PARENTAL ATTITUDES AND IDENTIFICATION AND ACADEMIC ACHIEVEMENT IN ADOLESCENTS

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ABSTRACT

Studies of the effect of family variables on achievement motivation have been recently directed towards ascertaining the relationship between certain parental attitudes and corresponding achievement in the child. The purpose of this study was to determine if general parental attitudes, among other variables, could be linked to academic achievement.

A review of the literature relevant to achievement motivation led to the hypotheses that;

i) Identification of males and females with the same sex parent is positively correlated with academic achievement.

ii) Academic achievement is positively correlated with socio-economic status.

iii) Academic achievement is associated with a high correlation between parents' attitudes determined directly, and students' perception of their parents' attitudes.

iv) There is a low correlation between the parents' attitudes towards child rearing as determined directly and as predicted by the child.

v) Identification with the same sex parent is positively correlated with the ability to predict parental attitudes which are close to the attitudes expressed by the parents themselves.

vi) Academic achievement is positively correlated with positive parental attitudes.

A total of 215 first year university students (102 females and 113 males) were administered the Parental Attitude Research Instrument and

asked to predict their parents' responses. They were also given the Gough Adjective Check List for self and parental description purposes. A total of 105 parents (60 mothers and 45 fathers) were administered the Parental Attitude Research Instrument directly and individually.

Males and females were both divided into groups on the basis of academic achievement.

T tests for the difference between means of identification in the achievement groups were not significant for females. For males the results were significant in the opposite direction to that predicted and therefore the first hypothesis was rejected.

T tests for the difference between means of socioeconomic status in the achievement groups were not significant for males or females, causing the second hypothesis to be rejected.

T tests for the difference between means of the correlations between student and parental PARIs in the achievement groups were not significant for either sex and the third hypothesis was rejected.

Correlations between students' and parents' PARIs for each scale were very low for males with only five of the 20 scales having a correlation significantly different from zero. For females, 13 of the 23 scales were significantly different from zero but in most the correlations were very low thus confirming hypothesis four.

Correlations between identification and the correlation of student-parent PARIs were not significant in either sex resulting in the rejection of the fifth hypothesis.

T tests for the difference between means of each of the PARI

scales for males and females were generally non-significant although males did demonstrate the hypothesis on three of the 20 scales. For females there was no direct relationship between academic achievement and positive parental attitudes. This hypothesis received partial confirmation in males but not in females.

The results were discussed and interpreted and it was concluded that;

1) Identification of males with the same sex parent is negatively correlated with academic achievement.

2) Socioeconomic status is not correlated with academic achievement.

3) Academic achievement is not correlated with the accuracy of students' perceptions of their parents' attitudes.

4) There is a low correlation between the parents' attitudes as determined directly and the parents' attitudes as predicted by the male. There is a considerably higher correlation between females' prediction of their mothers' attitudes and the mothers' actual attitudes.

5) Identification with the same sex parent is not correlated with the ability to perceive the parents' attitudes accurately.

6) Academic achievement for males is correlated with positive parental attitudes on three out of 20 scales. For females both high and low achievement is associated with negative parental attitudes, and medium achievement is associated with positive parental attitudes on five of the 23 scales.

A significant finding which was not predicted was the difference between males and females with regard to accuracy of prediction of

parental attitudes. There was a much higher correlation between females' prediction of their mothers' attitudes and the mothers' actual attitudes.

The limitations of the findings were discussed and suggestions were made for future research.

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CHAPTER I

INTRODUCTION

Achievement Motivation

Meaning and Definition

The term "achievement motivation" has been used in so many different contexts that a researcher dealing with this topic must first attempt to understand how other researchers have used it.

Many authors, especially the earlier workers in the field regard achievement motivation as a unitary factor that is a representation of a drive to achieve certain goals. Feld (1967) asserts that the consistency in measures of achievement motivation of eight to ten year old boys over a period of six years supports the assumption that achievement motivation is a stable personality characteristic. Consistency over time however does not necessarily presuppose a unitary factor.

Other researchers have recognized the complexity of achievement motivation and regard it as a composite of many factors rather than a unitary variable. Crandall (1960) attempted to operationally define achievement behavior in such a way as to include situational characteristics, factors which had previously been overlooked. According to Crandall, there are three things involved; the inferred goal of the behavior (the attainment of approval and avoidance of disapproval); the unique characteristic of the behavior involved (the competence of the performance), and the nature of the situation in which the behavior occurred (entailing a standard of excellence). Using these criteria it

should be possible to designate most behavior as either achievement oriented or not. Rosen (1956) differentiated between value orientations and achievement motivation. According to him, achievement orientation directs a person's efforts towards obtaining success and avoiding the pain of failure, while value orientations establish the criteria that influence the individual's preference. It seems likely that both of these would interact in a given individual and the distinction may be somewhat arbitrary.

Solomon (1969) states that academic achievement is an outcome of interactions between personality characteristics and task characteristics. He points to evidence indicating that achievement behavior should be differentiated according to situational characteristics. And Solomon (1969) found general academic achievement related only moderately or slightly to achievement behavior in various situations.

Lewin and Baldwin (1959) suggest that achievement motivation may be a composite of motives, all directed towards high achievement but possibly having several different ulterior goals.

Backman and Secord (1968) state that achievement motivation when factor analyzed consists of several different dimensions including academic motivation and efficiency, self-satisfaction, wish fulfillment, non-academic achievement orientation, and external pressure to succeed. These authors also point out that other variables may operate concurrently with achievement motivation to suppress or facilitate its operation, e.g., fear of failure.

Achievement motivation can be influenced by variables such as

cues in the environment, experimentally introduced cues, and controllable cues (Atkinson, 1958). It may also be affected by anxiety (Kagan & Moss, 1959), previous motivational level and the experimental condition (French, 1955). Measures may be quite different under verbally created conditions which were relaxed, task motivated or extrinsically motivated.

Katz (1967) brings out an interesting component of achievement behavior. He believes that the difference between high and low achievers is due to different capacities for vigorous and sustained effort on tasks that are not consistently interesting and attractive and which offer no immediate payoff, positive or negative. Thus he asserts that effective scholastic motivation is largely reducible to self control, an outcome of a socialization process involving the internalization of standards of excellence. Katz postulates that achievement fantasy may reflect unitary need for excellence in all or some areas, congeries of motives, or cognition and perception not necessarily related to motive strength.

In general most researchers would agree that achievement motivation is composed of many variables, some external and some internal which interact differently at any given moment to result in what may be called achievement oriented behavior.

Measurement of Achievement Motivation

Regardless of, or perhaps depending on the theoretical position we take with regard to the nature of achievement motivation, we are faced with the problem of measuring this entity. There are several broad categories by which it can be assessed.

Self-Ratings by the Subject

Self-ratings can be either direct or indirect. In the former, the subject fills out a rating scale indicating how strong he feels his need for achievement is. In the indirect approach, the subject is asked to express his likes or dislikes and inferences about his need for achievement are then drawn. McClelland (1955) points out that problems inherent in direct self-ratings include the fact that the subject may lie, or that he may not know very much about his own motivation. He may attempt to give responses which he feels the experimenter would want to hear rather than reveal his true feelings. McClelland believes that indirect methods using projective measures would yield a truer picture. Atkinson (1958) supports McClelland's methods, insisting that the strength of human motives can be validly inferred from the context of imaginative thought. According to de Charms, quoted in Atkinson (1958), measuring motivation directly measures a consciously high desire for achievement associated with conformity, while the indirect measures a high desire for achievement associated with internalized standards of excellence which lead to superior performance. Locke and Bryan (1968) come out in support of the approach to motivation which focuses on the specific conscious determinants of behavior as does Uhlinger and Stephens (1960). Locke (1966) found that the higher the level of intended achievement, the higher the level of performance. The conclusion these authors came to is that performance goals influence the intensity as well as the duration of the effort (Locke & Bryan, 1966).

Ratings by Outside Observers

The second main method of determining achievement motivation is that of outside observer ratings. As McClelland points out, however, the problem with this method is that, although the judgements may be reliable and there may be high inter-observer agreement, it cannot be ascertained if the assessment reflects only the motive in question (McClelland, 1958). Factors such as the influence of the judge's background, and the fact that the reasons for his judgement may not be known, compound the problem. An additional problem occurs when the judges score projective tests using fantasy, since this is easily influenced by induced motivational states.

Hovland (1966) pointed out that academic measures often do not correlate with projective measures of achievement. Argyle and Robinson (1962) found no correlation between achievement motivation as measured by projective tests compared to questionnaires. Also the measures of motivation used by McClelland and Edwards were found to be unrelated (Lewis, 1962). Klinger's review of the literature (1966) states that more than one-half of the studies using fantasy measures as predictors of college grades have yielded negative findings. This inability to relate actual achievement to other measures has also been noted by Uhlinger and Stephens (1960), Kwall and Lackner (1966), and Hills (1961). These relationships were found to be more closely related for males of high school age or younger, while for college age males only nine out of 16 of the studies relating these variables were significant.

Another measure involving ratings by outside observers is that

of behavioral measures. In young children this can take the form of an observer scoring the child on the basis of overt activities (Rosen, 1959). In older children and adolescents, academic grades are generally regarded as the best behavioral measure of motivation.

McClelland insists that academic performance is influenced by many other things such as social pressures and situational variables (McClelland, 1955). Also criticizing academic performance as a measure, Raph et al (1966) has stated that grades are influenced by teacher personality, bias and special interest and by student attitudes, behavior and work habits. Davidson and Lang (1960) found no great differences between teachers' capacity to communicate favorable feelings, indicating that differences between teachers, while certainly present, may not be as important as Raph suggests.

Another problem when total scores on achievement test batteries are used is that the presence of specific achievement or underachievement in one area may be blurred (Raph, 1966). There is also the problem in the value system which places tremendous weight on some talents (e.g., academic) to the exclusion of others (e.g., non-academic).

From a practical point of view, however, it may be better to consider general academic achievement. To begin with, if we began considering each specific area, the task would be very large, and secondly, a knowledge of overall academic achievement would appear intuitively to be a better predictor of an unknown situation than knowledge of achievement in one specific area. Also, since there appears to be little correlation between the fantasy measures of achievement and

actual school grades we may ask the question--which are we more interested in? For the purposes of this particular study our main interest will be directed towards the outcome of any achievement directed behavior, viz academic performance.

Variables Affecting Achievement Motivation

Review of the Literature

Many factors, both intellectual and non-intellectual, influence achievement. Borow (1946) pointed out that the failure of intelligence tests and high school records to predict college success with any degree of accuracy, implies that non-intellectual factors may be important in determining academic performance. In this paper the main emphasis will be on these non-intellectual variables, primarily family variables.

Much of the research in this area has been prompted by the phenomenon of underachievement, the case of a child not performing at the level of which he is capable intellectually. The research has been directed in the past towards the examination of the educational and occupational status of the families of achievers and underachievers. More recently, the focus has shifted to more subtle dimensions of family life, e.g., parental attitudes, reinforcement, achievement, independence training and love and nurturance.

Hammond and Cox (1967) state that there are two broad categories of non-intellectual variables influencing achievement--sociological and psychological.

A. Sociological variables. Considering briefly several of the sociological variables, first of all Gough (1946) asserted that there is

a significantly positive moderate correlation between academic success and socioeconomic status, cultural factors and occupational levels of the parents. Hammond and Cox (1967) reported that primary school residential area was as strong an indicator of educational success as was father's occupational level. Social class factors had substantial predictive power in secondary school, but not in primary school. Lewis (1941) found that his high achievers had fathers in higher vocational and socioeconomic classes and this has been confirmed by Williams (1957) and Frankel (1960). Lewis (1941) stated that higher ratings of fathers' occupation and economic status in the homes of accelerated children reflects a cultural and ideological superiority that is important in the superior achievement of these children.

Ratchick (1953) found that significantly more mothers of high achievers in grades 11 and 12 had graduated from college than mothers of low achievers in those same grades. Pearlman (1952) found similar results with college freshmen. He also noted that fathers of high achievers were more likely to have taken courses beyond the baccalaureate level. Granzow (1954) found the parents of underachieving readers to have had fewer educational advantages than parents of achievers.

In contrast to these results, Ford (1956) found little difference in the occupational distribution of two groups which differed greatly in achievement. Blackman (1955) reported no difference in educational level of the parents of achievers and underachievers in his sample. Curry (1962) found that socioeconomic status had no significant effect on the scholastic achievement of brighter students, but it did significantly

affect the achievement of the middle and lower ability groups.

In general then we see that socioeconomic status is regarded as being directly correlated with academic achievement although there are a number of researchers whose results are contradictory on this point.

Of particular relevance to our own study is the work of Siemens and associates (1965) and their investigations of the influence of selected family factors upon the educational and occupational aspiration levels of Manitoba youth. The justification for this study was the need to test the validity of related U.S. generalizations in a Canadian setting. The fact that our own sample was drawn from much the same population studied by Siemens makes their research particularly important.

Siemens (1965) found that educational and occupational aspirations of Manitoba boys and girls, grades 11 and 12, related significantly to size of community, socioeconomic status, fathers' educational achievement, and strength of fathers' and mothers' encouragement for post-high school education, while religious background was significantly associated with aspiration levels of boys only.

All of these variables were found to be closely related to social class. When social class was controlled for, these differences were completely wiped out in the low socioeconomic group, whereas several family factors remained significant in the high status group. Similarly, controlling for IQ wiped out these differences. Siemens (1965) points out that many studies have shown a positive relationship to exist between social class and measured intelligence, and his own work supports these results. This has been interpreted as the higher socioeconomic

status groups having brighter children, or as reflecting that IQ tests by their nature are class biased. Most of the aforementioned family factors were found to be closely related to the IQ level of the children.

Siemens (1965) found that aspiration levels of the high school students did not vary significantly with the various ethnic backgrounds of Manitoba. The family factors studied related significantly to aspiration levels in the same manner as in the U.S.A. This would suggest a certain cultural homogeneity among the sample, and warrants cautious generalizations of related U.S. studies to the Manitoba region.

A related study by Siemens and Jackson (1965) illustrates the discrepancy between aspiration level as indicated by planned educational level and the actual attainment of these aspirations by the Grade 11 and 12 students. While 84% of the grade 12 students indicated plans for going beyond high school, only 48% of boys and 56% of girls actually enrolled in further studies. Thus while expressed aspiration level is important in terms of achievement motivation, it is apparent that there are a great many other factors which determine whether or not a student will continue his schooling beyond grade 12. It is interesting that socioeconomic status, which was found to be highly related to all the family variables which influenced aspiration level, was not related to actual post high school plan fulfillment. Instead the latter was found to be related to marks in grades 9 and 10, IQ and religion. University plan fulfillment was found to be related to area of residence, and non-university plan fulfillment to ethnic origin.

A further study by Forcese and Siemens (1965) in which socioeconomic

status was held constant, some variation in aspiration levels according to rural or urban region persisted, with urban regions having students with higher aspirations. The positive relationship of marks in grades 9 and 10 to aspiration level also persisted when socioeconomic status was controlled. Teacher encouragement was found to be important for aspirations for the low and medium socioeconomic status students. Self-rated leadership ability and extent of extracurricular activities were positively correlated with aspiration levels even with social class controlled for.

Siemens and Dreidger (1965) found lower educational and occupational levels to be associated with rurality. They point out that the urban self-concept, intellectual ability and economic status is higher and more urban exposure to a variety of schools is apparent.

B. Psychological variables. We shall now turn to the psychological effects of various emotional climates within a family on achievement. For the most part this is determined by the type of parent-child interaction present and the attitudes of the parents.

a) General parental attitudes. Chance (1961) points out that the results of existing studies suggest that deviations in parent-child relationships are related to deviations in school achievement. Backman and Secord (1968) report that in the case of school dropouts, there was failure of the family to function adequately as a primary group, in which relationships are personal, communication is extensive and there is provision for satisfying experiences. Families of dropouts had none of these characteristics in contrast to families of graduates, which in

addition had more ties to relatives, and maintained considerable influence over their children. School dropouts, however, are probably not the best example of underachievement in that this represents an extreme form of behavior.

Kurtz and Swenson (1951) found "more favorable" home conditions in the families of achievers, as rated by teachers. These same authors report a tendency among the high achievers to respect and take their parents into their confidence, to be concerned about pleasing them, and to return the love their parents show. These high achievers also tended to have more friends who are also concerned about doing well in school and are well regarded by the teacher.

The findings of Gowan (1955) indicate that harmony is not prevalent in the underachiever's home. In studying maladjusted underachievers referred to a clinic, he postulated that the basic causes of maladjustment were disagreement between parents over methods of child rearing, over-anxiety or over-protectiveness and divorce or separation. In considering this study we must remember that these children were sufficiently maladjusted to warrant referral to a clinic, and would appear to have other problems besides their underachievement.

Morrow and Wilson (1961) found that overall family morale differentiated the two groups (underachievers and achievers) at the .001 level of significance. High achievers described their families as sharing recreation, ideas, and confidence; their parents as approving and trusting, affectionate, encouraging, non-restrictive, non-severe, and themselves as accepting their parents' standards. All these variables

refer to a warm and emotionally supportive parent-child relationship. Morrow states that his data supports the hypothesis that family morale fosters academic achievement via positive attitudes towards teachers and school and interest in intellectual activities.

Cooper and Lewis (1962) found that subjects who accord high evaluation to their parents, thus implying a positive relationship, perform at a relatively high academic level, and inversely; however, when IQ was controlled for these differences, although in the same direction, were not significant. Raph mentions work by Sutcliffe (1958) who found that the high achievers in high school more frequently lived with both parents, and had feelings of happiness toward home.

Gowan (1955) in a review of several studies of underachievement, suggested that in general at the secondary school level, underachievers perceive parental support and helpfulness in a negative manner. Stephens (1968) found underachieving boys described their fathers as having inconsistent or lax discipline, instilling anxiety, hostile in their control and rejecting. He concluded that the degree of parental involvement is positively related to academic achievement.

Shaw and Dutton (1962), using the PARI (Parental Attitude Research Instrument), found that parents of underachievers had significantly stronger negative attitudes towards their underachieving child. Blackman (1955) showed the environment of the underachiever to contain more elements of threat, frustration, hostility and unhappiness. Raph (1966), in his review of the literature, quotes many other authors who have agreed that disruption in family structure has been found to be associated

with underachievement.

In all of these studies, however, we are faced with the fact that correlation does not imply causality. While the implication in many of these studies is that the parental attitude resulted in the underachievement we must keep in mind the possibility that it may be partially a reaction to it.

Shaw and Dutton (1962) found that mothers of underachievers were more dominant, and needed the respect and dependency of their children. These mothers were also more dependent, could not tolerate aggression and feared their own hostile impulses. When the mothers' own attitudes were compared, only two factors, seclusion of mother and suppression of sexuality, differentiated the groups, with mothers of underachieving males scoring higher on both variables.

Teahan (1963) found that fathers of low achievers were perceived as being higher on "possessive" and "ignoring" dimensions than their sons while there was not this discrepancy between father and son in the high achieving group. Both parents of low achievers seemed to demand rather unquestioning obedience and were more punitive, and this finding disagrees with the results of Drews and Teahan (1957). Teahan (1963) concludes that the low achieving female has to face domineering attitudes from both parents while the high achieving female has a domineering father and a less domineering mother.

Other researchers such as Kagan and Moss (1959) have emphasized the importance of a less domineering father and a domineering mother in high achieving males. These authors conclude that the underachieving

male seems to clash with a domineering, punitive and overprotective father.

The specificity of the demands made by parents of high achievers was noted by Shaw (1964). He found that not only were the demands more specific, but the parents of high achievers wanted their children to be adult in behavior, and stressed the responsibility of the child to the parent.

Other researchers have obtained different results regarding the nature of the underachiever's psychological environment. Raph (1966) refers to a study of engineering students in which the overachievers had greater limitations in their environment and were less satisfied with it. Several others such as Musselman (1942) inferred that high achieving students came from less favorable home environments (broken homes, foreign extraction) and worked harder in school to overcome the handicap. Again, in assessing these contradictory studies, we must also keep in mind when they were carried out, remembering that attitudes of students are bound to change over generations.

More recently Morrow and Wilson (1961) obtained information about family relations from a group questionnaire of the students. Not supported were hypotheses that underachievers' families show more overprotectiveness, more high pressure for achievement, more parental disharmony or more irregular home routines.

Frankel (1966) administered the PARI to the parents of high and low achievers and found that the parents of the high's did not display a significantly greater positive attitude. Unfortunately, in this

study the results were confounded by social class variables.

Drews and Teahan (1957) point out that in the literature on achievement motivation there are two contradictory viewpoints regarding the type of familial atmosphere which is most conducive to achievement motivation, viz free and permissive vs. authoritarian and restrictive. They believe that parents cannot escape being authoritarian in the early years but that the difference exists in parents who set limits but encourage other activities and in those who issue "blanket warnings." They hypothesize that parents of high academic achievers will be less permissive and accepting in the treatment of their children than the parents of low academic achievers. They found that mothers of high achievers had higher scores in both dominating and ignoring, the latter item referring to limits set up within the home, and they had a punitive attitude towards disobedience. It would appear that the high achiever is a child who has a rigidly defined place which he is expected to accept docilely.

Sprigle (1960) found the mothers of achievers tended to be dominating, directing, desired to keep control of the child's training, and were insecure and uneasy in the role of mother. They also expressed dissatisfaction with their current life situation. Mothers of under-achievers expressed hostility towards husband and child. In seeking an explanation for the dissatisfaction with the maternal role in mothers of achievers, we note that the role of mother is not regarded as an achieving role and if a woman accepts this role, we may hypothesize that her achievement motivation as defined by society may not be very high.

In today's society women in general are probably less content with their role than in the past. Another explanation may be that the mother of a high achiever feels dissatisfied with her own role because of her child's success, and motivated because of this towards achievement behavior, or that she encourages this behavior in her child because of her own thwarted achievement needs.

b) Specific parental attitudes.

i) Towards achievement and education. One of the important areas in which family variables can influence achievement is through the installation of parental values and goals. Curris (1962) found no difference in value orientation of parents of high and low achievers. Other studies contradict this, especially with respect to attitudes about achievement.

Backman and Secord (1968) suggest that the value and meaning attached to education, the extent to which the home environment stimulates intellectual development, the language model, forms of discipline and control and academic guidance, and facilitation of desirable work habits all can affect achievement motivation. Christopher (1966) looked at perceived parental valuing of achievement by the child and obtained partial support for relating these variables and achievement.

Raph (1966) states that within a given socioeconomic strata, a family's attitude towards its occupational status has a greater influence on the achievement expectations of the sons than does actual class membership. According to Backman and Secord (1968) it seems probable that a persistent but sensitive parental attitude towards

achievement, generalized and stable over the entire developmental period would correlate substantially with achievement, though at any given isolated stage, the correlation could be zero or even negative.

Family values and goals may have their effects either directly, through academic and achievement oriented pressure, or indirectly according to their similarity to the values and goals of the educational institution. Certain types of parent-child interaction may be more compatible with the teacher-child relationship than others. The similarity of home and school ideals is important when we consider that the school, being a middle class institution, and the teachers being mainly middle class, it will be much easier for a middle class child to fit into this milieu and achieve than the lower class child whose parents place little emphasis on educational achievement. Raph (1966) pointed out that the value patterns of high achievers are closely correlated with the values of the teachers.

The attitudes which the parents express concerning academic achievement was found to be crucial by Shaw (1964). He states that parents of underachievers hold values which tend to be neutral or negative with respect to education, while parents of achievers tend to value education positively and show a greater tendency to push the child towards achievement. Katz (1967) has postulated that the low academic motivation of the Negro pupil may be a reflection of the lack of relevance of the competent goals of the school to the goals toward which the child has been socialized.

ii) Specific achievement pressure. D'Heurle et al (1959)

found a small positive relationship between parental pressure toward achievement and achievement test scores. Morrow and Wilson (1961) found that underachievers' families did not show more pressure for achievement than achievers' families. Hurley (1962) found that increased achievement pressure on the part of parents was associated with inferior college achievement in children; however, his achievement pressure was the student's own score which was assumed to reflect the pressure previously exerted on the child by his parents. This is an erroneous assumption as the child may hold opposite views to those of his parents.

Crandall and Dewey (1964) suggest that only certain types of achievement pressure are related to educational ambition and directly encouraging children to succeed in school does not necessarily improve their performance.

Hattwick (1936) noted that the work habits of children pushed and children babied were poor and there was a tendency for the work habits of the latter to get progressively worse.

Backman and Secord (1968) suggest that perhaps the relation between parental stress on academic achievement, and the child's actual achievement is curvilinear. Too little or too much may decrease achievement. The important thing to ascertain here is the criteria behind the achievement pressure and to what end this pressure is directed.

iii) Independence training. Several studies have attempted to correlate independence training with achievement motivation. McClelland (1955) states that severity of independence training in childhood is positively correlated with the amount of achievement imagery in

the folk tales current in a culture. He says that his findings support the hypothesis that achievement motivation develops out of a parental concern that children "stand on their own feet" early in life.

Winterbottom, in her study of 1958 showed that mothers of elementary school age boys with high need achievement made more demands for independence and placed more restrictions on the boys before the age of eight, but made fewer overall demands and restrictions. These boys differed only in the fantasy measure and not in academic achievement as assessed by teachers.

Shaw (1964) found that parents of achievers wanted their children to learn to make their own decisions and to be more adult in behavior while parents of underachievers were concerned with having their children learn to protect their personal rights and know their way around the city. The latter may be interpreted as the parents' desire to avoid having to keep track of the child and the result may be as Shaw points out not an "independent child" but one who acts out of a "selfish autonomy."

Several other studies have correlated independence with achievement. Crandall, Preston and Rabson (1960) found that mothers who frequently rewarded achievement efforts were less nurturant, but just as affectionate towards their children. They were less acceptant and rewarding of help-seeking overtures, and the high achieving children were less dependent on adults for help and emotional support, indicating a stronger degree of independence. Thus independence training and the rewarding of achievement were positively correlated. These findings

suggest that middle class mothers may react to their children's approval seeking as a part of achievement development. An important distinction which these authors make is the distinction between affection and nurturance. These terms are often used interchangeably and are generally poorly defined. The authors point out as well that neither maternal reaction to the children's help-seeking nor emotional support-seeking overtures predicted achievement efforts outside the home.

Gordon (1959) found that the parents of achieving children show significantly higher scores in independence and lower scores in conformity than parents of underachieving children. It might be expected that a parent who valued independence as a trait and was himself high on that trait would encourage it in his child.

Feld (1967) found a positive relationship between earlier expectations for independence and high need achievement scores for mothers.

Contradictory results were found by Chance (1961); he obtained results which imply that independence training can be detrimental. Children whose mothers favored early demands for independence made poorer school progress relative to their IQ. The differences were most marked in girls and in reading. The fact that these results are in direct opposition to those of Winterbottom may be explained on the basis of the two different measures used, fantasy and academic achievement, and on the fact that the significant results were for males in the Winterbottom study and for females in this study. Chance's study permits little generalization because the sample was small, had high IQ and high

socioeconomic status and superior school systems. Chance does suggest that the early demands for independence by the mother may be experienced by the child as excessive pressure, and item examination revealed that many items could be interpreted as the mother's need to maintain interpersonal distance, rather than favoring early independence.

Rosen (1961) found that mothers of boys with high need achievement were more dominant and expected less self-reliance than mothers of boys with low need achievement. He postulated that for a strong achievement motivation to develop, the boy needed more autonomy from his father than from his mother. Or, it may be that the mother-son relationship is more secure and can tolerate more domination by the mother.

Rosen and D'Andrade (1959) point out that encouragement of independence in general must be distinguished from encouragement of independent achievement in particular. They posit two types of training, achievement training and independence training. Mothers of high need achievement sons expressed higher aspirations, imposed higher standards of excellence and reacted more intensely to success or failure: they were also higher on warmth and lower on rejection and their sons asked for less aid.

These discrepant results in this area of independence training may be partly due to the confusion as to whether it is a positive or negative concept. Certainly it could be either depending on the concurrent warmth and nurturance of the mother. Chance (1961) recognized this and said that maternal attitudes favoring independence may have different effects depending upon the mother's motivation for desiring

that independence.

iv) Parental control and nurturance. Davids and Hainsworth (1967) studied the child's perception of parental behavior and found that the high and low achieving boys differed markedly in their perceptions of maternal "control factors," with underachievers perceiving greater maternal ascendancy, intrusiveness and deification. Comparison of mothers' actual attitudes revealed no differences. Underachievers perceived more negative attitudes than the mothers actually avowed. Concordance between mothers and high achieving sons is much greater than between mothers and their low achieving sons. The authors conclude that the control factor appears to be more significant since it refers more specifically to mother-child interactions, and reiterate that whether a mother is actually hostile or controlling or not, if a son reports that she is, this information is valuable in understanding their interactions.

The dimension of control couple with nurturance was studied by Heilbrun and Waters (1968). A puzzling result of this study is that the apparently over-protected, high control-high nurturance child appears more capable of independent college achievement. A study by Heilbrun and Orr (1965) found the highest achievement in the low control-high nurturance group and the worst performance in children who were in the high control-low nurturance group. The question which is relevant here pertains to the direction towards which the control is directed. Heilburn et al (1968) proposed that a history of maternal rejection resulted in lowered self-esteem, and a hypersensitivity to social censure which mediated task irrelevant responses to failure cues which

were incompatible with conceptual responses.

Stehbens (1968) found that low achieving girls described their parents as controlling through the use of guilt and expressing hostile control.

According to Heilbrun and Orr (1965) previous findings for males indicate that the maternal control variable was more important than maternal nurturance, while the opposite was true for females. This is not a surprising finding in view of the social stereotypes for the two sexes. These authors suggest that a detached mother would fail to provide a learning situation conducive to the development of expressive behavior in the daughter.

Heilbrun and Waters (1968) state that previous evidence suggests that perceived maternal control mediates reinforcement sensitivity. What is the reinforcement directed towards? We may postulate that, holding nurturance constant, high control would only be associated with high achievement in the child if the parent directed this control towards making the child independent and responsible. Control, used in this sense would mean guidance.

v) Reinforcement. The source of reinforcement, extrinsic vs. intrinsic was studied in relation to over- and under-achievement by Haywood (1968). He postulated that individuals are motivated in two ways: intrinsically by factors inherent in the performance of a task, or extrinsically by non-task aspects of the environment. Haywood found a clear differentiation between scholastic over- and under-achievement in the students' motivation. Intrinsically oriented motivation was

associated with higher academic achievement.

Atkinson and Reitman (1956) found that students with a positive internalized motive will do best in a situation where intrinsic rather than extrinsic rewards are maximized. The type of reinforcement which we might hypothesize would foster achievement motivation would be the intangible rewards, such as praise, directed towards increasing the child's self-confidence, rather than the more tangible material rewards. If a child is rewarded materially, when this reinforcement is absent, he would have less motivation to continue with the task. In contrast, the child whose reinforcement has been praised may be able to internalize this reinforcement and carry on in the absence of parental praise.

vi) Identification. Several studies have attempted to correlate achievement with identification. Shaw and White (1965) interviewed both parents and children and gave each questionnaires to fill out. They found significant correlations between males' ratings of themselves and their ratings of their fathers, while the opposite was true of the underachievers. There is more agreement between members of achievers' families in their self-perceptions and the perceptions of them as reported by other members of the family. Shaw and White conclude that the male achievers identify with their fathers and the non-achievers did not. Mutimer and Loughlin (1966), by using a projective test with children, concluded that achieving boys and girls identify more with the same sex parent, based on the finding that underachievers consider their parents to be the least significant member in the family.

Westfall (1957) also found that the non-achiever seemed to

identify less with his parents who themselves appeared to be less active and less supporting of his needs and him than parents of achieving students. Granlund and Knowles (1969) also found male sex role identification to be characteristic of achievers but not of under-achievers.

These studies on identification are also indicative of the type of existing parent-child relationship. It is generally accepted that in order for identification to occur, there must be a warm, positive loving relationship with the same sexed parent.

In any study of parent-child relationships there arises the question of the importance of early experience. Freud's emphasis on the importance of the early years stimulated a great deal of the research we have been looking at, as researchers searched for correlates of achievement motivation in the child-rearing practices of the parents. Because achievement motivation appears to develop at a relatively early age, a concentration on children and young adolescents would seem to be the most profitable approach.

From our review of the literature, we see that, in general, achievement motivation is regarded by most researchers to be a composite of many factors, both personal and situational. Its measurement has taken many forms with two main trends emerging--the projective or fantasy measures--from which achievement is inferred, and the more direct measures such as academic grades.

Both intellectual and non-intellectual factors appear to affect achievement. Intellectual factors are represented by innate ability,

while sociological and psychological factors are subsumed under non-intellectual factors. Intensive investigation of sociological factors such as socioeconomic status, occupation, area of residence, has found a positive correlation between socioeconomic status and achievement in most cases.

Studies which have looked at psychological factors especially as reflected by parental attitudes, have generally reported "more favorable" home conditions in families of achievers. Some authors confirm this and report stronger positive parental attitudes in parents of achievers, while other authors take the reverse position.

Research devoted to determining if certain parental personality traits are more conducive to achievement has been extensive, but again opinion is divided as to which home climate is more favorable. A confounding variable in many of the studies is the nurturance of the parent. Specific parental attitudes favorable towards achievement have been found to correlate positively with achievement, but the results of actual achievement pressure on the part of the parents is not clearcut.

Studies which have looked at the relationship between identification and achievement have generally found a positive relationship between the two.

In general then it would appear that achievement motivation is fostered by a warm, emotionally supportive relationship with the parents, an overall high family morale, a high degree of identification with the parents, socioeconomic status which is high, positive parental attitudes towards education and achievement, specific demands, and a high

correlation between the parental ideals and those of the educational institution.

Methodologies for Studying the Effect of Family Variables on Achievement Motivation

We shall now turn to a closer examination of the different methodologies used in studying the effect of family variables on achievement motivation.

Most researchers begin by isolating populations of achievers and underachievers based on discrepancies between ability and performance. Some then study parental antecedents directly by administering a questionnaire to the parents, while others study parental antecedents as reported by the children. This latter approach is valuable since we are primarily interested in how the child perceives parental characteristics. Davids and Hainsworth (1967) point out that it is the child's own perceptions which will determine his behavior, not necessarily how things really are.

Those who have studied parental antecedents directly include such investigators as Shaw, Winterbottom, Gordon, Frankel, Chance, Norman, Drews and Teahan, Shaw and Dutton, while those who have concentrated on perceived parental characteristics include Davids and Hainsworth, Hurley, Christopher, Morrow and Wilson, Nunn, Slater, Hielbrun and Orr, Mutimer and Loughlin, and Powell.

The most commonly used instruments are McClelland's fantasy measure of achievement motivation (n ach), the Parental Attitude Research Instrument (PARI), measures of academic achievement and

miscellaneous measures of parental attitudes.

A few investigators have instituted more novel approaches such as the use of open-ended questionnaires (Shore & Leiman, 1965), factor analysis of indices of achievement motivation (Mitchell, 1961), and direct assessment of parental attitudes and interaction by home visits (Kagan & Moss, 1959; Crandall et al, 1960), or in a controlled laboratory setting (Rosen & D'Andrade, 1959).

Tyler asserts that his results on parent-child interactions support the use of a consistent theoretical framework of independently collecting parent and child data, of operationally defining the motivational variables used, and of scaling parent and child data in a parallel fashion. He stresses the importance of keeping parent and child data uncontaminated by each other (Tyler, 1960).

Each methodology has its own strengths and weaknesses. A problem which is inherent in the approach which studies parent-child interaction by assessing parental antecedents inferred from a questionnaire, is that of validity. Will the mothers report their own behavior or that which they believe is socially desirable? For example, Halsted (1967), in working with Puerto Rican mothers, found that all of the mothers found it hard to discuss misbehavior and discipline in a consistent and objective manner.

A related problem in retrospective studies is that of inaccurate recall. The inaccuracy of mothers' recall has been noted by several researchers. Freeberg and Payne (1967) found superior reliability in recalling information about first borns, and superior reliability for

those mothers whose husbands were of higher occupational levels. They also noted that mothers displayed greater accuracy in recall of the child's early behavior than fathers did.

Pyles, Stoltz and MacFarlane (1935) noted a slight but general tendency for mothers to forget some of the difficulties of rearing young children, illness at pregnancies and birth injuries. Mothers of first borns tended also to err in precocity. Medinnus et al (1965) has pointed out that inter-parent agreement is a fairly specific phenomena and not very consistent with respect to attitude scales dealing with child rearing, education and perception of the goals for their child. Greater discrepancies were noted between attitude scores of the parents of poorly adjusted children.

The problem of inaccurate retrospection may also occur when familial variables are based on the recollections of college students (Nunn, 1967).

Another error which is sometimes made is to assume the child or adolescent's own opinions on a subject can be used to infer parental opinions on that same subject. A child's attitudes about situations may in fact be formed by reacting against those of his parent.

Feld (1967) notes additional methodological problems. If maternal attitudes and children's achievement motivation are assessed at the same point in time, it is possible to view the results as demonstrating only the effects of contemporary family conditions upon children's achievement motivation.

Another methodological problem is that of the consistency of

attitudes over time. Feld (1967), for example, found a tendency towards a reversal of attitudes in the reports of mothers' child rearing practices, which may reflect either maternal inconsistency, or an adaptation in the mothers' behavior to the behavior of their sons. Feld postulates that early experiences may be important because of the consistency in reinforcement between early and later experiences. These results tend to favor a situational view and emphasize the importance of current parent-child interactions. Schaefer and Bayley (1960) in comparing early and late parent-child interaction data, found that the two were highly correlated especially on the love vs. hostility dimension. They found greater changes over time on the autonomy vs. control dimension. This suggests that certain aspects of the parent-child relationship may change while other aspects remain relatively constant.

Some authors such as Shaw and White (1965) correlate the scores of parents with these same measures as reported by the child in an attempt to validate the results and to see how these differ. Other investigators such as Christopher (1966) and Heilbrun and Orr (1966) are interested only in parental antecedents as perceived by the child. They point out that it doesn't matter if the child's perceptions are true or not, it is these perceptions which will influence achievement motivation. This approach appears valid although it is of interest also to compare the child's perceptions of the parent's attitudes with the parent's perceptions of his own attitudes.

Hypothesis

In view of the previous research findings the following hypotheses were set forth:

I. Identification of male and female adolescents (ages 17-21) with the same sex parent is positively correlated with academic achievement.

II. Academic achievement is positively correlated with socioeconomic status, in male and female adolescents.

III. Academic achievement is associated with a high correlation between parents' attitudes determined directly, and adolescents' perception of their parents' attitudes.

IV. There is a low correlation between the parents' attitudes as determined directly and the parents' attitudes as predicted by the adolescent.

V. Identification with the same sex parent is positively correlated with the adolescent's ability to perceive the parents' attitudes accurately.

VI. Academic achievement in adolescents is positively correlated with positive parental attitudes as determined by the Parental Attitude Research Instrument.

The level of significance in each hypothesis was set at $\alpha = .05$ using a two-tailed test.

CHAPTER II

METHOD

Subjects

Our sample was drawn from the entire population registered for Psychology 120 at the University of Manitoba for the 1969-70 academic year. It consisted of 113 males and 102 females, urban and rural students, aged 17-21. All had completed Grade XII education and were attending an urban college at the time of the study. In addition, information was obtained from a large percentage of the parents of the urban students; data were obtained on 60 mothers of girls and 45 fathers of boys.

Description of Measuring Instruments

Parental Attitude Research Instrument

The Parental Attitude Research Instrument (PARI) was developed at the National Institute of Mental Health by Schaefer and Bell in 1958. It was an attempt to organize multi-behavior in any mother-child interaction into a limited number of general concepts. The methodological motivation was to develop a set of rating scales defined in behavioral terms that would be communicable and permit reliable ratings by relatively unskilled personnel. The hypothesis underlying this concept is that the covert reactions of the mother to the child will be revealed by the pattern of the overt behavior ratings in a questionnaire. The authors began with a conceptual analysis of the domain of parental attitudes.

Three clinical psychologists sorted items from previous work by Mark (1953) and Shoben (1949) into subscales which seemed psychologically homogeneous. Items referring to socially unapproved behavior predominate but positively phrased "rapport" scales were also added. The scale was expanded to include many new items which reflected the new constructs. A series of test runs were made to show internal consistency. Finally a set of 23 five-item scales was selected and tested to establish internal consistency, reliability and test-retest reliability. The format involves the use of rather generalized third person statements about child rearing such as:

"People who think they can get along in marriage
without arguments just don't know the facts."

Four response alternatives are permitted; strongly agree, mildly agree, mildly disagree and strongly disagree. There are forms for both mothers and fathers. The former has 23 factored scales of five items each, as does the latter, with the items being cyclically arranged on the questionnaire blank.

There are some disadvantages to the use of this scale as might be expected. The first is the influence of response sets, especially on acquiescence response sets. Several authors have also expressed concern with the social desirability set and consider it necessary to pull out the contaminating effects of response sets (Becker & Krug, 1965). Best (1969) suggested implementation of a statistical correction procedure for reported general response tendencies.

PARI scores are markedly sensitive to educational influences and

readily reflect differences in educational levels, especially the factor "authoritarian control." The hostility-rejection factor is not related to educational level, however (Becker & Krug, 1965). These same authors postulate that part of this may be due to differences in response style between different educational levels.

Schaefer and Bell warn users of the PARI to control for educational and occupational level of the child's parents.

In Likert scales such as the PARI, factor analysis is used to determine if the test is measuring unitary or complex constructs. The construct validity is based on measures of internal consistency. As Anastasi (1968) points out, since the latent attitude dimension is defined by the mutual intercorrelations or the item-consistency, items are assumed to be interrelated by virtue of the latent factor. The PARI has been administered to independent samples, and it has been found upon separate factor analysis that the same set of factors emerge. This suggests that the questionnaire is tapping the same set of attitudes, offering additional support for construct validity.

The PARI also correlates highly with other similar questionnaires whose purpose it is to assess parental attitudes. Roe (1957) and Slater (1962) have found factors very similar to those of the PARI using their own measuring instrument developed separately, thus establishing an independent source of validation.

Several authors, such as Mannino et al (1969), Gerhart and Geismar (1968), Becker and Krug (1965), and Medinnus (1969) have been unsuccessful in attempts to demonstrate a relationship between expressed attitudes

and observed behavior. Medinnus (1969) believes that the failure of the PARI to differentiate between the attitudes of mothers of children who vary widely on important psychological dimensions may be that there is a wide margin of safety with regard to parents' attitudes. These authors, among others, exhibit a basic misunderstanding of the purpose of the PARI. Attitude scales such as the PARI were not developed for the purpose of predicting behavior, but of predicting attitudes. Nevertheless, investigators continue to expect a high correlation of the PARI with behavioral measures, even though many of them recognize that there is no one-to-one relationship between a person's attitudes and behavior.

Medinnus' (1969) suggestion that a clinical measure of defensiveness be applied as a corrective factor to PARI scores appears impractical. One must first develop such a measure, and consider how it should be incorporated into the PARI. The question of the reliability and validity of the measure also arises. It has generally been found that there is no real defense against "defensiveness" and it remains a problem of most psychological instruments.

Advantages of the PARI include its use of closed questions which are faster and easier for the subject than open-ended questions. The subject's replies are forced onto the dimension of interest to the experimenter, thus decreasing the number of uncodable answers. The forced-choice technique is useful in determining response sets and reducing the irrelevant effects of a social desirability set and detecting carelessness.

Another advantage is the PARI's system of scoring which scores the four responses: Strongly Agree, Mildly Agree, Mildly Disagree, Strongly Disagree--4, 3, 2 and 1 respectively. This gives the researcher an idea of the strength and direction of the subject's responses, and the numerical system lends itself to statistical analysis by computer. The PARI, being a Likert-type attitude scale, and not a standardized test, has nevertheless been partially standardized on children of white middle class Americans.

Schludermann and Schludermann (1970) have applied the Mothers' and Fathers' PARI to Canadian university students and found it to be equally applicable in Canada. Thus the instrument has been found to be directly applicable to the population which we shall be studying, namely first year students at the University of Manitoba.

One of the main advantages of the PARI in this study is that this scale has been widely used by experimenters seeking correlations between family variables and attitudes and achievement motivation. This allows us to compare our results with those of others who have used the same test instrument.

The advantages in terms of time saved, of using a test on which many of the standardization procedures such as item analysis have already been carried out, are obvious.

The ease of administration of the PARI is another point in its favor.

As previously mentioned, the magnitude of association between PARI and interviewing parents directly is not high, but according to

Becker and Krug (1965) the findings can be interpreted as suggesting some construct validity of the PARI.

Finally, Schaefer and Bell (1958) suggest that one of the main advantages of the PARI is its use as an economical first approach in uncharted areas. The Fathers' and Mothers' forms of the PARI differed in the use of reversed scales. The Fathers' form used both reversed and unreversed scales, and this combination served to control for acquiescence set, since agreement with an unreversed item is equivalent to disagreement with that same item in its reversed form. High agreement with an unreversed item was represented by a high scale score, since the scoring was Strongly Agree - 4 . . . 3 . . . 2 . . . 1 - Strongly Disagree, while high agreement with a reversed item was represented by a low score, since the scoring was Strongly Agree - 1 . . . 2 . . . 3 . . . 4 - Strongly Disagree. The Mothers' form of the PARI consisted solely of unreversed items scored the same way as the unreversed items on the Fathers' PARI.

The Gough Adjective Check List

The Adjective Check List (ACL), developed in 1958 by Gough and Heilburn, has been used extensively by many investigators for many purposes, among them estimating qualities of self in subjects. Shaw and White (1965) adapted the ACL for the purpose of measuring identification between students and parents. They had students fill out the ACL for themselves and for their parents and used the correlation between these as an index of identification. Our reason for considering identification in this study is that Shaw and White found that academic

achievement was directly related to the strength of identification.

Blischen's Socioeconomic Index

Bernard Blischen, in 1958 described a system in which occupations from the census publication could be ranked in terms of socioeconomic status, making use of data on education and income characteristics of people in the different occupations of the 1951 census. More recently, Pineo and Porter (1967) approached socioeconomic status differently, using the average evaluation of an occupational title made by a national sample to establish its social standing. In an attempt to expand this scale, which dealt with a limited number of occupations, Blischen in 1967 revised his own scale and then devised a procedure for assigning approximations of the Pineo-Porter prestige scale scores to census occupational titles. He constructed a regression equation which had as dependent variable the Pineo-Porter scores for 88 occupations and the independent variable the corresponding income level and educational level indices. The regressions weights were then applied to all census occupations. The high correlation between the Pineo-Porter and Blischen's present index was interpreted by Blischen as supporting the validity of the latter. Blischen found that the mean socioeconomic index of the labor force of Manitoba was 38.78, ranking third, below Ontario and Alberta. In the present study Blischen's scale was used to assign a number to each student representing the socioeconomic index.

Measures of Academic Achievement

We used two measures of academic achievement, a general one, viz overall grade point average (GPA), and a specific one, viz mark in

Psychology 120. Comparing subjects on one course which they all took has an advantage of better comparability, while using the overall GPA has another picture of a student's academic achievement. GPA has another advantage in that a certain course may be thought of as being predominately masculine or feminine, which could confound the results when comparing grades with measures of identification.

Procedure

I. With University Subjects

The subjects filled out the questionnaires in groups on one of two pre-arranged days of the week. The sessions were one hour in length. The subjects were addressed by the experimenter prior to the administration of the test instrument in an attempt to obtain rapport. At this time the subjects were asked to enlist the cooperation of their parents in answering a telephone questionnaire which was to be subsequently conducted by the experimenter.

Each subject was given a booklet containing the Parental Attitude Research Instrument (PARI), and two copies of Gough's Adjective Check List. The booklets for females contained the Mothers' form of the PARI, while those for the males contained the Fathers' form of the PARI. The subjects were instructed as follows:

> There are three parts to this experiment. The first is a questionnaire concerning attitudes about family life and child rearing. Please answer each question in the way that you think your same sex parent would; i.e., girls answer it the way their mothers would and boys do the same for their fathers. There are no right or wrong answers, and we would ask you to answer

> as honestly as possible. Remember that it is not your opinion which we want but that of your parent. Please read the instructions on the booklet carefully and fill in the answers.
>
> The next part consists of two copies of an Adjective Check List. For the first copy please check off all the adjectives which you consider to be self-descriptive. For the second copy check off all those adjectives which describe your same sex parent, i.e., boys describe their fathers and girls their mothers.

The subjects indicated their responses directly on the question sheets and the tests were scored according to the procedure designated by the test constructors.

II. With Adult Subjects

Parents of the students living in Winnipeg were contacted by telephone in an attempt to enlist their cooperation in participating in a 20 to 30 minute questionnaire conducted over the phone by the experimenter. Only the same sex parents of the students were contacted, i.e., mothers of the girls and fathers of the boys. The questionnaire to be administered was the PARI. If the parent agreed to participate, the following instructions were given:

> This is a questionnaire to find out about the attitudes that mothers (fathers) have about child rearing. There are no right or wrong answers so please answer as honestly as possible. I will read you a number of statements and after each one I would ask you to give me your opinion by saying one of four things: Agree strongly, agree mildly, disagree strongly, or disagree mildly.

The experimenter then read each statement and circled the parent's response each time on the test booklet.

These tests were then scored according to the procedure set forth by the test constructors.

CHAPTER III

RESULTS

The division of male and female subjects separately into three academic achievement groups on the basis of grade point average (GPA) was carried out as follows:

Low GPA - 0.0 to 1.49

Medium GPA - 1.5 to 2.49

High GPA - 2.5 to 4.00

The rationale for this division was, first of all, that a GPA of 2.5 or higher is defined by the university to be above average, hence it served as the boundary between Medium and High achievement. The demarcation between medium and low achievement was set at 1.5, as this GPA was halfway between 1.0 (defined by the university as marginal) and 2.0 (defined as average). This division resulted in three groups of males with 24 low GPAs, 56 medium GPAs, and 30 high GPAs, and three groups of females with 11 low GPAs, 57 medium GPAs, and 32 high GPAs.

The determination of a measure of identification for each subject was based on the procedure used by Shaw and White (1965) which consisted of a correlation between the Adjective Check List self-description and parental description for each subject. These identification indices ranged from .077 to .976 with a mean correlation of .717 for females and ranged from .070 to .959 with a mean correlation of .720 for males.

In order to test the hypothesis that identification of males and females with the same sex parent is positively correlated with

achievement, we calculated the mean and standard deviations of the identification indices within each of the six different GPA groups (Table 1). We then carried out *t* tests for the difference between the means of these groups for males and females (Table 2). For females there is no significant difference between any of the three achievement groups with respect to the strength of identification, although there is a trend in the predicted direction. For males the difference between the low GPA group and the high GPA group is significant (*t* = .05) but the direction here is the opposite of that predicted. That is, the high GPA group has significantly lower identification with the parent than the low GPA group.

A socioeconomic index was calculated for each subject based on the procedure of Blischen (1960). From this an overall socioeconomic index (SEI) for females was found to be 49.62. Similarly, the mean SEI for males was calculated and found to be 48.11. Both of these values are considerably higher than the mean SEI for Manitoba which is 38.78. It would appear that our sample probably has a greater number of middle and upper middle class subjects than the general population. Nevertheless our sample contained a broad range of socioeconomic positions. For males and females the range was from 27.25 to 76.44.

In order to test the hypothesis that academic achievement is positively correlated with socioeconomic status, we found the means and standard deviations of the socioeconomic indices within each of the achievement groups (Table 3). We then carried out *t* tests for the difference between means of these groups (Table 4). While all the

TABLE 1

MEAN AND SD OF IDENTIFICATION INDEX FOR ACHIEVEMENT GROUPS

	Sex Groups			
	Males		Females	
Achievement Groups	Mean	SD	Mean	SD
Low GPA	.819	.146	.681	.265
Medium GPA	.735	.229	.715	.230
High GPA	.697	.280	.777	.169

TABLE 2

T TESTS FOR DIFFERENCE BETWEEN MEANS IN TABLE 1

	Sex Groups			
	Males		Females	
Groups Compared	t	df	t	df
Low vs High GPA	2.026*	52	1.074	41
Low vs Med. GPA	1.935	78	0.037	64
Med. vs High GPA	0.571	84	1.421	85

* Significant at .05 level

TABLE 3

MEAN AND SD OF SOCIOECONOMIC INDEX OF ACHIEVEMENT GROUPS

	Sex Groups			
	Males		Females	
Achievement Groups	Mean	SD	Mean	SD
Low GPA	48.064	16.103	45.677	13.619
Med. GPA	47.270	15.121	49.178	15.356
High GPA	49.566	12.722	51.420	16.074

TABLE 4

T TESTS FOR DIFFERENCE BETWEEN MEANS IN TABLE 3

	Sex Groups			
	Males		Females	
Groups Compared	t	df	t	df
Low vs High GPA	0.343	46	1.023	39
Low vs Med. GPA	0.187	66	0.660	56
Med. vs High GPA	0.686	72	0.616	79

results are nonsignificant, the trend for the females is in the predicted direction, i.e., the females with high GPA have a higher mean SEI than females with low or medium GPA.

To test the hypothesis that academic achievement is associated with a high correlation between parental attitudes determined directly, and students' perception of their parents' attitudes, we obtained the mean and standard deviations of the student-parent correlations on the PARI as a whole (Table 5). There were no significant differences between the three achievement groups for either sex as far as being able to predict parental attitudes accurately (Table 6).

In order to determine the validity of the students' PARI responses as accurate indicators of the parents' true attitudes, we ran a series of correlations between the students' PARIs and the parents' PARIs for each scale separately (Tables 7 & 8). By looking at the different correlations obtained, we can compare the students' ability to predict parental attitudes on different scales. In general the correlations for males and their fathers are low with five scales being significantly different from zero, whereas females appear to do considerably better. Females were able to predict their mothers' responses on the PARI at a level significantly better than zero on 13 of the 23 scales.

An overall correlation between student and parental PARI was carried out for each of the 44 male-father pairs and the 60 female-mother pairs on which data was available. Then a correlation between these values and the corresponding identification index for each student was carried out, in an attempt to determine if any relationship existed

TABLE 5

MEAN AND SD OF CORRELATION BETWEEN STUDENTS' PARI AND PARENTS' PARI FOR ACHIEVEMENT GROUPS

	Sex Groups			
	Males		Females	
Achievement Groups	Mean	SD	Mean	SD
Low GPA	.544	.138	.522	.194
Med. GPA	.430	.215	.545	.182
High GPA	.455	.205	.538	.208

TABLE 6

T TESTS FOR DIFFERENCE BETWEEN MEANS IN TABLE 5

	Sex Groups			
	Males		Females	
Groups Compared	t	df	t	df
Low vs High GPA	1.289	25	0.160	26
Low vs Med. GPA	1.603	25	0.253	36
Med. vs High GPA	0.332	32	0.138	52

TABLE 7

CORRELATIONS BETWEEN SONS AND FATHERS ON THE 20 SCALES OF THE PARENTAL ATTITUDE RESEARCH INSTRUMENT

Scales	Correlations
1. Encouraging Verbalization	.393***
2. Fostering Dependency (r)	.000
3. Breaking the Will (r)	.240
4. Harsh Punishment	.331**
5. Deception	.170
6. Marital Conflict (r)	.187
7. Non-punishment	.324*
8. Irresponsibility of Father (r)	.375***
9. Suppression of Agression (r)	.031
10. Deification of Parent (r)	.122
11. Exclusion of Outside Influence (r)	.244
12. Irritability (r)	.083
13. Strictness	.089
14. Suppression of Sexuality (r)	.272
15. Ascendancy of Husband	.167
16. Inconsideration of Wife	.134
17. Complaint of Ascendancy of Wife (r)	.077
18. Suppression of Affection	.367***
19. Change Orientation	.194
20. Forcing Independence	.089

* Significant at .05 level
** Significant at .02 level
*** Significant at .01 level
(r) = reversed scale

TABLE 8

CORRELATIONS BETWEEN DAUGHTERS AND MOTHERS ON THE 23 SCALES OF THE PARENTAL ATTITUDE RESEARCH INSTRUMENT

Scales	Correlations
1. Encouraging Verbalization	.130
2. Fostering Dependency	.094
3. Seclusion of Mother	.244
4. Breaking the Will	.336**
5. Martyrdom	.386***
6. Fear of Harming Baby	.314*
7. Marital Conflict	.498****
8. Strictness	.204
9. Irritability	.258*
10. Excluding Outside Influence	.187
11. Deification of Parent	.313*
12. Suppression of Agression	.308*
13. Rejection of Homemaking Role	.248*
14. Equalitarianism	.000
15. Approval of Activity	.148
16. Avoidance of Communication	.204
17. Inconsiderateness of Husband	.256*
18. Suppression of Sexuality	.275*
19. Ascendancy of Mother	.282*
20. Intrusiveness	.272*
21. Comradeship and Sharing	.000
22. Acceleration of Development	.366***
23. Dependency of Mother	.240

* Significant at .05 level
** Significant at .01 level
*** Significant at .002 level
**** Significant at .001 level

between the strength of identification and the ability of the student to predict accurately his parents' attitudes. The correlation was .244 for females and .000 for males indicating no relationship between these two variables.

The mean and the standard deviations for each of the scale scores on the students' PARI was obtained for each of the achievement groups (Tables 9 & 10). We then conducted *t* tests for the difference between means for these groups in an attempt to discover if certain of the PARI scale scores would differentiate between the different achievement groups (Tables 11 & 12). Comparing males low GPA vs. high GPA, two scales differentiated (with *t* = .05 and *t* = .01). Comparing males medium GPA vs. high GPA, three scales differentiated between the groups (*t* =.02). For females low GPA vs. medium GPA, two scales differentiated the groups (*t* = .02 and *t* = .01). And for females medium vs. high GPA, five scales differentiated between the two groups (*t* = .05, *t* = .01, and *t* = .002).

TABLE 9

MEAN AND SD OF THE 20 SCALE SCORE ON PARI FOR MALE ACHIEVEMENT GROUPS

	Achievement Groups					
	Low GPA		Med. GPA		High GPA	
Scales	Mean	SD	Mean	SD	Mean	SD
1.	15.087	2.448	13.702	2.853	13.967	2.588
2.	10.000	1.817	10.386	2.198	10.700	1.846
3.	10.130	2.252	10.614	2.084	10.933	2.977
4.	11.261	2.381	11.719	2.285	11.167	3.012
5.	10.913	2.500	11.193	2.749	12.133	2.717
6.	13.783	3.021	13.719	2.546	13.100	1.832
7.	9.522	2.282	9.649	2.717	10.267	2.189
8.	9.696	1.804	9.614	1.997	11.033	2.834
9.	10.652	2.013	11.350	1.868	11.333	1.577
10.	12.783	1.933	12.982	2.004	12.433	2.261
11.	11.652	2.013	12.087	1.668	11.833	1.714
12.	12.739	2.307	13.246	2.522	14.500	1.979
13.	13.304	2.940	14.017	2.509	13.167	2.794
14.	10.608	2.317	11.122	2.506	11.100	2.087
15.	14.826	2.547	15.193	2.678	14.333	3.389
16.	13.652	2.238	12.947	2.495	13.666	2.925
17.	12.913	1.954	13.579	1.834	13.633	2.024
18.	13.869	1.676	14.315	2.053	14.300	2.383
19.	13.304	3.042	14.087	2.836	13.733	2.476
20.	14.608	2.162	15.105	2.447	13.967	1.683

TABLE 10

MEAN AND SD OF THE 23 SCALE SCORES ON PARI FOR FEMALE ACHIEVEMENT GROUPS

	Achievement Groups					
	Low GPA		Med. GPA		High GPA	
Scales	Mean	SD	Mean	SD	Mean	SD
1.	14.909	1.928	16.596	2.135	14.812	2.822
2.	10.818	2.552	10.175	2.636	11.156	3.083
3.	12.818	2.081	12.228	2.695	11.656	2.482
4.	12.273	2.004	10.386	2.404	11.562	2.794
5.	13.363	2.307	12.508	3.377	13.343	3.350
6.	14.727	1.482	14.754	2.805	13.843	2.969
7.	16.727	1.212	16.421	2.477	16.281	2.413
8.	14.363	3.723	13.157	3.280	14.281	3.347
9.	15.181	2.249	15.333	3.213	15.406	3.277
10.	12.000	1.954	10.701	2.714	12.000	2.598
11.	13.181	2.757	12.491	2.968	13.093	2.323
12.	13.181	2.979	12.105	2.524	12.312	2.214
13.	13.363	2.185	14.017	3.236	13.718	3.094
14.	13.545	1.827	15.210	2.041	13.562	2.331
15.	15.454	3.026	14.578	2.574	15.281	2.182
16.	10.363	2.672	10.315	2.010	10.093	2.685
17.	13.454	2.709	11.754	3.158	12.687	3.477
18.	10.454	2.934	9.596	3.094	10.437	2.276
19.	12.090	2.998	11.596	3.232	11.875	2.407
20.	11.636	3.497	10.982	3.516	11.656	3.679
21.	16.545	2.230	17.105	1.888	16.562	2.120
22.	12.909	2.108	13.245	2.836	12.500	2.524
23.	13.272	2.260	13.245	3.147	12.750	2.524

TABLE 11

T TESTS FOR THE DIFFERENCE BETWEEN MEANS IN TABLE 9 (MALES)

Scales	Groups Compared: Low vs. Med. t	Low vs. High t	Med. vs. High t
1. Encouraging Verbalization	1.575	1.613	0.438
2. Fostering Dependency (r)	0.807	1.380	0.706
3. Breaking the Will (r)	0.889	1.119	0.524
4. Harsh Punishment	0.791	0.127	0.880
5. Deception	0.466	1.773	1.528
6. Marital Conflict (r)	0.089	0.956	1.303
7. Non-punishment	0.213	1.200	1.153
8. Irresponsibility of Father (r)	0.178	2.095*	2.446**
9. Suppression of Agression (r)	1.435	1.338	0.047
10. Deification of Parent (r)	0.415	0.607	1.125
11. Exclusion of Outside Influence (r)	0.917	0.346	0.663
12. Irritability (r)	0.863	2.933***	2.549**
13. Strictness	1.030	0.170	1.370
14. Suppression of Sexuality (r)	0.880	0.796	0.045
15. Ascendancy of Husband	0.575	0.605	1.192
16. Inconsideration of Wife	1.237	0.021	1.148
17. Complaint of Ascendancy of Wife (r)	1.405	1.311	0.122
18. Suppression of Affection	1.009	0.774	0.031
19. Change Orientation	1.060	0.567	0.636
20. Forcing Independence	0.894	1.177	2.551**

* Significant at .05 level
** Significant at .02 level
*** Significant at .01 level
(r) = reversed scale

TABLE 12

T TESTS FOR THE DIFFERENCE BETWEEN MEANS IN TABLE 10 (FEMALES)

Scales	Groups Compared: Low vs. Med. t	Low vs. High t	Med. vs. High t
1. Encouraging Verbalization	2.611	0.126	3.113***
2. Fostering Dependency	0.760	0.358	1.516
3. Seclusion of Mother	0.817	1.309	1.012
4. Breaking the Will	2.763***	0.911	2.003*
5. Martyrdom	1.035	0.022	1.126
6. Fear of Harming Baby	0.046	1.283	1.415
7. Marital Conflict	0.624	0.793	0.260
8. Strictness	1.000	0.083	1.529
9. Irritability	0.188	0.252	0.101
10. Excluding Outside Influence	1.451	0.000	2.330*
11. Deification of Parent	0.752	0.106	1.063
12. Suppression of Agression	1.044	0.887	0.382
13. Rejecting of Homemaking Role	0.840	0.415	0.436
14. Equalitarianism	1.631	0.025	3.356****
15. Approval of Activity	0.898	0.175	1.363
16. Avoidance of Communication	0.056	0.287	0.408
17. Inconsiderateness of Husband	1.090	0.767	1.254
18. Suppression of Sexuality	0.887	0.017	1.475
19. Ascendancy of Mother	0.495	0.215	0.462
20. Intrusiveness	0.654	0.019	0.843
21. Comradeship and Sharing	0.781	0.022	1.209
22. Acceleration of Development	0.448	0.527	1.248
23. Dependency of Mother	0.034	0.641	2.032*

* Significant at .05 level
** Significant at .02 level
*** Significant at .01 level
**** Significant at .002 level

CHAPTER IV

DISCUSSION

Identification and Achievement

The first hypothesis which was tested was that identification of males and females with the same sex parent is positively correlated with achievement. One of the only studies designed specifically to determine the relationship between identification and achievement is that of Shaw and White (1965), in which they used the Adjective Check List to ascertain self and parental perceptions. They found that male achievers identified with their fathers but underachieving males did not; as well, female achievers identified more with their mothers than did female underachievers.

Granlund and Knowles (1969) also found male sex role identification to be characteristic of achievers but not of underachievers.

While our method was similar to that of Shaw and White (1965), our results were quite different. The results for females were not significant, although there was a trend in the predicted direction, i.e., females in the high GPA group had a higher mean identification with their mothers than females in the medium and low GPA groups.

The results for males in our study were in the opposite direction to that predicted, i.e., the males in the low GPA group had the highest identification of the three groups, and the males in the high GPA group the lowest. The difference between males' high GPA and males' low GPA was significant ($p = .05$).

One reason for these discrepant results may lie in the socioeconomic status of his achievement groups. In our study there was no significant difference in socioeconomic status between the achievement groups for males or females; however, the females did show a trend in which the high GPA group had a higher mean socioeconomic index than the medium or low GPA groups. The three GPA groups of males on the other hand were approximately the same with respect to mean socioeconomic status. It is interesting that our results for females, with regard to identification, were in the same direction as the results of Shaw and White. Unfortunately Shaw and White did not measure socioeconomic status so we don't know if his achievement groups were homogeneous with respect to this variable or not. Another problem in comparing our results is that Shaw and White used only two achievement groups with a GPA of 2.7 as the cutoff separating achievers from underachievers, while in our study there were three achievement groups with quite different GPA divisions. We may question the choice of 2.7 as the cutoff for underachievement as this is not an abnormally low GPA.

In seeking an explanation for the discrepant results which we obtained for males, further research is needed. While the use of the Adjective Check List descriptions of self and parents as a measure of identification is a good idea as a starting point, it may be profitable in the future to do a detailed analysis of the type of adjectives which the son and father have in common with an end to determining whether these adjectives are achievement oriented or not. It may be that high identification with the same sex parent is associated with high academic

achievement only when the parent is also achievement oriented.

Socioeconomic Status and Achievement

The second hypothesis to be tested concerns the effect of socio-economic status on academic achievement. From our review of the literature, we note the conflicting views here, with Gough (1946), Lewis (1941), Williams (1957) and Frankel (1960) asserting that socioeconomic status correlates positively with academic achievement while Ford (1956), Blackman (1955) and Curry (1962) found that it had no effect on academic achievement.

In our study we found no significant difference between the different achievement groups with respect to socioeconomic status. At first glance we might take this to mean that our sample had a very narrow range of socioeconomic levels, but this was not the case. Our sample covered almost the entire range of Blischen's socioeconomic levels. The range in our sample was from 27.25 to 76.44, and the total range possible according to Blischen (1967) is from 25.36 to 76.69. Our sample did not include some of the very lowest levels. From our results we would conclude that socioeconomic status at least in the university population which we studied did not affect academic achievement. It is interesting to note that our results for females, while non-significant, were in the predicted direction indicating that the effect of socioeconomic status on achievement may be different for males and females. Our results are similar to Siemens and Jackson (1965) who found socioeconomic status to be unrelated to post high school plan fulfillment in grade XI and XII Manitoba high school students.

Achievement and Prediction of Parental Attitudes

The third hypothesis tested was that academic achievement is associated with the ability to predict parental attitudes accurately. Shaw and White (1965) found a tendency for male underachievers to have limited perceptions of both themselves and others, and our hypothesis was an attempt to see if this was true in our study. The results here were clearly non-significant indicating no relationship at all between academic achievement and ability to perceive parental attitudes accurately. Intuitively, one would not necessarily expect any relationship, but previous research suggested that the relationship might exist.

Validity of Administration of the PARI to Students

The fourth hypothesis centered around determining the validity of administering the PARI to students who would then predict their parents' responses. Most of the researchers concerned with parental attitudes have taken one of two positions. Either they measure the parents' attitudes directly, or they measure the child's perception of his parents' attitudes. Davids and Hainsworth (1967), proponents of the latter view, assert that it is the child's own perceptions which will determine his behavior, not necessarily how things really are. While we tend to agree with this view, we were also interested to compare the students' perceptions of their parents' attitudes with the attitudes which the parents themselves express. We were also interested in comparing males and females as to accuracy of perception of parental attitudes.

For males, the correlation between the parents' actual response and the response as predicted by the son were significantly greater than

zero on only five of the 20 scales:

Scale 1	-	Encouraging Verbalization	$p = .01$
Scale 4	-	Harsh Punishment	$p = .05$
Scale 7	-	Non-punishment	$p = .05$
Scale 8	-	Irresponsibility of Father	$p = .02$
Scale 18	-	Suppression of Affection	$p = .02$

Of these five scales, four are concerned with tangible reward and punishment aspects of child rearing in which the son would be directly involved. There was no relationship between sons' and fathers' responses on other scales dealing with more theoretical positions and attitudes on child rearing, e.g., deification of parent, deception, exclusion, change orientation, or with scales referring primarily to the father-mother interaction such as marital conflict, complaint of ascendancy of wife, or inconsideration of wife. All scales, with the exception perhaps of scale 8, on which the son was accurate to a certain extent, reflect the father-son interaction.

It appears then that in general males do quite poorly in predicting their fathers' attitudes correctly, and they are able to do better on those scales reflecting attitudes with which they have been personally involved, rather than the more subtle attitudes or those involving the parent-parent relationship.

Turning to the females, we see that the daughters are able to predict their mothers' attitudes with 13 out of the 23 scales ($p = .05$ to .001). These are as follows:

Scale 4	-	Breaking the Will	$p = .01$
Scale 5	-	Martyrdom	$p = .002$
Scale 6	-	Fear of Harming Baby	$p = .02$
Scale 7	-	Marital Conflict	$p = .001$
Scale 9	-	Irritability	$p = .05$
Scale 11	-	Deification of Mother	$p = .02$
Scale 12	-	Suppression of Aggression	$p = .02$
Scale 13	-	Rejection of Homemaking Role	$p = .05$
Scale 17	-	Inconsiderateness of Husband	$p = .05$
Scale 18	-	Suppression of Sexuality	$p = .05$
Scale 19	-	Ascendancy of Mother	$p = .05$
Scale 20	-	Intrusiveness	$p = .05$
Scale 22	-	Acceleration of Development	$p = .002$

The first conclusion which can be drawn is that girls are better able to predict their mothers' responses than boys are their fathers'. The striking thing which we find with the females is that they are much more sensitive to inter-parental attitudes than the boys are. For boys the highest correlation with their fathers' attitudes was on scales such as "encouraging verbalization," "suppression of affection" and "harsh punishment."

In contrast, the females were best able to predict their mothers' scores on attitudes of "marital conflict," "martyrdom," "acceleration of development," "inconsiderateness of husband," and "rejection of homemaking role," among others. It is interesting that many of these scales may not involve the girl directly, and many of these scales

measure attitudes which would never be expressed outright, but perhaps implied, e.g., ascendancy of mother, deification, fear of harming baby, martyrdom and acceleration of development. In females there appears to be a sensitivity to subtler attitudes in the home as well as a sensitivity to the mother-father relationship which is absent with males.

These findings are in keeping with the social stereotype of the female having greater sensitivity to the emotional aspects of interpersonal relationship, both her own and that of her parents. This finding is also noteworthy when we recall that there was no significant difference in the mean strength of identification between males and females. This social sensitivity appears to be distinct from any identification process.

It appears that if a researcher is mainly interested in the parents' own responses, then administering the PARI to the children is of questionable value, especially in the case of males. However, if his main interest is to determine how the student perceives his parents' attitudes, then there is no doubt that this is a valuable approach.

Identification and Prediction of Parental Attitudes

The fifth hypothesis tested concerns the relationship of identification to the prediction of parental attitudes. It is interesting that no relationship was found between the strength of identification with the parent and the ability to predict accurately the parents' attitudes, thus refuting the hypothesis. We might have expected that identification would facilitate the understanding of the parent more, but apparently this is not the case here.

Achievement and Parental Attitudes

The testing of the final hypothesis involved an extensive study of the different achievement groups from the point of view of determining if they could be differentiated on the basis of the students' PARIs. We looked at the students' reports of their parents' attitudes, since we tend to agree with Davids and Hainsworth (1967) concerning the importance of the child's perception of what his parents' attitudes are.

No scales differentiated between males' low GPA and males' medium GPA.

Two of the scales differentiated males' low GPA from males' high GPA. These were Scale 8 - Irresponsibility of Father ($p = .05$), and Scale 12 - Irritability ($p = .01$). The males in the low GPA group had fathers who demonstrated significantly more irresponsibility in child rearing, and irritability than males in the high GPA group.

These same two scales differentiated males' medium GPA from males' high GPA, i.e., males with medium GPA had fathers who were significantly more irresponsible ($p = .02$), and irritable ($p = .02$) than males in the high GPA group. One further scale, Scale 20, Forcing Independence, differentiated between the medium and high GPA groups ($p = .02$). In this case, fathers of medium GPA males forced independence significantly more than fathers of high GPA males.

Thus we see that for males, irresponsibility on the part of the father, irritability and forcing independence are all negatively correlated with the sons' achievement.

For females, only two scales differentiated the low and medium

GPA groups. These were Scale 1 - Encouraging Verbalization ($p = .02$), and Scale 4 - Breaking the Will ($p = .01$). The mothers of medium GPA girls were seen as encouraging verbalization in their daughters significantly more than the mothers of low GPA girls. Mothers of low GPA girls were seen as breaking their daughters' will more than mothers of medium GPA girls.

No scale scores differentiated low GPA females from high GPA females.

High GPA females were differentiated from medium GPA females by five scales:

Scale 1 -	Encouraging Verbalization	$p = .01$
Scale 4 -	Breaking the Will	$p = .05$
Scale 10 -	Excluding Outside Influence	$p = .05$
Scale 14 -	Equalitarianism	$p = .002$
Scale 23 -	Dependency of Mother	$p = .05$

Mothers of medium GPA girls encouraged verbalization more than mothers of high GPA girls, and the mothers showed greater dependency than mothers of high GPA girls. Mothers of high GPA girls excluded outside influence more, and were also less equalitarian than mothers of medium GPA girls. Mothers of high GPA girls also broke the will more than mothers of medium GPA girls. The following list illustrates these findings more clearly:

Mothers of Low GPA	Mothers of Med. GPA	Mothers of High GPA
Breaking the Will	Less Breaking of the Will	Breaking the Will

Mothers of Low GPA	Mothers of Med. GPA	Mothers of High GPA
Not Encouraging Verbalization	Encouraging Verbalization	Not Encouraging Verbalization
	Equalitarianism	Less Equalitarianism
	Didn't Exclude Outside Influences	Excluded Outside Influences
	Dependency of Mother	Less Dependency of Mother

The results with females appear to be quite confusing at first, as in essence there appears to be little difference between the low and high achieving girls. In fact there are no scales which differentiate the low and high GPA groups. In this summary table of the characteristics of the mothers we see that the "negative parental attitudes" are more prevalent in the low and high achieving groups and the positive parental attitudes more prevalent in the medium achievement group. The differences between the medium and low GPA groups are in the predicted direction. The striking findings center around the negative attitudes attributed to mothers of high achieving girls. Attitudes such as not encouraging verbalization, breaking the will, excluding outside influence, and less equalitarianism would not be expected to coincide with high academic achievement--in fact, we would expect these attitudes to have a constricting effect on a daughter.

These findings are similar to those obtained by Heilbrun and Waters (1968) who found that the apparently over-protected high control-high nurturance child did best in college academic achievement. Perhaps one explanation may be in the nurturance of the mothers of this group.

On the basis of the attitudes which these high GPA girls perceive in their mothers, it appears that they are over-protected and over-controlled, but we have no knowledge of the nurturance of the mothers. Another explanation may be that the mothers of the high GPA group exert significant pressure for achievement and the high grades of this group is a response to this pressure.

In general we see that in males, academic achievement is associated with more positive parental attitudes in only three of the 20 scales, two of which are clearly non-nurturant (Irresponsibility of Father and Irritability of Father). In females, only five of the 23 scales differentiated between the achievement groups, and there appears to be a curvilinear relationship between positive parental attitudes and achievement since the more positive parental attitudes are associated with medium achievement and the negative attitudes with low and high achievement. The hypothesis thus received partial confirmation in males, but must be rejected in the case of females.

If we believe that parental attitudes do affect achievement, then there may be some attitudes of the parent which the PARI does not tap which are relevant to achievement.

Conclusions

The conclusions arising out of this study of adolescent males and females were:

1) Identification of males with the same sex parent was negatively correlated with academic achievement.

2) Socioeconomic status was not correlated with academic achieve-

ment in our study.

3) Academic achievement was not correlated with the accuracy of students' perceptions of their parents' attitudes.

4) There was a low correlation between the parents' attitudes as determined directly and the parents' attitudes as predicted by the male. There was a considerably higher correlation between females' prediction of their mothers' attitudes and the mothers' actual attitudes.

5) We found that identification with the same sex parent was not correlated with the ability to perceive the parents' attitudes accurately.

6) Academic achievement for males correlated with positive parental attitudes on three out of 20 scales. For females both high and low achievement was associated with negative parental attitudes on five of the 23 scales.

The above conclusions were made with the following limitations.

Limitations of the Present Study

Any generalizations of the present study can only be made with an understanding of the limitations, most of which involve the measuring instruments, and the limited sample.

One of the first problems is the social desirability set and its effect on the PARI. Since the administration of the PARI to the parents was done individually over the telephone, this problem of giving the socially desirable response is a real one. The attempt to eliminate it by saying "there are no right or wrong answers" was certainly not sufficient. This problem would probably be lessened with the students as they were attempting to give their parents' responses and not their

own. It was felt, however, that the increase in the response to the telephone questionnaire as opposed to a mailed questionnaire counterbalanced this limitation. In addition, the authors of the PARI do not recommend that it be used as a mailed questionnaire because of the chance of consultation between husband and wife, as well as the problem of social desirability set.

The great variability of the parents with respect to age and number of children is an additional problem in this study. While all were parents of a 17 to 20 year old university student, for some parents this student was their oldest child (the other children perhaps being preschool and up), while for other parents the 20 year old was their youngest (the eldest child was as old as 45 in one case). Thus we have parental attitudes being greatly influenced by the age of the children. For example, it was noted that the majority of mothers who answered "agree strongly" to the question "Mothers very often feel that they can't stand their children a moment longer" were mothers of young children. Mothers whose children were grown up tended to be positive in their recollections of child rearing attitudes. The problem of recall was evident in the cases of the older parents whereas this did not present the same problem in the young parents. The parental age may be an important variable especially where age differential is large between the child and the parent. In addition, the younger parents may be reflecting two sets of attitudes--that of their parents and their own generation. The change in attitudes with age was recognized by the parents, many of whom mentioned that their attitudes had changed over the years. The fact that

as a group the parents were so heterogeneous was another reason why we looked at the students' perceptions of their parents' attitudes.

Further limitations of this study center around the basis for the parental attitudes on child rearing reported by the students. It is possible that the students were basing their predictions of parental attitudes on the parents' behavior in certain situations rather than on formally verbalized statements made by the parent. We know from the research that attitudes and behavior are not well correlated, and if indeed the adolescents in our study are basing their reports of parental attitudes on the parents' behavior rather than actual statements expressed by the parent, then this raises an additional problem in terms of the PARI.

Suggestion for Further Research

Further research which is directed towards correlation of parents' attitudes with students' perceptions of those attitudes or with parents' attitudes alone would do well to control the age of the parents and the number of children, as both of these would appear to contribute greatly to the parental attitudes about child rearing.

The effect of love and nurturance on the interpretation of the different scales of the PARI is probably substantial, and merits further study. This could take the form of a more extensive study of the "Love vs Hostility" dimension of the PARI, which is one of the most persistent and clearcut of the factors.

Further research should also include a measure of the parents' specific attitudes towards academic achievement, and specific achievement

pressure as these may be found to be more meaningful than "patterns of child rearing" attitudes dealt with here.

CHAPTER V

SUMMARY

In the past many variables, both sociological and psychological, have been studied with reference to their effects on achievement motivation. The purpose of this study was to determine if general parental attitudes, among other things, could be linked to academic achievement.

In view of the relevant literature it was hypothesized that identification, socioeconomic status and accurate perception of parental attitudes all correlated positively with academic achievement; that there would be a low correlation between parents' attitudes determined directly and predicted by the student; that identification correlated positively with accurate prediction of parental attitudes, and that positive parental attitudes correlated positively with academic achievement.

One hundred and two females and 113 males in first year university served as the Ss, along with 60 mothers of the females and 45 fathers of the males. The Parental Attitude Research Instrument (PARI) was administered to all the subjects, with the students instructed to fill it in as their same sex parent would. In addition the students were administered two copies of Gough's Adjective Check List (ACL) to fill in for themselves and their same sex parent.

All males and females were divided into three achievement groups, low, medium and high on the basis of grade point average (GPA).

T tests for the difference between the three achievement groups

for males and females for the means of identification, socioeconomic status, and student-parent PARI correlation were carried out and all three were non-significant with the exception of identification in males. This was found to be negatively correlated with academic achievement.

Correlations between students' and parents' PARIs for each scale were very low for males and females, thus confirming the hypothesis that there is little relationship between parental attitudes determined directly and predicted by the students. Correlations between identification and the correlation between student-parents' PARIs were also not significant.

Positive parental attitudes were found to correlate with academic achievement only in males and only on three scales of the PARI.

There was a significant difference between males and females with regard to accuracy of prediction of parental attitudes. There was a much higher correlation between females' prediction of their mothers' attitudes and the mothers' actual attitudes.

Finally, it was suggested that researchers be aware of the methodological problems in this study, and its limitations.

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APPENDIX

APPENDIX I

TABLE SHOWING THE PERCENTAGE OF BOYS AND GIRLS DRAWN FROM METRO WINNIPEG, RURAL AND SMALL TOWNS AND MANITOBA AND ABROAD

	Boys (N=113)		Girls (N=102)	
Location of Schools	Total	Percentage	Total	Percentage
Metro Winnipeg	72	63.5%	70	68.6%
Rural and Small Towns	24	21.2%	22	21.6%
Outside Manitoba and Abroad	17	15.2%	10	9.8%