievement tests as grades provided a more continuous indication of students academic performance. This is due to the fact that school tests and examinations are given more frequently than standardized achievement tests are. In addition to this it was felt that the use of grades was further justified as the grades used in this study were not the result of a single judgement but were based on three separate assessments. Firstly, the oral marks in English were used. These marks (derived from the continuous assessment of pupils over the entire year) together with the marks gained in the mid year examinations and those from the end of year examinations, were used to compute a final mark which was utilized in this study.

The marks used in this research were obtained in the following manner:

- a. Oral assessment : This covered verbal communication. Students were assessed on the delivery of prepared and impromptu speeches, dialogues and verbal group interaction.
- b. Mid-year and end of year assessments : The marks from both these examinations were based on the following written papers:

- (i) Language and Comprehension,
- (ii) Literature and
- (iii) Composition and Letter.

- (i) Language and Comprehension : These papers consisted of reading study exercises and exercises in the correction of sentences, usage of tenses, word order and usage of prepositions and conjunctions.
- (ii) Literature : The literature papers consisted of questions based on the poems, short stories and novel studied during the year.
- (iii) Composition and Letter : Students were given the choice of five to seven topics and were required to write an essay on one of these. In addition to this students also had to choose between writing a friendly or a business letter.

Each of the papers listed (i), (ii) and (iii) above were written both during the mid year and end of year examinations.

From the aforesaid it is evident that the grades used in this study were a summation of a series of assessments and was not based on a single judgement. As a result of this comprehensive examination process, the researcher felt that the use of grades, which may not have been as reliable or as valid as a standardized

achievement test, was nevertheless justified in the circumstances.

The principal circumstance which prevented the use of a standardized achievement test stemmed from the restriction placed upon the researcher by the House of Delegates. While they were supportive of this research their proviso that all contact between the researcher and his sample of pupils be restricted to after school hours meant that little comprehensive testing could be done. This was due to the fact that as students spent almost seven hours at school, it was felt that it would not be fair to subject them to an achievement test which could last for a further two to three hours after school hours, especially as achievement scores, in the form of grades - which have been described as "the most appropriate measure of current school performance" (Dornbusch et al., 1987, p. 1247) were readily available.

In view of the factors listed above it was decided to use examination results rather than standardized achievement test scores.

In addition to using the I.Q. test and the standard seven examination question papers, the third instrument used was the Family Assessment Device.

**FAMILY ASSESSMENT DEVICE**

The family assessment device (see Appendix 1) is a screening instrument of family functioning which is geared towards identifying problems in a simple and efficient manner. This device focuses on the following six dimensions of family functioning:

- (i) Problem Solving,
- (ii) Communication,
- (iii) Roles,
- (iv) Affective Responses,
- (v) Affective Involvement and
- (vi) Behavioural Control

**PROBLEM SOLVING**

Problem solving has been defined as "the ability to resolve problems to a level that maintains effective family functioning". (Ibid. p. 119).

This model proposes that while all families have problems, effective families are able to solve theirs while ineffective families are not.

The two kinds of problems that families experience, according to this model are, firstly instrumental problems - that is problems that relate to basic issues of food, clothing and shelter. The second type of problem is affective problems or problems related to feelings like anger and depression.

While most families are able to solve their instrumental problems effectively, affective problems, which are more complex, are not so easily solved.

Epstein et al. list seven steps to effective problem solving.

These are:

- (i) Identification of the problem;
- (ii) Communication of the problem to appropriate resources within or outside of the family;
- (iii) Development of alternative action plans;
- (iv) Decision regarding a suitable action;
- (v) Action;
- (vi) Monitoring that action which is taken and
- (vii) Evaluation of the success of the action.

The most effective families follow all seven steps in problem solving while the most ineffective often do not even realize that they have a problem, that is they do not even reach step (i) (Epstein, Bishop, Levin, 1978).

#### COMMUNICATION

Epstein et al. define communication simply as "the exchange of information within a family" (Ibid. p. 23). Problem solving communication has also been divided into Instrumental Communication (about issues like food and clothing) and Affective Communication (which pertains to communication of feelings).

The four basic methods of communication have been described as:

- (i) clear and direct,
- (ii) clear and indirect,
- (iii) masked and direct,
- (iv) masked and indirect.

On this continuum (i) is described as the most effective form of communication and (iv) the least effective.

Despite the fact that this model focuses primarily on verbal communication, it does not disregard non-verbal communication especially if it contributes to masking or the sending of messages indirectly.

#### FAMILY ROLES

This dimension has been defined as "the repetitive pattern of behaviour by which family members fulfil functions" (Epstein et al., 1980, p. 124). Family roles have also been divided into the instrumental and affective domains, with all of the implications previously mentioned.

This model lists five family functions as the basis for identifying roles namely:

- (i) the provision of resources,
- (ii) nurturance and support,
- (iii) sexual gratification,
- (iv) personal development and
- (v) maintenance and management of family systems.

The two important considerations of roles include firstly the appropriateness of role allocation, for example does maintenance and management of family systems fall to the head/s of the household rather than to one of the children. The second important consideration is the provision of adequate follow up for role accountability in order to assess whether the roles allocated are being adequately fulfilled.

The most effective families have been described as the families in which all roles have been appropriately distributed and where accountability to other family members is built into the system. The most ineffective family on the other hand assigns roles inappropriately and overlooks role accountability completely.

#### **AFFECTIVE RESPONSES**

Affective responses have been described as "the ability to respond to a given stimulus with the appropriate quality and quantity or feelings" (Epstein et al. 1980, p. 126).

The two types of affective responses identified are welfare responses and emergency responses. Welfare responses refer to feelings of love, warmth and affection and emergency responses pertain to feelings of anger, depression and sadness.

The two issues of significance here are:

- (i) are family members capable of experiencing the full spectrum of human emotions? and
- (ii) are the feelings displayed consistent with the stimulus?

Families that fulfil both these criteria have been described as the most effective on this domain and families who ignore both, the most ineffective.

#### **AFFECTIVE INVOLVEMENT**

This dimension has been described as "the extent to which family shows interest and values the particular activities and interests of individual family members" (Epstein et al., 1980, p. 127).

The principal focus here is to what extent family members show interest and values the activities of others. The range of possible involvement spans:

- (i) Lack of Involvement - where family members share no interest in each other. The only common feature with each other stems from their shared surroundings.
- (ii) Involvement Devoid of Feelings - this is characterised by the expression of some interest only when it is absolutely necessary but no investment from each other
- (iii) Narcisstic Involvement - is characterized by a lack of interest in others and yet also by active involvement in their activities. This involvement though is motivated primarily by self interest.
- (iv) Empathic Involvement - is the most effective level of involvement of the spectrum and is characterised by a

genuine interest and active involvement in the activities of others, even though they may be peripheral to ones own interests.

- (v) Over Involvement - this is characterised by an over-intrusive, over-protective and overly warm type of environment.
- (vi) Symbiotic Involvement - this describes a pathological state in which involvement is so intense that the boundaries between the individuals become blurred.

While empathic involvement is the most effective form of involvement, those on either side of it are less effective. Those on the extremes of the spectrum though are the least effective (Epstein et al., 1978).

#### **BEHAVIOUR CONTROL**

This dimension is defined as "the pattern the family adopts for handling behaviour in three specific situations

- (i) physically dangerous situations,
- (ii) situations involving the meeting and expressing of psychobiological needs and drives and
- (iii) situations involving socializing behaviour both inside and outside the family" (Epstein et al., 1978, p. 26).

It is important to remember that this dimension is not concerned solely with child discipline and control but with the behaviour

of all family members. While controlling behaviour in dangerous situations like running on the road might apply to children mainly, other situations like reckless driving pertain to adults as well.

For each of the three situations mentioned above, the family develops a standard of acceptable behaviour and dictates further how much an individual is allowed to deviate from that standard. This leads to their adopting one of four styles of behaviour control namely:

- (i) Rigid Behaviour Control - this implies a narrow or constricted standard with little or no opportunity of deviating from the norm set.
- (ii) Flexible Behaviour Control - bears the implication of reasonable standards with room for negotiation in certain contexts.
- (iii) Laissez-Faire Control - implies that a standard or rule is not an issue and total latitude is allowed.
- (iv) Chaotic Behaviour Control - is characterized by moving from one type of control to the next in a random fashion so that family members do not know what to expect.

While flexible behaviour has been identified as the most effective, chaotic behaviour control is the least.

In addition to the above six areas, the Family Assessment Device also focuses on general family functioning.

While Epstein, Bishop and Baldwin are quick to point out that the above six are by no means the only processes which operate in family functioning, they are of the opinion that these "have the most impact on the emotional and physical health of family members" (1980, p. 115).

The device is made up of sixty items altogether, each in the form of a statement. Item 32 for example, which deals with behaviour control, states that "we have rules about hitting people".

Respondents are given the choice of either strongly agreeing, agreeing, disagreeing or strongly disagreeing with this and all other statements.

These responses are given numerical values of one, two, three or four - with one being healthy and four, pathological. These numerical values are entered in the appropriate column on a special scoring sheet (see Appendix 2). Once these numbers have all been entered, the different columns, each representing a separate subscale (problem solving, communication, etcetera), are added separately. The sum of each subscale is then divided by the number of responses for that particular subscale. The

dividend in each case is either 1, 2, 3 or 4. Once again 1 is regarded as a healthy score and 4 a pathological score.

The reason for choosing this instrument, above others for use in this research are fivefold. Firstly, this device focused on four of the six processes which have been consistently linked to achievement behaviour and which forms the basis of this study, namely behaviour control, affective responses, affective involvement and communication. Secondly, this instrument, which has evolved from regular refinement and redesigning over a twenty five year period, has been described as the most clinically relevant instrument when working with families (Ibid.). This belief has been borne out by the fact that it has been widely used by Comley, 1973; Epstein and Westley, 1959; Guttman, Spector, Spector, Sigal and Pakoff, 1972; Westley and Epstein, 1975; Woodward, Santa-Barbra, Levin, Goodman, Streiner, Muzzin and Epstein, 1974. (Epstein et al., 1980).

Thirdly, the specific reliability measures of the different dimensions of the Family Assessment Device are particularly high. While behaviour control, affective involvement, problem solving, communication and roles have reliability measures in the seventies, for example, affective responses has a reliability coefficient of 0,83 and general functioning is at the 0,92 level (Epstein et al., 1980).

Fourthly, the validity of this instrument is also above question. This was confirmed in two ways:

- (a) A comparison of a group of clinic families with a group of non-clinic families showed that this instrument differentiated between the two in a highly, statistically significant manner at the 1% level. It is therefore evident that this device is effective in identifying problem areas in family functioning.
- (b) The administration of the Family Assessment Device, Locke Wallace Marital Satisfaction Scale and The Philadelphia Geriatric Mortis Scale on a random sample of 178 retired couples revealed that the Family Assessment Device was the most powerful predictor of family functioning among the three instruments - thus confirming its place as the "most relevant" clinical instrument in its field (Ibid., 133).

The fifth reason for the use of this instrument rather than any other stemmed from the fact that the Family Assessment Device is based squarely within the framework of general systems theory which maintains that:

1. "The parts of the family are interrelated.
2. One part of the family cannot be understood in isolation from the rest of the system.
3. Family functioning cannot be fully understood by simply understanding each of the parts.

4. Family's structure and organization are important factors determining the behaviour of family members.
5. Transactional patterns of the family system share the behaviour of family members" (Epstein et al., 1980, p. 117).

#### RESEARCH PROCEDURE

As Dornbusch et al. (1987) and Trotman (1977) have shown that ethnic factors mediate the effects of family dynamics on school achievement it was decided to work in a mono-cultural environment.

Considering that there is a definite paucity of research in this field among the Indian population it was decided to work within the Indian School System.

A letter was sent to the House of Delegates under whose jurisdiction all Indian Schools in South Africa fall, requesting permission to conduct this research at five of their schools.

The letter outlined the purpose of this study and requested the use of standard eight pupils from five secondary schools (The choice of these schools was based on the fact that they served similar working class communities). In addition to this letter, a letter from the Educational Psychology Department of the University of Natal, supporting this research proposal was also sent. Copies of the Family Assessment Device (Appendix 1) and a biographical questionnaire were also enclosed (see Appendix 3).

The reason for choosing to work with an adolescent group was as a result of the fact that research had already shown that family dynamics impacted upon school achievement at this developmental level (Dornbusch et al., 1987; Steinberg et al., 1989). The choice of a standard eight group in particular was based on the belief that as this was only the first year of the Senior Secondary Phase, these students still had almost three years of schooling to complete. Hence any possible programme to remediate for underachievement could still be implemented as there was sufficient time for the programme to be effective.

Approval for this research was given by the House of Delegates subject to the following provisos:

1. Participation of pupils should be on a voluntary basis.
2. The written consent of parents of pupils in the sample be obtained.
3. Completion of questionnaires be done outside normal teaching time.
4. All information obtained be treated confidentially, and
5. The prior permission of the Chief Executive Director is obtained if the findings are to be published.

(see Appendix 5).

Once this approval was received in writing the researcher then approached the principals of the five schools in order to explain the aims of the research and to solicit their support. At this point it was discovered that two of the schools earmarked for this project had students bussed in from more affluent

communities. As socio-economic status was one of the factors being controlled for in this study it was decided to exclude both these schools.

The principals of the three remaining schools were then requested for copies of the standard seven final examination results (that is of pupils presently in standard eight) and the I.Q. scores of these students.

The researcher intended to use this to identify a sample. With these data in hand, the researcher could identify his sample of achievers and underachievers in one of three ways:

- a) by using the Quintile Ranking System,
- b) by using arbitrary cutoff points,
- c) by the use of a Regression analysis.

#### **THE QUINTILE RANKING SYSTEM**

The Quintile Ranking System of identifying underachievers was considered as this method was used in Indian schools until 1987.

By this method the I.Q. scores were ranked in the following manner:

Table 1a

I.Q. Score	Ranked Score
131 +	1
116 - 130	2
101 - 115	3
95 - 100	4
< 95	5

The students marks were converted to percentages and ranked in the following order.

Table 1b

Percentage	Ranked Score
70% +	1
60 - 69%	2
50 - 59%	3
40 - 49%	4
< 40%	5

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The percentage ranked score was then compared to the students I.Q. ranked score.

A student whose Quintile rank score was two or less than his I.Q. ranked score would be identified as an underachiever. Hence a

student who gained 40 percent (rank score of 4) but who had an I.Q. of 120 (rank score of 2) would be identified as an underachiever ( $4-2=2$ ).

While this was a simple method to use to identify groups of achievers and underachievers, it was decided not to use this system as it has been shown to be unreliable.

In fact an article from the House of Delegates Education Bulletin was sent to all schools in 1987 requesting principals to stop using the Quintile Ranking System as it was ineffective. It was this circular in particular which caused the researcher to explore alternative avenues for identifying achievers and underachievers.

#### **THE USE OF ARBITRARY CUTOFF POINTS**

The second method which was considered for use in identifying possible achievers and underachievers was the use of arbitrary cutoff points. This was used by Shawinsky (1989). She identified achievers in her sample as students with I.Q.'s of at least 115 and with achievement scores of above sixty-five percent. Her underachievers on the other hand were identified as students with I.Q.'s of at least 115 and with achievement scores of less than fifty-five percent. Due to the fact that such arbitrary cutoff points lacks a scientific base it was decided not to use this system.

### THE USE OF A REGRESSION ANALYSIS

The third option open to the researcher was the use of a regression analysis. By this method a regression equation is used to plot a regression line and the sample of achievers and underachievers are identified on this basis. One of the major drawbacks of this system though is that it leads to functional definitions of these terms which are relevant to specific studies only. This in effect means that a student identified either as an achiever or underachiever in one study might not be so designated in others.

As there are no universally applicable rules to identify achievers and underachievers, and that his method was highly recommended by Shawinsky (1989) and Krige (1974) the latter having used it very successfully, it was decided to opt for this method of identifying achievers and underachievers.

Originally it was intended to use "Z" scores to compute the regression equation. Due to the fact however that this led to many scores being grouped together under one set of figures it became impossible to separate individual scores (see Appendix 6). It was therefore decided to compute the regression equation using raw scores. The regression line took the form of  $Y = bX$  where Y was the dependant variable (or english score) and X was the independent variable (or I.Q. score).

The statistical analysis showed co-efficient a to be 7.7 and co-efficient b to be 1.8. See Tables three and four for the distribution of raw scores and the regression lines.

Two lines parallel to the regression lines were used to separate about twenty-five percent of the highest and lowest achievers. (See lines A and B on figures one and two, pages 71 and 72). The reason for choosing to separate about twenty-five percent of the sample in this was as a result of Cass and Thomas' and Weisberg's (Education Bulletin, 1987) assertions that "underachievement occurs in 25 percent of schoolchildren". (Educational Bulletin, 1987, p. 35) While there are others like Green (1988) and Fine and Holt (1983) who believe that underachievement occurs in only about 10 to 15 percent of a school population it was decided to opt for the former as personal experience as a school counsellor has shown that the former is more likely in the schools used in this survey.

The regression analysis to identify the achievers and underachievers was computed separately for each school. It became evident that the distribution of I.Q. scores of student at school 3 were unusually high. When compared to the two other schools, it was found that twenty-six percent of pupils from school three had I.Q. scores above 127 as compared to only six percent in school one and three percent in school two. This comparison revealed further that at school three twenty-one percent of the students had I.Q. scores between 120 and 126 as compared to only five percent in school one and nine percent in

school two. Due to this huge discrepancy between school three and schools one and two and due further to the fact that according to the manual for the GTISA only about four percent of students have I.Q.'s above 127 and seven percent have I.Q.'s between 120 - 126 it was felt that the records of school three were possibly unreliable. It was therefore decided to exclude this school from the study (See appendix 7).

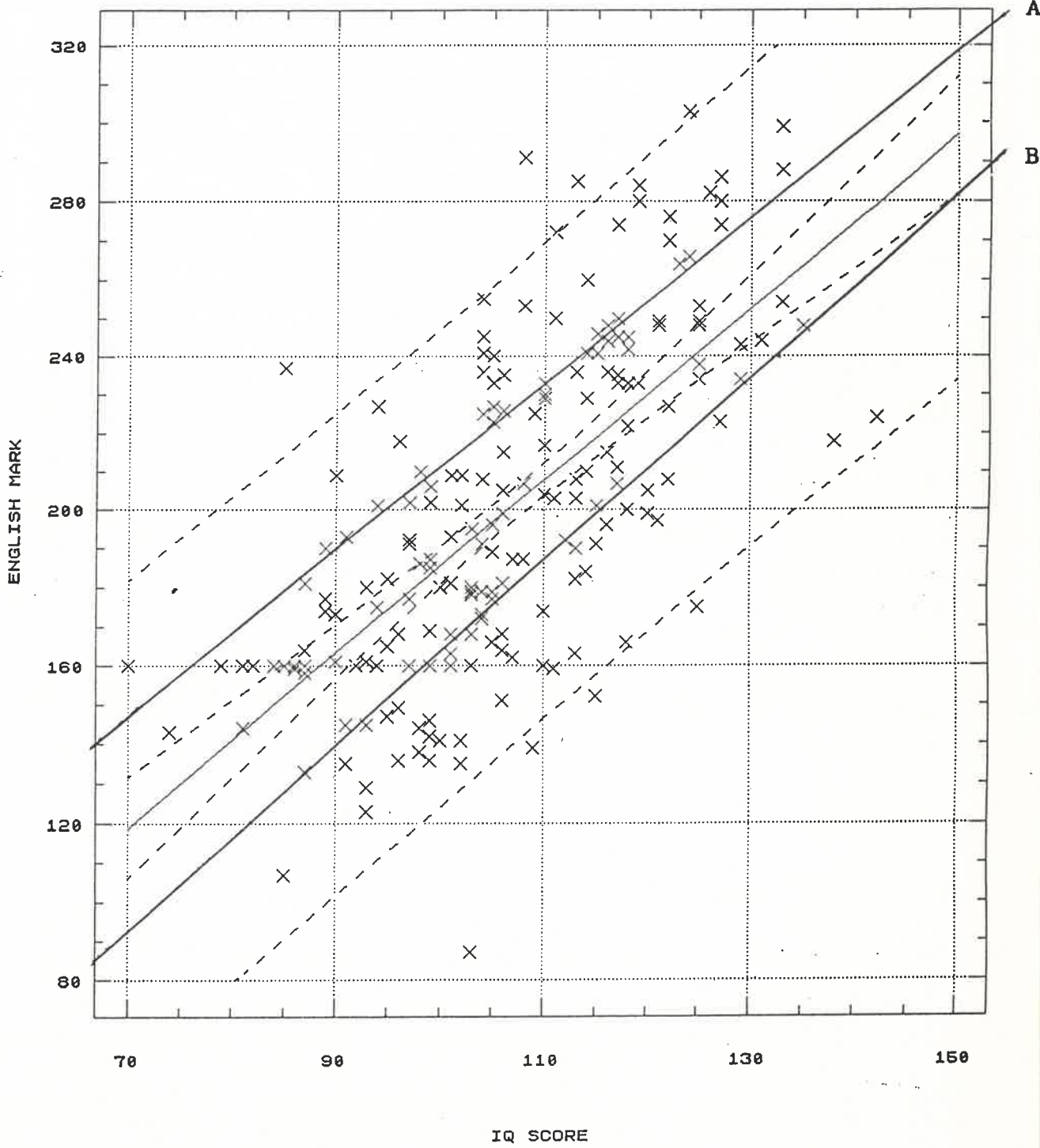
#### **DESCRIPTION OF POPULATIONS FROM WHICH SAMPLE WAS DRAWN.**

The two schools used in this study are both placed in the heart of working class communities. While school one has a population of about 1 200 students, school two caters for approximately 700.

According to school records most of the parents of students at these schools are employed in the unskilled labour force as machinists, shop assistants and factory hands. While some parents are employed in the clerical field and others in trade such as building and carpentry, these make up a much smaller number. In addition to this a very small group of parents are professionals such as teachers and nurses. Indigent pupils, that is those who depend upon government grants for their upkeep, constitute between twelve to fifteen percent of the school populations.

LINEAR REGRESSION PLOT

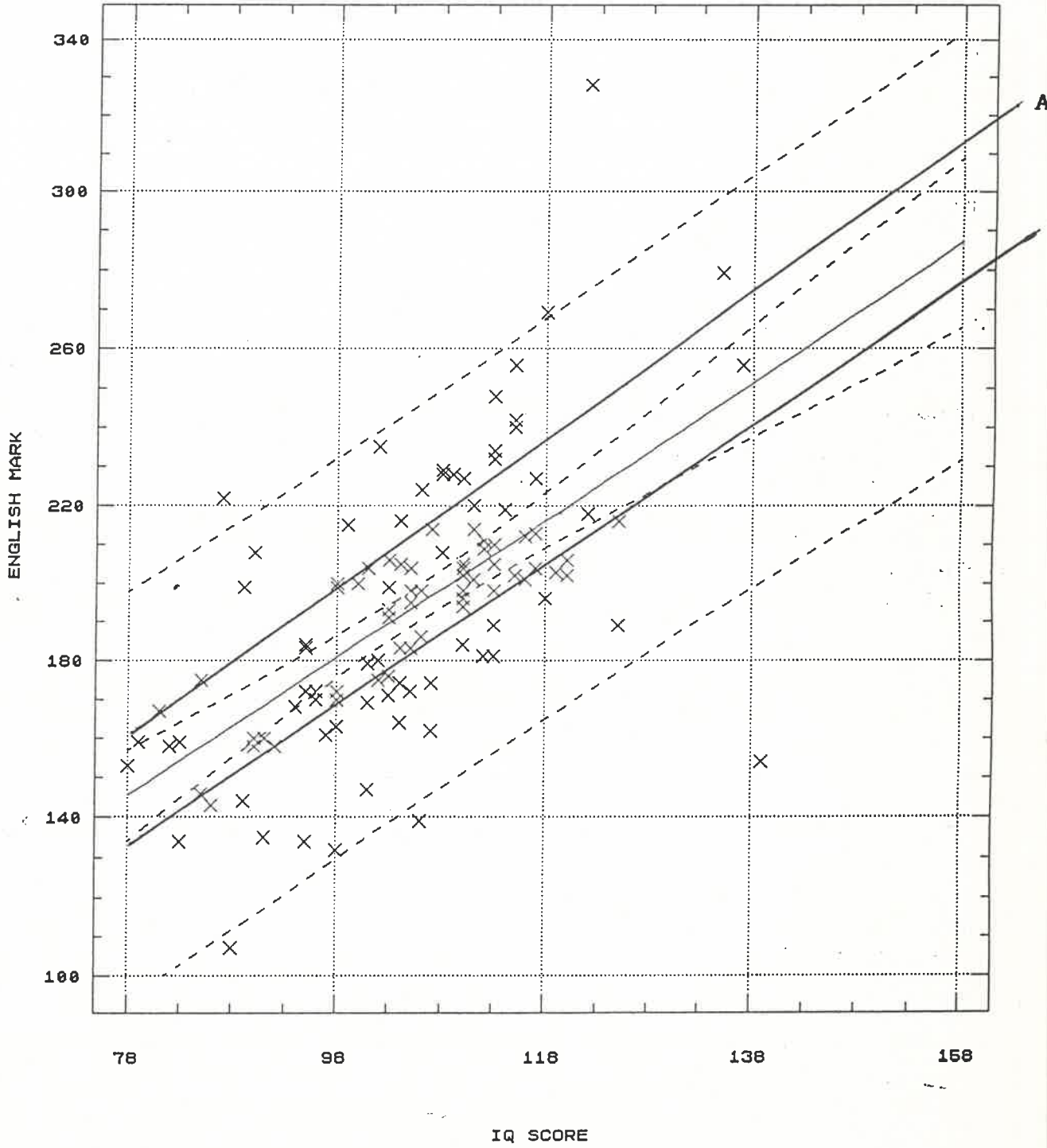
ENGLISH MARK VS IQ SCORE



SCHOOL 1

LINEAR REGRESSION PLOT

ENGLISH MARK VS IQ SCORE



Due to the fact that the Department of Education and Culture in the House of Delegates is an Own Affairs Department, the schools used in this study have only Indian children on their rolls. These children and their parents subscribe to one of three religious denominations, namely Christianity, Islam or Hinduism. In addition to this while there would be language differences between the different groups, most Indian pupils communicate in English both in and out of the home situation.

#### **THE SAMPLE**

Once the Regression Analysis was completed the researcher identified forty-four achievers (21%) and forty-nine underachievers (24%) in school one. School two on the other hand had twenty seven achievers (23%) and thirty-two underachievers (27%). There were one hundred and fifty two students altogether.

The researcher then visited both schools and met with most of the above students. He outlined the purpose of his research and asked for the pupils co-operation in this. At both schools all pupils agreed to participate once they had been informed about the fact that all they had to do was to complete the Family Assessment Device and a biographical questionnaire.

Each student was then given a letter (see Appendix 6) which was addressed to their parents. This letter outlined the purpose of this study and requested parents permission to use their children in this study. A reply slip was attached to each letter.

On the following day the reply slips were collected from pupils. Altogether five reply slips were not returned - two from school one and three from school two. All reply slips which were received indicated parents had no objection to their childrens' participating in this study.

The original sample which consisted of 152 pupils was now down to 92. This reduction of pupils was as a result of students leaving school, absenteeism and involvement in other projects. See table below for a break down.

Table 4

	School One		School Two		Total
	Achievers	Under Achievers	Achievers	Under Achievers	
Original Sample	44	49	27	32	152
Left School	3	9	4	10	26
Absent	41	40	23	22	126
	2	9	4	5	20
Involved in other activities	39	31	19	17	106
	2	4	5	3	14
Total	37	27	14	14	92

The Family Assessment Device and biographical questionnaires were administered separately at each school by the school counsellor of the school and the researcher. In keeping with the request by the House of Delegates this was done after school hours. Both forms were completed within an hour.

In selecting this sample the following possible confounding variables were controlled for:

- i. Race All students were chosen from the Indian Race Group. As Dornbusch et al. (1987) and Trotman (1977) have shown that family dynamics are mediated by ethnic factors it was decided to restrict this study to only one race group. As there is a dearth of research in this field amongst the Indian population, it was decided to restrict this sample to Indian students.
- ii. Age - All students were selected from the standard eight year and were between the ages of 14 years 2 months and 17 years 6 months. The choice of working with an adolescent group stemmed from the fact that as previous research was conducted on this age group (Dornbusch et al., 1987; Steinberg et al., 1989) it was felt that these results would be comparable.
- iii. Socio-Economic Status - As socio-economic status has been shown to affect school achievement (Carpenter et al. 1987) it was decided to control for this factor. This was done by choosing schools which served very similar working class environments.
- iv. Gender - As some studies have shown that family processes which lead to underachievement in males are not the same as family processes which lead to underachievement in females

(Krieger, 1974) it was decided to record the gender of each subject so as to allow for the analysis of data in terms of possible sex differences.

- v. Learning Disability or Mental Retardation - Students who were referred to the school psychologist either for learning disabilities or mental retardation were excluded from this study. This information was provided by the counsellor of each school.

The following factor was not controlled for

Intact Biological Families. While it was intended to control for this variable in this study, this was not possible due to the fact that twenty four percent of pupils lived within the extended family system. In addition to this slightly more than twelve percent of students at both schools came from homes where parents were either separated or divorced and six percent of students had widowed parents. As excluding students from these households would have resulted in a particularly small sample (n=46) it was decided not to control for this factor.

#### **SUMMARY**

This chapter outlined the purpose of this study and provided details about the sample used. In addition to this the research procedure was outlined and details were provided about the instruments which were adopted for use in this study. Details

justifying the utilization of examination results over a standardized achievement test were also provided.

Chapter four consists of the results obtained and a brief description of the statistical procedures used.

## CHAPTER FOUR

### RESULTS

This chapter presents the results obtained and describes the statistical procedures used in the analysis of these results.

### COLLECTION OF DATA

As already mentioned the collection of data was done at two secondary schools. In total ninety two copies of the Family Assessment Device were completed.

### STATISTICAL TECHNIQUE

The Mann-Whitney U test was applied in order to ascertain whether statistically significant differences existed between families of achievers and families of underachievers in respect of their patterns of:

1. Problem Solving,
2. Communication,
3. Roles,
4. Affective Responses,
5. Affective Involvement and
6. Behaviour Control

This technique was chosen above others as Siegel (1956) pointed out that in addition to being "the most powerful" (1956, p. 116) of the non-parametric tests, the Mann-Whitney U test was the most widely used when focusing on two independent groups. The two independent groups focused on in this study were achievers and

underachievers. The reasons for the popularity of this technique, according to Watson and McGraw (in Shawinsky, 1989) could be attributed to the fact that this procedure is particularly sensitive to differences in central tendency between the distributions of two groups.

#### **ANALYSIS OF DATA**

It was decided to analyze the data obtained in two ways. Firstly the results of the analysis of the Family Assessment Device of achievers were compared to the results of the underachievers for both sexes together. Secondly the results of the achieving boys were compared to the results of the underachieving boys and the results of the achieving girls were compared to the results of the underachieving girls.

In view of the fact that certain researchers believe that family dynamics affect achievement behaviour in males and females in different ways (Winterbottom in Krige, 1974), and others maintain that this is not so, it was decided to analyse the data for boys and girls both together and separately. The intention in analysing the results in these ways was to ascertain whether achievement behaviour in boys and girls was affected by similar or different family dynamics.

Before a detailed analysis of the results was undertaken it was quite evident that there were more male underachievers than female. The achieving group on the other hand consisted of more females than males. A closer comparison of both groups revealed

that the achieving group was made up of forty-three percent boys and fifty-seven percent girls while the underachieving group comprised of seventy one percent boys and twenty-nine percent girls.

## RESULTS

Table 5

a. Achievers verse Underachievers - Both Sexes

Family Dynamics	Achieving Males and Females compared to Underachieving Males and Females
Problem Solving	p = 0.64
Communication	p = 0.33
Roles	p = 0.11
Affective Responses	p = 0.24
Affective Involvement	p = 1.20
Behaviour Control	p = 0.04*

Behaviour control is the only dimension on which there was a statistically significant difference between achievers and underachievers of both sexes considered together (  $p < 0.05$  ).

This result points in the direction that children of both sexes who were achievers, as defined in this study, were more likely to have families who rank high on behaviour control. Conversely children who were defined as underachievers in this study were,

according to these results, more likely to come from homes where families ranked low on behaviour control.

In addition to this finding, the above table reveals that there were no significant differences between achievers and underachievers on the dimensions of problem solving, communication, roles, affective responses and affective involvement.

Table 6

b. Female Achievers verse Female Underachievers

Family Dynamics	Achieving Females compared to Underachieving Females
Problem Solving	p = 0.85
Communication	p = 0.76
Roles	p = 0.86
Affective Responses	p = 0.33
Affective Involvement	p = 1.25
Behaviour Control	p = 0.01*

Behaviour control was also the only dimension in which a significant difference was found between families of female achievers and underachievers ( $p < 0.05$ ), as described in this study (see table above).

The result suggests that daughter's who achieved highly at school are more likely to come from homes where the families ranked high

on behaviour control. On the other hand daughters who underachieved tend to come from homes in which the families ranked low on behaviour control.

There were no significant differences however between families of achievers and underachievers on the other five dimensions.

Table 7

c. Male Achievers verse Male Underachievers

Family Dynamics	Achieving Males compared to Underachieving Males
Problem Solving	p = 0.56
Communication	p = 0.18
Roles	p = 0.21
Affective Responses	p = 0.16
Affective Involvement	p = 0.04*
Behaviour Control	p = 0.28

The only significant difference to emerge from the comparison of results between male achievers and underachievers was on the dimension of affective involvement ( $p < 0.05$ ).

This result suggests that males who achieved highly were more likely to have families who ranked high on affective involvement. Males who were described as underachievers on the other hand, were according to this study, more likely to come from families who ranked low on affective involvement.

Further it was found that there were no significant differences between families of achievers and families of underachievers on the remaining five dimensions which included problem solving, communication, roles, affective responses and behaviour control.

The application of these results will be discussed in chapter five.

## CHAPTER FIVE

## DISCUSSION

## INTRODUCTION

The purpose of this study, as pointed out in chapter three, was to investigate the possible links between family dynamics and academic achievement in an adolescent sample.

Previous research in this field has shown that only certain aspects of family functioning have been consistently linked to achievement behaviour. Hess and Holloway (in Dornbusch, 1987) for example have shown in their review of literature on family functioning and academic achievement that the following family processes were consistently linked to achievement behaviour:

1. Communication between parent and child,
2. Positive affective relationships, that is
  - a. positive affective involvement, and
  - b. positive affective responses, and
3. Discipline and control strategies.

The present study was aimed at exploring further the links between the above family processes and academic achievement in a South African Indian sample of fourteen to seventeen year olds.

In addition to this, this study also focused on two family dynamics, which have not been consistently linked to achievement behaviour. These were:

4. Family roles and
5. Problem Solving.

While both these processes might not have been linked to achievement behaviour as often as the previous three mentioned, there are researchers who believe that these two processes are linked to achievement behaviour (Boike et al, 1978; Green, 1989).

In investigating this link between the above family dynamics and achievement behaviour, the researcher began by using a regression equation to identify achievers and underachievers at two Indian schools in the Midlands city area. Once these students were identified they were asked to complete the Family Assessment Device which assessed the following six dimensions of family functioning:

1. Communication,
2. Affective Involvement,
3. Affective Responses,
4. Behaviour Control,
5. Family Roles and
6. Problem Solving.

The scores achieved on the Family Assessment Device on the above dimensions for each family were then correlated with the final English mark for the child from that family (identified as an achiever or underachiever) in order to see whether any pattern emerged.

The results of this correlation pointed in the direction that while certain family dynamics, like behaviour control and affective involvement, were significantly linked to achievement behaviour, other process, like communication and problem solving, were not.

Results of each of the six dimensions mentioned previously are discussed in detail below.

#### **BEHAVIOUR CONTROL**

Of the six family processes focused on in this study it was found that behaviour control was the most consistently linked to achievement behaviour.

Baumrind (in Lewis, 1981) for example found that in a series of three studies behaviour control was always linked to achievement behaviour in children.

The results of the present study revealed similar findings namely:

- (i) In a comparison of female underachievers and female achievers, it was found that families of female achievers ranked significantly higher on the behaviour control dimension than did families of female underachievers.
- (ii) In a comparison of the entire group of achievers and underachievers (that is both males and females

together), it was also found that families of achievers ranked higher on the behaviour control dimension than families of underachievers.

- (iii) There was no significant difference though between male achievers and male underachievers on the behaviour control dimension.

The first two results serve to extend to an adolescent population Baumrind's findings which were restricted to a very young sample. While her studies showed that behaviour control was linked to achievement behaviour in early schooling children, the first two findings of this study confirmed that this holds true for the adolescent population as well.

In addition to this, this study has shown further that Baumrind's findings which were restricted to a white middle class sample also holds true for a part of the South African Indian working class population. This confirms that behaviour control as an antecedent to achievement behaviour is possibly not restricted to any particular group but also holds true in socio-economically heterogeneous and cross-cultural populations of different developmental levels.

However this is not the first time that Baumrind's findings were extended to a cross cultural population. In an extensive American study of about eight thousand White, Asian and Hispanic subjects Dornbusch et al. (1987) concluded that families of

achievers ranked significantly higher on the behaviour control dimension than did families of underachievers.

Dornbusch et al.'s (1987) study was similar to the present study as both used adolescent population groups.

What was interesting in Dornbusch et al.'s findings was that while all parents of achievers ranked significantly higher on the behaviour control dimension, White and Hispanic parents of achievers scored higher on authoritative (democratic) control while Asian parents of achievers scored higher on authoritarian (rigid) control. The permissive parenting style was not linked to achievement behaviour in any of Dornbusch et al.'s sub groups.

The behaviour control dimension of the Family Assessment Device does not differentiate specifically between authoritarian, permissive and authoritative parenting styles. Nevertheless it does describe four types of behaviour control which are very similar to the Baumrind and Dornbusch typologies.

The first type of behaviour control identified in the Family Assessment Device is rigid behaviour control ("standards are narrow and specific [with] minimal negotiation ... across situations". (Epstein et al., 1980, p. 128)). This is closely akin to Baumrind's (1967) and Dornbusch et al.'s (1987) authoritarian form of control. The second type of behaviour control described by Epstein et al. is flexible behaviour control ("standards are reasonable [with] opportunities for negotiation

and change". (1989, p. 128)). This type of behaviour control is very similar to Baumrind's and Dornbusch et al.'s authoritative control.

Thirdly laissez-faire behaviour control on the Family Assessment Device ("no standards are held and total latitude is allowed" (Epstein et al., 1980, p. 129)) is closely linked to Baumrind's and Dornbusch et al.'s permissive control.

According to Epstein et al. (1980) flexible (or authoritative) behaviour control is the most effective, while a fourth type they describe as chaotic behaviour control ("unpredictable and random shifting between ... styles) is the least effective. (For a detailed discussion on behaviour control refer to chapter two).

In the present study the families of the entire group of achievers (that is both male and female together) and the female sub group of achievers ranked significantly higher on the behaviour control dimension than did families of underachievers. This meant that the families of achievers in these two groups engaged in flexible (or authoritative) behaviour control while the families of underachievers did not.

This result is totally in keeping with findings by Baumrind (1967) and Steinberg (1989) whose results also revealed that achievement behaviour in the classroom is linked to flexible or authoritative behaviour in the home situation. In addition to this, these results are in keeping with Dornbusch et al.'s

findings for his White and Hispanic samples, but not for his Asian sample, which showed that authoritarian (rigid) behaviour control was linked to achievement behaviour in the Asian American population. Why is it that authoritative (Democratic) or flexible behaviour control is linked to achievement behaviour in South Africa's Asian population, while authoritarian (rigid) behaviour control is linked to achievement behaviour in America's Asian population?

While the question appears to be a straight forward one on the surface, the underlying implications are more complex. It must be remembered for example that the term Asian does not necessarily imply a homogeneous population. While the Asian population in the present study refers only to Asians of Indian origin, it is quite possible that, given the size of Dornbusch et al.'s sample (almost eight thousand), their Asian population could quite likely have consisted of students of Indian, Chinese and Japanese population groups among others. Hence any attempt to compare the two very closely might be a futile exercise as they could be very different samples in terms of national origins and lifestyles.

In spite of this, one possible reason for this discrepancy between these two samples is found in Chen and Uttal's (1988) study. Their results revealed that authoritarian (rigid) behaviour control was linked to achievement behaviour in more traditional Asian families and authoritative (democratic or flexible) behaviour control was linked to achievement behaviour

in more westernized families. This finding has been confirmed by Hess and Mc Devitt (1984).

Given the fact that the local Indian population in this study are mainly fourth and fifth generation Indian, who together with their forbearers have been exposed to western influences for the past one hundred and thirty years, it is quite possible that the local Asian population are more westernized than their American counterparts. Moreover given the extent of western education in South Africa (to which the Indian population attaches great value) and the western based mass media it is quite possible that the local sample could have imbibed strong western values and act as westerners would. Hence the results of this study are more in keeping with results of other western cultures, rather than more traditional Asian societies.

If this is in fact the case, then this does not explain the third finding of this study which is that there is no significant difference between families of male achievers and male underachievers on the behaviour control dimension.

While this is not in keeping with findings by Baumrind (1966), Dornbusch et al (1987) and Steinberg et al. (1989), it is in line with Shawinsky's (1985) results.

In a study of first year South African University students, Shawinsky found that there were no significant differences between families of achievers and underachievers on the behaviour

control dimension. As this result was not in keeping with previous findings Shawinsky attributed this discrepancy between her results and others to the fact that her sample was particularly small. In addition to this she pointed out that her differentiation of achievers and underachiever was done arbitrarily.

In spite of these reservations by Shawinsky, though Lewis (1981) believed that Shawinsky's findings, (which showed that behaviour control was not linked to achievement behaviour) was valid. Lewis is of the opinion that behaviour control does not precede achievement behaviour and is not linked to it.

This view is supported by the third finding (listed above) in this study. Lewis (1981) pointed out that behaviour control could not be linked to achievement behaviour as this is not in keeping with Attribution Theory. According to Lewis, attribution theory states that achievement behaviour is promoted by inner control and not by outer forces like parental control. She pointed out further that while many researchers believe that behaviour control precedes achievement behaviour, there is little agreement by them as to how precisely behaviour control promotes achievement. This view is confirmed by Arbuckle et al. (1988).

In the present study the findings are divided into three parts. Of these one part (which shows that behaviour control is not linked to achievement behaviour) is in line with Shawinsky's

finding and the other two parts contradicts this finding and Lewis's expectations.

The specific question that arises at this point is why is there a significant difference between female achievers and female underachievers on the behaviour control dimension and not between male achievers and male underachievers?

This could be due to the possibility that the family processes which lead to achievement behaviour in boys are different from family processes which lead to achievement behaviour in girls. Rosen and D'Andrade (in Krige, 1974) for example found that male achievers came from families in which the mothers were approving and accepting. Female achievers on the other hand according to Crandall et al. (in Krige, 1974) came from families in which the mothers were stricter and colder.

Baumrind (1966) does not agree with this reasoning and pointed out that the authoritarian parenting style (strict and cold) according to her results, is not linked to achievement behaviour. Moreover she pointed out that authoritative (democratic) behaviour control is linked to achievement behaviour in both boys and girls.

A review of the recent literature indicates that there is greater support for Baumrind's (1966) belief than there is for Crandall et al.'s (in Krige, 1974). (Baumrind, 1983; Dornbusch et al., 1987; Steinberg et al., 1989). The question then as to why female

achievers differed significantly from female underachievers on the behaviour control dimension, and the male sample did not, does not appear to have been satisfactorily answered in the literature reviewed.

A possible explanation could be that female achievers of South African Indian origin have greater restrictions placed upon their social lives and leisure time by their families. Hence they have more time to devote to academic matters. Female underachievers on the other hand could have fewer of such restrictions placed upon them and so have less time to spend on academic matters - thus preventing them from achieving to their full potential. As there is no support for this view in the literature though this must be seen as speculation on the part of the present researcher.

Further no indications could be found in the literature as to why there was no significant difference between male achievers and underachievers on the behaviour control dimension.

#### **AFFECTIVE INVOLVEMENT**

A review of the literature on family functioning and academic achievement has revealed that affective involvement has been consistently linked to achievement behaviour (Baumrind, 1966; Baumrind et al., 1967; Dornbusch et al., 1987; Estrada et al., 1987; Morrow et al., 1961; Rimm et al., 1988, Steinberg et al., 1989).

Morrow and Wilson (1961) for example have shown that parents of adolescent achieving boys engage in more sharing activities with their sons and are more encouraging and affectionate than parents of underachieving boys. This, according to Morrow et al., hold true for all socio-economic groupings.

The present study, conducted primarily upon working class children, has come up with very similar findings. The results of the survey of achieving boys differed significantly from the results of the underachieving boys on this dimension. Sixty-nine percent of achieving boys for example strongly disagreed with item thirteen which stated that "you only get the interest of others when something is important to them" as compared to thirty-one percent of underachievers who strongly disagreed with it. On a similar item, item thirty seven ("we show interest in each other when we can get something out of it") fifty-five percent of achievers disagreed while forty-five percent of underachievers agreed with it.

The similarity of results between Morrow et al.'s American based study and the present South African based survey points to the very likely possibility that affective involvement is linked to achievement behaviour in boys cross-culturally and in socio-economically heterogeneous populations as well.

This belief has been confirmed by Estrada et al. (1987) who conducted a very similar study on forty-seven Caucasian children. These children, like Morrow et al.'s sample, were drawn from a

socio-economically heterogenous population. Estrada et al. concluded that positive affective involvement from childhood onwards was linked to academic achievement behaviour at least until the early adolescent years.

Estrada et al. however did not restrict their sample, as was done by Morrow et al., to the male population only. Their sample included a sizeable group (forty-nine percent) of females. Their findings extended the results of Morrow et al.'s to show that affective involvement in the home situation was linked to academic achievement in both the male and female population.

Rimm et al. (1988) echoed similar sentiments when they declared that their results showed that a positive affective involvement was linked to achievement behaviour. Their study was different from the others mentioned as it included a sample of twenty-two students who ranged from the first to the eleventh grades and were all underachievers. Their families were assessed on the affective involvement dimension and these results were compared to results of examined achievers on a similar scale.

Rimm et al.'s results as pointed out earlier, showed that the achievers of both sexes came from homes that ranked high on the affective involvement dimension, while the underachievers of both sexes did not.

Similar views have been echoed by Baumrind (1966); (1983) and Baumrind and Black (1967). The findings of Baumrind (1966; 1983)

and Rimm et al. are different from the present study as they showed that affective involvement affects school achievement at all developmental levels and not only during adolescence.

Despite the fact that there is a huge body of evidence which shows that affective involvement is linked to achievement behaviour there are some researchers who disagree with this.

Shawinsky (1989) for example found that families of underachievers did not differ significantly from families of achievers on the affective involvement dimension. Her study is similar to the present study in that they both included male and female subjects and they were both conducted on samples drawn from the local, South African population. The point of difference, however, is that while Shawinsky's study was conducted on white university students, the present study was restricted to Indian high schoolers.

The results of both Shawinsky's and the present studies suggest that in:

- a) a mixed sex samples of achievers and underachievers, and
- b) female samples of achievers and underachievers

There is no link between positive affective involvement in the home situation and achievement behaviour in the classroom, for either the Indian or White groups studied.

This, according to Crandall et al. (in Krige, 1974), also holds true for the American female population. In fact they went, so

far as to say that not only was a positive affective involvement, not linked to achievement behaviour but that "stricter and colder mothers" (Krige, 1974, p. 24) had more academically competent daughters than mothers who were warm and affectionate.

While there are clearly differing views on the effects of a positive affective involvement on academic achievement behaviour, there are certainly more researchers who believe that the two are linked (Baumrind, 1966; Baumrind, 1983; Baumrind and Black, 1967; Dornbusch et al., 1987; Estrada et al., 1987; Morrow et al., 1961; Rimm et al., 1988; Steinberg et al., 1989) than those who do not (Crandall et al., in Krige, 1974; Shawinsky, 1989).

#### COMMUNICATION

Communication within the home and family setting, according to Shawinsky (1989) is not linked to achievement behaviour in the classroom.

In an in-depth study of thirty university students from a local university which caters primarily for Afrikaans speakers, Shawinsky concluded that there was no significant difference between achievers and underachievers on the dimension of communication.

The present survey conducted entirely upon a group of Indian high schoolers has revealed very similar findings. Here to, it was shown that the families of achievers did not differ significantly from families of underachievers on this dimension.

Not only does this study serve to confirm Shawinsky's finding that communication in the family setting is not linked to achievement behaviour, it also serves to show that this is as true in the South African Indian situation, as it is in an Afrikaaner context.

Neither of these results is in keeping with findings by overseas researchers.

Wynn, Jones and Al-Khayal (1982) for example have shown that clearly-focused, well structured and task appropriate communication in the home situation is linked to achievement behaviour in the classroom. They found that in homes where family communication met these three criteria, the children were described as academically competent both by peers and teachers alike.

Wynn et al.'s study was different from the present study though in that while this study focused on fourteen to seventeen year old boys and girls, Wynn et al. restricted their sample to ten year old boys.

Another study by Fisher and Jones (in Green, 1989) which focused entirely upon seven year old males also concluded that communication in the family was linked to academic achievement in the school situation.

It appears from both these studies that family communication is linked to achievement behaviour at least during the early schooling years. The present study suggests that this may not be so during adolescence. Perhaps during adolescence the individual is in the process of establishing his (her) own identity. This in many instances means a partial breaking away from the family fold. Hence communication in the family may not be as important to the adolescent as it is to the early schooler whose significant others are still very much restricted to the home situation. Perhaps therefore while unhealthy communication patterns could be serious enough to cause underachievement in the early schooling years, it has a lesser effect during adolescence.

Another possible reason for the discrepancy between the results of the South African studies and the findings of overseas studies on the communication dimension could be due to cultural factors.

Trotman (1977) pointed out that the effects of family processes on academic achievement are mediated by ethnic factors. This finding was confirmed by Dornbusch et al. (1987). Hence while it is possible, due to factors peculiar to the South African situation, communication in the family is not linked to achievement behaviour, it could still be a contributory factor to academic achievement within other cultural settings.

Whatever the reason for the discrepancy, it certainly appears as if more research needs to be done within this field before any final conclusions can be reached.

**FAMILY ROLES**

As pointed out in chapter two, roles is one of the family processes in this study which has not been consistently linked to achievement behaviour in the classroom setting.

This was confirmed by Shawinsky who showed that there was no significant difference between families of achievers and underachievers on this dimension as assessed on the family assessment device.

The present study which has used exactly the same instrument as Shawindky did has revealed similar findings. The families of achievers did not differ significantly from families of underachievers in terms of family roles.

The present study supported Shawinsky's finding in that family roles were not linked to achievement behaviour in the Indian race group as well.

The present findings, and that of Shawinsky, are not in keeping with findings by Green (1989) and Rimm et al. (1988).

Green (1989) believes that family roles are linked to achievement behaviour, particularly in the field of underachievement. He outlined the case of a family who because of more serious problems covertly allocated the role of underachiever to a bright child.

Once the child accepted this role and showed signs of the underachievement syndrome, the family quickly latched onto this as their main concern and were able to shelve their more serious problems. The family could continue in this way as long as the underachievement persisted. In this way the underachievement in the classroom served a positive stabilizing function in that it helped keep the family together while they focused on the underachiever and not on their other more serious problems that could have threatened the unity of the family.

Green (1989) therefore believes that when underachievement is used to maintain the homeostasis in the family, the allocation of family roles is an important link to achievement behaviour.

Another study, whose results also differed from the present study in that it revealed that family roles were linked to achievement behaviour was conducted by Rimm et al. (1988)

They showed that family roles was linked to achievement behaviour in the way the family allocated and withdrew roles.

They pointed out that previous research by Albert (1980) and Bloom (1985) had shown that achievement behaviour was linked to "specialness" in the family. (Rimm et al., 1988, p. 354). The child who, due to birth order or any other reason, was designated as special, was likely to end up as an achiever in that family.

Should that specialness be removed however, due to the birth of a sibling for example, that special child was likely to show signs of underachievement.

More than half of Rimm et al.'s sample of underachievers were once achievers who had their specialness removed, as a result of the birth of a sibling or the marriage of a parent.

It does appear to be clear that in cases as pointed out by Green (1989) and Rimm et al. (1988), family roles are important in achievement behaviour. In spite of this though, the present study has found that family roles were not linked to achievement behaviour in this sample.

#### **AFFECTIVE RESPONSES**

Positive affective responses have been consistently linked to achievement behaviour together with positive affective involvement (Baumrind, 1966; Dornbusch et al., 1987; Steinberg et al., 1989); however there are some studies which show that positive affective responses on their own are not linked to achievement behaviour.

An example of such a study is by Shawinsky (1989). Her study revealed that there was no significant difference between families of achievers and families of underachievers on this dimension.

The present study confirmed this finding. In a comparison of families of achievers and underachievers it was found that there was no significant difference on the affective involvement dimension between:

- a) families of male achievers and male underachievers,
- b) families of female achievers and female underachievers, and
- c) families of male and female achievers together and male and female underachievers.

These results however are not in keeping with findings by Steinberg et al. (1989). They showed that in a study of one hundred and twenty families, positive affective responses were linked to achievement behaviour. Their results revealed specifically that in families where children were responded to in a warm and supportive manner, the children "tended to be better in school" (Steinberg et al., 1989, p. 1430).

These findings are supported by Baumrind (1966; 1983) who found similar results in studies conducted on early schooling children. Positive affective responses according to Baumrind's findings, led to children performing competently in the academic setting.

The extension of Steinberg et al.'s results on adolescent children to early schooling children by Baumrind points to the likelihood that positive affective responses are linked to achievement behaviour at all levels.

While Baumrind supports Steinberg et al.'s findings in that they both show that positive affective responses are linked to achievement behaviour, the present study does not support these findings.

One possible reason for the discrepancy between the present finding and previous studies mentioned is hinted at in an article by Dornbusch et al. (1987). They pointed out that positive affective responses were linked to achievement behaviour via the authoritative (democratic) parenting package which consisted of behaviour control, warmth and acceptance. They pointed out further that in their sample of Asian families authoritative parenting was not linked to achievement behaviour, while authoritarian (rigid) parenting (strict and cold) was. This was confirmed by Chen et al. (1988) and Hess et al. (1984).

If this is indeed the case, then the reason for positive affective involvement being linked to achievement behaviour in this sample is not clear.

As a survey of the literature did not provide satisfactory answers to this question, it does seem as if more research in this field is necessary before this question is satisfactorily answered.

#### **PROBLEM SOLVING**

A survey of the literature on academic achievement and family functioning has revealed that problem solving, within the family

context, has not been consistently linked to achievement. behaviour (Hess and Holloway in Dornbusch, 1987).

The present study has confirmed this finding. In a comparison of families of achievers and underachievers it was found that there were no significant differences between families of achievers and underachievers on this dimension.

While the results of the present study confirms the view of Hess and Holloway, it is in contradiction of certain other findings.

Shaw and White (1960) for example found that effective problem solving in the family situation was linked to achievement behaviour in the classroom at high school level. This finding was confirmed by Shawinsky (1989) who showed that problem solving in the family was also linked to achievement behaviour at university level.

In a survey of four hundred and sixty eight primary school pupils Boike et al. (1978) confirmed further that problem solving was linked to academic achievement behaviour. They showed further however that while instrumental problems (dealing with basic issues of food, clothing and shelter) were linked to milder forms of underachievement, a lack of resolution of affective problems (that is problems dealing with feelings) was linked to more severe forms of underachievement.

Despite the fact that problem solving has not been consistently linked to achievement behaviour, there are some researchers who believe that there is a link between the two. The results of the present study though is not in keeping with those results which show that the two are linked and is in keeping with the commonly held view, that is problem solving is not linked to achievement behaviour (Hess and Holloway, in Dornbusch, 1987).

#### **SUMMARY**

This chapter discussed in some detail the effects of behaviour control and affective involvement within the family situation. Further it described how Baumrind's (1983) finding, which revealed that these processes were linked to achievement behaviour in children, have been extended to include a South African Indian adolescent sample.

In addition to this, this chapter also focused on two other processes (communication and affective responses) which have been consistently linked to achievement behaviour in other studies, but which were not linked to achievement behaviour in the present study. The possible reasons for this discrepancy were discussed in some detail.

Finally, this chapter focused on two processes (family roles and problem solving) which have not been consistently linked to achievement behaviour. It was shown that the present results confirmed the commonly held belief that both these processes are not linked to achievement behaviour.

## CHAPTER SIX

## CONCLUSION

## INTRODUCTION

This study was aimed at investigating the possible link between family dynamics and achievement behaviour.

This research was prompted by the widespread belief concerning the effects of home and family processes on academic achievement at school level. One has merely to browse through some family magazine or certain newspapers to find views by Child Rearing and Educational Resource people on the ways families in general and parents in particular can enhance academic achievement behaviour.

There are also numerous books in the "family press" tradition which outline what are supposedly the better ways of child rearing.

The present researcher was keen to know whether there was a verifiable basis for the beliefs expounded in these books and popular magazines. Hence this study.

This study investigated specifically the links between:

1. Problem Solving,
2. Roles,
3. Communication,
4. Affective Involvement,

5. Affective Responses and
  6. Behaviour Control
- and academic achievement behaviour.

As previous research has shown that affective involvement, affective responses, communication and behaviour control were linked to achievement behaviour in both overseas (cross-cultural) student samples and local (white) student samples, the researcher was keen to see if these were linked to achievement behaviour in the South African Indian sample. As Dornbusch et al. (1987) and Trotman (1977) have both shown that the effects of family dynamics on achievement behaviour are mediated by ethnic factors, it was not advisable to predict the outcome of this study by extrapolation from other studies.

What did emerge from this study was that of all the six processes listed above, only two were linked significantly to achievement behaviour in the local Indian, adolescent sample. These were behaviour control and affective involvement.

Behaviour control was linked to achievement behaviour in the sample of both sexes and in the subgroup of the achieving girls. There was no significant link between behaviour control and achievement behaviour in the sample of achieving boys.

Affective involvement on the other hand was linked to achievement behaviour in the sample of male achievers and was not linked to achievement behaviour in the female or mixed sex samples.

None of the other processes was linked to achievement behaviour in either the mixed sex or single sex subgroups.

Certain questions arise from these findings: why is it that behaviour control was linked to achievement behaviour in the female subgroup and not in the male? and why was affective involvement linked to achievement behaviour in the subgroup of male achievers and not in the female achiever subgroup? Further, why was it that none of the other processes (Affective Responses, Problem Solving, Roles, Communication) was linked to achievement behaviour in the present sample?

The first two questions seem to suggest that behaviour control is linked to achievement behaviour in girls and affective involvement is associated with achievement behaviour in boys. This seems unlikely as the first finding of this study showed that behaviour control was linked to achievement behaviour in a mixed sex sample, that is of boys and girls. When the sub-group of boys was looked at on its own though, it was found that behaviour control was not linked to achievement behaviour in males.

Perhaps this discrepancy between male and female achievers on the behaviour control dimension is associated with different child rearing practices for males and females in some sections of Indian society. It is widely supposed that Indian parents are stricter towards their daughters and more indulgent towards their sons. In a family of adolescent children of both sexes for

example, it is very likely that the daughter would be responsible for numerous household chores while the son would have fewer. Also the daughter would usually be given fewer chances of socializing with peers outside the home situation, while the son has greater freedom in this respect.

This may mean that as the daughter is restricted more to the home situation, due to a more stringent form of behaviour control, she is more likely to spend more time on academic matters. Hence behaviour control may impact directly upon the time she spends on her schoolwork, which leads to her gaining better results in tests and examinations. The son who is given greater freedom on the other hand, may not show the positive effects of behaviour control in the academic sphere.

Behaviour control is however not the only process which has been linked to achievement behaviour. Affective involvement has also been associated with achievement behaviour. Morrow et al. (1961) and Rimm et al. (1988) have shown that parents who were more empathically involved in the activities of their children were more likely to have children who achieved highly in the school situation than parents who were not. In the present sample it therefore appears as if the positive effects, which were lost to the boys through behaviour control, they gained through affective involvement. On the other hand the positive effects of affective involvement, lost to the girls, they gained via behaviour control.

Previous research though has shown that there were no such discrepancies between male and female subjects. Baumrind (1966), Dornbusch et al. (1987) and Steinberg et al. (1989) for example have all shown that behaviour control and affective involvement were linked to achievement behaviour in both boys and girls in their American samples.

Perhaps the discrepancy between the findings of this study and the findings of American researchers is due to the fact that the local Indian population are more entrenched in sex role stereotyping than their American counterparts.

Perhaps with the changing trends in child rearing practises in the Indian community in future generations, the effects of such stereotyping would disappear. This might then mean that the family processes which lead to academic achievement behaviour in boys would probably be the same as the family processes which lead to achievement behaviour in girls.

#### IMPLICATIONS OF RESULTS

Whatever the situation in the future though, the researcher believes that it is important for todays parents to be made aware of the present findings, particularly if these findings are confirmed by future researchers.

Parents need to be aware of this for as heads of the household and final policy makers in the family, their decisions will have

an impact, either directly or indirectly on classroom achievement behaviour.)

In addition to this all groups and individuals who are involved in parent training also need to look critically at these findings in order to assess whether this study can be of benefit to them. Should the present results be confirmed by future research, it would be important for those in the field of parenting education to take cognisance of these findings as it is likely that most concerned parents would be keen to know whether or not they could promote academic achievement behaviour.

Clinicians involved in the treatment of underachievement might also have an interest in the present findings. As this study has shown that family dynamics affect achievement behaviour, it is quite possible that family therapy might be used more often in the treatment of the underachievement syndrome in the future.

Viewing underachievement from a systems perspective appears to be a theoretically sound practice as this enables the clinician to gain a greater understanding of the problem within both the home and school contexts. This is important as most clinicians would agree that a holistic view of the child - as a product of two key systems, home and school - would be necessary before any effective treatment strategies could be worked out.

It would be important for clinicians to remember though that while family therapy appears to be an intuitively sound approach

towards the remediation of the underachievement syndrome Fine and Holt (1983) have pointed out that there is presently very little research data to support this belief. Their view is that while the clinician should not ignore the possibilities of a systems approach, they should be aware that more research is necessary in order to show whether it is effective or not.

Green (1989) cautions clinicians further by pointing out that while there might be merit in approaching academic underachievement from a systems perspective, generally traditional family therapy on its own (that is excluding the home-school interface) is ineffective. He believes that more success is likely should the clinician engage in working closely with school personnel and parents in developing, implementing and maintaining a suitable educational plan. This view is supported by Fine and Holt (1983).

This certainly appears to be a meaningful method of approaching the problem for while family therapy would possibly have a long term positive effect towards the remediation of the problem, certain measures like additional tutoring would probably be needed to overcome a backlog that might have been caused by the underachievement.

While the present findings have implications for parents, parent training personnel and clinicians, it would be important for those who hope to use this study though, to be aware of its limitations.

**LIMITATIONS OF THIS STUDY**

Firstly due to the mono-cultural sample used (the South African Indian Community) these results cannot be generalized cross culturally. As pointed out previously Trotman (1977) had found that the effects of family dynamics on academic achievement behaviour were mediated by ethnic factors. This was later confirmed by Dornbusch et al. (1987) who showed that while authoritative (democratic) behaviour control was linked to achievement behaviour in a sample of White American children, this did not hold true for Asian American children. Hence while the present study shows that affective involvement and behaviour control are linked to achievement behaviour in the South African Indian sample, these results cannot be generalized to other population groups.

Secondly, this study was based squarely within a working class community. The implications of this are that until further research is carried out in socio-economically heterogeneous populations, these results must be seen as being peculiar to the working classes. This belief is based on the findings of Carpenter et al. (1987) who showed that a family's income makes a positive contribution to a child's cognitive development. The strong implications of Carpenter's study is that the relationship between income and nutrition, health, quality of schooling and educational resources are sometimes able to compensate for negative family dynamics that are not extreme in nature. This in effect means that in certain middle class families where the parents might rank lower in affective involvement and behaviour

control, the children might still be identified as achievers due to the family income which acts as a compensatory factor. This belief has been confirmed by O'Connor et al. (1988) who have also shown that family income promotes academic achievement behaviour.

A third limitation of the present study was that the sample was restricted further as it consisted only of adolescents who were in standard eight. This means that research needs to be conducted upon samples of different developmental and educational levels in order to assess whether these findings hold true for other age groups and students at different levels of education as well. It is imperative that this be done before any firm conclusions are reached as Shawinsky (1989) has shown that neither behaviour control nor affective involvement was linked to achievement behaviour in her sample of university students. The discrepancy between Shawinsky's results and the present findings points in the direction that students at different developmental levels possibly react differently to special family processes. Hence it appears as if affective involvement and behaviour control are linked to achievement behaviour at high school level, but not at university level. As pointed out earlier on more research needs to be conducted in this field before any conclusive statements can be made.

A fourth limitation of the present study is that while the findings have shown that behaviour control and affective involvement are linked to achievement behaviour, the researcher has no way of knowing for certain whether these processes precede

achievement behaviour or whether these family processes merely follow from the achievement behaviour of the children. There is a possibility that the achievement behaviour in the children could have led to the parents behaving in the way they did.

This in effect means that training parents to rank high on the behaviour control and affective involvement dimensions will not necessarily lead to achievement behaviour in children. The possible implication could be that training children to achieve on the other hand could lead to parents ranking high on affective involvement and behaviour control. This, according to Steinberg et al. (1989) however, is only a remote possibility. Their research has shown that behaviour control and affective involvement are more likely to precede achievement behaviour, rather than the other way round.

Fifthly, in view of the fact that this research, like most other research in this field, was not conducted under laboratory conditions, it was not possible to control for all variables. Some of the factors that should have been controlled for, but which were not, were biographical factors. The present findings would perhaps have been more convincing had the present sample, for example, been drawn exclusively from biologically intact families. While this was the original intention of the researcher, it was found that controlling for these factors would have resulted in a particularly small sample. In order to prevent this it was decided to maintain a reasonable sample size and compromise on controlling for biographical details.

The sixth limitation of this study is that the present results are based on data that was collected at only one point in time. As family dynamics are processes that cover a period of time from birth onwards, it would have been more appropriate to gather this data over a longer period.

In the present study it is quite possible that the students could have responded to statements on the Family Assessment Device on the basis of their experiences as adolescents only, and not on family dynamics from childhood onwards. As adolescence is sometimes marked by individual turmoil and family conflict as a result of the discarding of parental values, it is possible that the responses in this survey are not entirely accurate. Perhaps the data gathered would have been more reliable had it been collected over a longer period of time which included both the pre-school and primary school levels as well. Such a collection of data might have provided a more accurate picture of family dynamics.

Finally the conclusions reached in this study were based on the perceptions of only one member of the family, that is an adolescent child. Hence the information gathered here might or might not have been a true reflection of family functioning. Should all members of the family have completed the Family Assessment Device individually, and should their responses have been congruent, we would have been more certain that we were dealing with family dynamics, rather than a single member's perceptions of it.

**RECOMMENDATIONS FOR FUTURE RESEARCH**

In view of the above limitations the researcher recommends that the present research be repeated in

- (a) a socio-economically heterogeneous and
- (b) cross-cultural South African setting amongst
- (c) a group of students of different developmental levels.

While the present researcher realizes that this will not have implications for universal generalizability, it would provide greater indication whether or not any of the family processes investigated is linked to academic achievement in a wider section of South African society. (The present research is more restricted as it was conducted only on South African adolescents of Indian origin). There is presently a great need for such research as both Dornbusch (1987) and Trotman (1977) have indicated that the effects of family dynamics on academic achievement behaviour is mediated by ethnic factors. Hence any conclusions as to whether the family processes focused on in this study are linked to academic achievement behaviour in South African families of other racial groups can only be confirmed once research is extended to include these groups.

(Given the rapidly changing face of South African society in general and the education scenario in particular, future researchers who hope to make more substantial contributions to the ever growing body of research in education would, I believe, have to focus more on cross-cultural research. The need for such

empirical investigations is evidenced by the growing number of non-racial classrooms that appear at previously segregated schools each year.)

Secondly future researchers might consider repeating the present research, but rather than gathering their data from only one member of the family, at only one point in time, they might consider collecting their data from all members of the family over a longer period. This extended period could stretch perhaps from the pre-school period to adolescence.

Such research is more likely to provide a more reliable account of family dynamics as data collected at only one point in time might have the effect of being coloured by recent, single events rather than be a true reflection of family processes. A child, severely chastised by her parents for example, might describe her parents as authoritarian figures immediately after the chastisement. Data collected over a longer period from the same individual though might reflect a different picture.

Data collected over a longer period, and from more than one member of the family, is likely to provide a more reliable bank of information. The former would ensure that the information gathered is based on family processes rather than on single events and the latter would provide a more accurate account of family dynamics rather than a single members perception of it.

Finally, future research could be geared towards investigating the link between parenting style in particular and academic achievement behaviour in the South African Setting. While such research has been conducted in overseas countries, and has shown that authoritative parenting has been linked to classroom achievement behaviour more than authoritarian or permissive parenting, very little research in this field has been carried out in South Africa. There is a great need for research of this nature at this time as parents are becoming more and more involved in the education of their children. Parents are likely to make more significant contributions in the field of their children's education, should they be clearer on the roles they are expected to play in order to promote achievement behaviour in the classroom.

It is therefore imperative that researchers in this field also consider making their findings available to parents through lay publications rather than restrict themselves to professional journals only. For of what value are research findings if they are not fed back in layperson's language, to the people they were originally designed to assist? Perhaps future researchers might need to take greater cognizance of this question.

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