

**Personality, Self-Concept, Study Methods
and Attitudes Toward School and Levels of Achieve-
ment of Adolescents in Grades Ten, Eleven, and Twelve**

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CURRICULUM STUDIORUM

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INTRODUCTION

A review of the literature on adolescent underachievement suggests that many researchers representing many disciplines have shown interest in the problem of adolescent underachievement. The literature also shows that attempts to understand the problem or problems for adolescent underachievement have been highly diversified. Thus far it is believed by some that adolescent underachievement can be associated with a single cause while others feel that causes for adolescent underachievement are multiple and varied.

Some factors most often believed to contribute to adolescent underachievement are poor mental health (adjustment problems), poor family relations, physiological abnormalities (vision, hearing, etc.), low self-concept, faulty teaching, poor environmental conditions, lack of proper study habits, and negative attitudes toward school. Many factors believed to contribute significantly to the problem of adolescent underachievement have actually failed to do so. Many researchers seem to have put much effort into the development of a definitive cause or causations for underachievement only to find that their efforts rendered inconclusive or contradictory evidence as to what the problem of adolescent underachievement is all about.

Regardless of the cause or causes of underachievement in adolescents, it is essential for all to realize that

underachievement, for whatever reasons, represents a serious waste of talent in manpower and the world of work. Unless society creates an environment which serves to curtail this gross waste, the problem is not likely to disappear automatically. Conversely, it is likely to become a more serious problem.

Because of much inconclusive and contradictory evidence in the literature, this researcher has chosen to study the problem from the following points of view: (1) personality adjustment (overall mental health); (2) self-concept (an aspect of total personality); and (3) study methods and attitudes toward school. In order to conduct the research; underachievers, par achievers, and overachievers have been used to investigate the three areas personality, self-concept, study methods and attitudes toward school.

Chapter One presents the review of the literature as it relates to the three areas under investigation, i.e., personality, self-concept, study methods and attitudes toward school. Also, Chapter One presents a theoretical basis for further research and a general hypothesis. The specific hypotheses, research design, instruments used, sample population, and statistical analysis for significance will be presented in Chapter Two. The obtained results will be presented in Chapter Three, while Chapter Four contains a

discussion of the obtained results in light of the literature, the implications of these results for further research, and recommendations.

CHAPTER I

REVIEW OF THE LITERATURE

The literature relative to adolescent underachievers, is highly varied and multitudinous in terms of studies previously conducted. Before any of these findings are discussed an order of presentation is outlined. The first section, Part One, will focus on classification, i.e., who is the underachiever? Part Two will present definitions of underachievement. Part Three will discuss the process of selection, i.e., underachievers, par achievers, and overachievers. Part Four presents research findings on personality and the adolescent underachiever. Part Five will have as its focus research literature relative to adolescent underachievers, adolescent par achievers, and adolescent overachievers in relationship to self-concept. Part Six presents literature on study methods and adolescent underachievement in relationship to adolescent par achievement and adolescent overachievement. The chapter will conclude with a summary of findings, the need for further research and a theoretical basis for the current research.

1. Classification of Achievement Levels

In a general way it may be said that underachievers are students who fail to live up to expectancy in terms of academic achievement as predicted by an I.Q. test or an

aptitude test. They are generally classified on the basis of some standardized I.Q. test or an aptitude test in relationship to a standardized achievement test. Wellington and Wellington¹ are critical of methods used to classify under- and overachievers. They observe: "Because the criterion for selection in these studies are not always clear or consistent, acceptance of these findings or opposing ones, that certain differences are present, is not justified. New research is needed, holding the factors of selection constant." The idea of constancy and homogeneity as implied by Wellington and Wellington² is supported by Thorndike.³

Whenever we combine data from different schools, different programs, or even different teachers, we are likely to introduce heterogeneity into the criterion. An aptitude score is only one fact that characterizes a person. There are many others, and a number of these may also have some significance as predictors of one's achievement. Thus we find that achievement as measured by teachers' grades depends upon whether the pupil is a boy or girl. Most of the underachievers in a mixed group are boys; more of the achievers are girls. Through some combination of industry, docility, and agreeableness girls manage to make a more favorable impression on teachers than boys do, a differential that is not generally shown on coldly impersonal standardized tests. It might be advisable to work with a group of the same sex.

¹C. Burrell Wellington and Jean Wellington, The Underachievers: Challenges and Guidelines, New York, Rand McNally, 1965, p. 31.

²Ibid., p. 31

³Robert R. Thorndike, The Concepts of Over- and Underachievement, New York, Columbia University Bureau of Publications, Teachers College, 1963, pp. 17-18.

Even though he does not explicitly state it as such, one can easily infer from Thorndike's remarks that he favors standardized tests over teachers' marks in the process of classifying under- and overachievers. Hurlock⁴ concurs with Thorndike on the incidence of underachievement among boys as compared to girls; i.e., the majority of underachievers are boys. She explained: "Girls conform more closely to adult expectations and that boys place a lower value on good academic work." Hurlock does not give any support for her statement that boys place less value on academic achievement, nor does Thorndike substantiate his suggestion that teachers do not mark boys objectively. However, other researchers seem to agree with Hurlock and Thorndike.

Bricklin and Bricklin⁵ observed that 'school grades do not take into account the child's potential capacities. Teachers' estimates are often biased by a child's physical appearance and by the degree to which he cooperates in class.' Hummel and Sprinthall⁶ concur with the idea that

⁴Elizabeth B. Hurlock, Adolescent Development, New York, McGraw-Hill, 1967, p. 347.

⁵Barry Bricklin and Patricia Bricklin, Bright Child--Poor Grades: The Psychology of Underachievement, New York, Delacorte, 1967, p. 4.

⁶Raymond Hummel and Norman Sprinthall, Underachievement Related To Interests, Attitudes, and Values, Personnel and Guidance Journal, Vol. 44, 1965, pp. 388-395.

teachers' marks are "not arrived at with pure objectivity." They further say that some subjects in high schools neither encourage nor merit maximal efforts from bright students.

It might be inferred from these studies that each of the authors favors standardized tests over teachers' marks for purposes of classifying underachievers, par achievers, and overachievers. However, even if teachers do have difficulty marking boys objectively, it seems that something else is operating to cause such a large percentage of boys to classify as underachievers. Some researchers estimate that up to ninety percent of underachievers are boys. It seems better to use standardized tests, based on norms representing random sampling, which give all students, both boys and girls, a better and an equal chance.

The following quotation from Thorndike⁷ may help to clarify further the problem of classification of adolescent under- and overachievers:

When contrasting has been used to study "under-achievers" the contrasting group has sometimes consisted of the other extreme group, the so called "overachievers" whose achievement is well above what would be predicted, and sometimes of the bulk of average achievers who are performing at about the predicted level. These two types of contrasts have different advantages, present somewhat different types of problems, and present somewhat different types of conclusions. If we can think safely of

⁷ Thorndike, op. cit., pp. 60-61.

'degree of achievement in relation to expected achievement' as a single continuous variable, differing in degree but not in kind, then use of the "over-achiever" group may be expected to provide the maximum amount of information for the amount of data gathered.

The above statements relative to the two extreme groups, underachievers and overachievers, as having a potential for maximum data for the effort spent, is particularly encouraging inasmuch as this research is focused on underachieving adolescents, par achieving adolescents and overachieving adolescents. Continuing on the subject of contrasting groups as a media for classification, Thorndike⁸ observes:

The sharp difference in achievement between the contrasting groups will make them more sensitive, case for case, to any genuine difference in related variables. Thus, this becomes an efficient experimental design. However, for the results from such a contrast of extreme groups to be interpretable, we must assume that the "overachievers" only quantitatively, not qualitatively, are different, i.e., we must assume that the kinds of factors are associated, though in opposite directions, with over- and underachievement. For example, if poor study habits are associated with the underachiever, we would assume the opposite for the overachiever.

Shaw⁹ believes that the most efficient way to initiate a program aimed at identifying bright underachievers

⁸ Ibid., p. 61.

⁹ Merville C. Shaw, "A Definition and Identification of Academic Underachievers", U.S. Office of Education Bulletin, number 25-29, 1961, Washington, D.C., Government Printing Office, p. 17.

is to begin with available intelligence or aptitude tests. In his recommendations as to how to identify underachievers, he describes three kinds of underachievers: (1) Situational underachievers (those students reacting to some specific traumatic situation in their lives that will pass with time and so will the underachievement); (2) Chronic underachievers (those students reacting to a variety of situations in their lives, none of which are likely to change unless some kind of professional intervention is initiated); and (3) Hidden underachievers (those doing poorly on achievement tests, school grades, aptitude tests, and I.Q. tests). Bricklin and Bricklin¹⁰ and Raph, Goldberg, and Passow¹¹ concur with Shaw on the first two kinds of underachievers.

Wellington and Wellington¹² state that, "a good deal of research has shown that achievement tests and I.Q. tests cover about the same ground; they differ only in purpose." This thesis is corroborated by Remmers and Gage.¹³ However,

¹⁰ Bricklin and Bricklin, op. cit., p. ix.

¹¹ Jane B. Raph, Miriam L. Goldberg, and A. Harry Passow, Bright Underachievers, New York, Columbia University, Teachers College Press, 1966, p. 29.

¹² Wellington and Wellington, op. cit., p. 31.

¹³ H. H. Remmers and N.L. Gage, Educational Measurement and Evaluation, New York, Harper, 1955, p. 227.

it is opposed by some researchers, as might be inferred from statements from Shaw as shown above.

2. A Definition of Underachievement Levels

There are almost as many definitions for underachievement as there are researchers working on the problem. Many differ in quantity while others differ in quality.

Shaw¹⁴ defines the underachiever as one with superior ability whose performance, as judged either by grades or achievement test scores, is significantly below his high measured or demonstrated aptitudes or potential for academic achievement. At least in part, this definition conflicts with Shaw's own third category of underachievers, i.e., the hidden underachiever, whom he describes as a student who does poorly on all measures, including aptitude and I.Q. tests. Raph, Goldberg, and Passow¹⁵ define the underachiever as "all those who, for whatever reasons, fail to develop their potentialities maximally." Hurlock¹⁶ describes both underachievers and overachievers: (1) Underachievement

¹⁴Shaw, op. cit., p. 17.

¹⁵Raph, Goldberg, and Passow, op. cit., p. 2.

¹⁶Hurlock, op. cit., pp. 344-347.

means achievement below the individual's tested capacity; the underachiever's achievements may be favorable in comparison with those of his classmates, but they are below what he is capable of doing; (2) The overachiever is one whose performance is above his tested ability; he does better work than his capacities would lead one to expect.

Bricklin and Bricklin¹⁷ describe the underachiever as one whose day-by-day efficiency in school (and elsewhere) is much poorer than would be expected on the basis of his intelligence. From what Hurlock and Bricklin and Bricklin give as a description of underachievement, there can be no doubt that they acknowledge no such classification as a hidden underachiever. By their definitions, if a child does poorly on all measures of potential and achievement, how can one assume that he is capable of doing more than he does?

According to Thorndike,¹⁸ the first step in planning to do research on overachievement and underachievement is to clarify one's own understanding of what the term means. Vague or faulty concepts have been the source of faults in many past studies. Wellington and Wellington¹⁹ describe

¹⁷Bricklin and Bricklin, op. cit., p. ix.

¹⁸Thorndike, op. cit., pp. 1-2.

¹⁹Wellington and Wellington, op. cit., p. 1.

the underachiever as one who appears to possess ability to achieve considerably higher grades than his present records show.

On the basis of the preceding statements by researchers as to how the underachiever should be described (defined), it seems that the underachiever is at least one whose academic performance is significantly below the level of expectancy as measured by teachers' marks and I.Q. tests, or standardized achievement tests and standardized I.Q. tests.

3. Criteria of Selection of Achievement Levels

How much discrepancy must there be before one qualifies as an underachiever, a par achiever, or an overachiever? To be more specific, how much difference in terms of achievement (by months, grades, standardized tests, and I.Q. scores) must there be in order to classify a student as an under-par, or overachiever?

Wellington and Wellington²⁰ advocate the following criteria for selecting underachievers: 'As a matter of expediency, most schools probably set an arbitrary lower limit for their underachievers. An I.Q. of 110 has often been the break off point, although, as we have indicated, a failing student with an average I.Q. is in reality an

²⁰ Ibid, p. 14.

underachiever." These authors observe that some of the research using teachers' marks have not specified which system was used; research which does specify the system used, usually prefers cumulative averages.²¹ Wellington and Wellington also say that it seems more realistic to use separate grades rather than cumulative averages. An explanation for this preference is not given, but one might assume that at least two factors are being considered: (1) Objectivity vs. subjectivity in teachers' marks; and (2) Varying degrees of difficulty of subject matter. For example, physics might be considered much more difficult than creative art. Therefore, a student who took physics, when compared to a student who took creative art, may be placed in an unequal and disadvantageous position.

Thorndike²² corroborates this position with the following statement:

If we are predicting achievement, an 'A' signifies one thing in Physics, something else in Vocational Agriculture; one thing at Harvard, and something else at Sirwash State College. Different schools, different programs, even different instructors use the same symbol system with different meanings.

Thorndike²³ further asserts that there is no more a priori justification for expecting an exact correspondence

²¹Ibid, p. 12.

²²Thorndike, op. cit., p. 4.

²³Ibid, p. 3.

of academic achievement with a scholastic aptitude measure than there is to expect a perfect correspondence between height and age.

After completing the section on selection criteria, one might conclude that research on the problem of underachievement often serves to confuse more than to clarify because selection is based on whatever system happens to appeal to the particular researcher.

4. Personality Factors and Academic Achievement

This section presents research findings which support the belief that underachievement is exclusively a function of maladjustment, or at least that maladjustment plays a major role in adolescent underachievement. Conversely, evidence also will be presented to show that maladjustment is a primary reason for adolescent overachievement.

Murlock²⁴ states that, more often than not, underachievement is associated with personality problems; it comes from conditions unrelated to school. Bricklin and Bricklin²⁵ support this thesis; they say that the school may bring out the maladaptive symptoms in the child but that the

²⁴Murlock, op. cit., p. 347.

²⁵Bricklin and Bricklin, op. cit., p. 64.

child brings these traits to school, at least in embryonic form. On the contrary, Morse²⁶ feels that the school can be and often is very damaging to a child's self-concept, an essential aspect of total personality.

Peterson²⁷ holds that there is neither a universal cause nor a universal cure for underachievement. He sums up his theory: "Within the interactions between a unique personality and the individual's perceptual world lie the reasons for scholastic failure." He argues that if we are to know why one underachieves, we must examine not underachievement, but the individual.²⁸ This is a very important observation and, at least in part, may explain why the problem of underachievement has not been well understood.

Liss,²⁹ in his work with adolescents in psychotherapy concluded:

²⁶William C. Morse, "Self-Concept Data in University School Project," The University of Michigan Education Bulletin, Vol. 34, January, 1963, pp. 49-52.

²⁷John Peterson, "The Researcher and the Underachiever: Never the Twain Shall Meet," Phi Delta Kappan, Vol. 44, 1963, pp. 379-381.

²⁸Ibid.

²⁹Edward Liss, "Learning Difficulties: Unresolved Anxiety And Resultant Learning Patterns," American Journal of Orthopsychiatry, Vol. 11, 1941, pp. 520-523.

The complexity of motivation and causation of learning difficulties makes the search for etiology an unceasing adventure. There is no single factor in the problem, and continuous investigation uncovers and discloses ramifications and interrelationships which are not alone multiple but variable. The psychodynamics which enter into an ultimate picture of dysfunction are both mosaic and protean.

Blaine^{30,31} agrees with the preceding authors on the concept of multiple causes for underachievement in adolescents. However, he does say that "like so many other patterns of adolescence, underachievement does not fall into the category of psychiatric illness." In keeping with the multiple-cause position taken by Blaine, Bricklin and Bricklin³² give four causes for underachievement in adolescents. They are: (1) Physical causes (poor vision or hearing, etc.); (2) Pedagogic or teaching methods (poor teaching); (3) Sociological causes (homes that devalue education and bad environment); (4) Emotional causes (these authors' data suggests that eighty percent of all under-achievers are doing poorly because of tension).

³⁰Graham B. Blaine, Patience and Fortitude: The Parent's Guide To Adolescence, Boston, Little, Brown, 1962, pp. 35-42.

³¹Graham B. Blaine, Youth and Hazards of Affluence: The High School and College Years, New York, Harper and Row, 1966, pp. 29-32.

³²Bricklin and Bricklin, op. cit., pp. 8-9.

Bricklin and Bricklin have done extensive diagnostic psychological and educational testing with underachieving children and adolescents. Their work has consisted of psycho-therapy and intensive tutoring on a longitudinal basis with follow-up several years later. They arrived at a major conclusion that chronic underachievement patterns are resistant to change, both educationally and psychologically; therefore, prevention is essential.

For many years Bettelheim³³ has worked with emotionally disturbed children at the orthogenic school, a laboratory school connected to the School of Education at the University of Chicago. Bettelheim believes that there are many reasons for a child or an adolescent to underachieve. Multiple causes for academic malfunctioning are expressed by Gallagher and Harris.³⁴ They state: "Causes for scholastic failure are many, emotional problems being among them."

De Hirsch³⁵ studied adolescents over a period of twenty years at the Pediatric Language Clinic, Columbia

³³Bruno Bettelheim, "The Decision To Fail," The School Review, Vol. 69, number 14, 1961, pp. 389-412.

³⁴J. Roswell Gallagher and Herbert I. Harris, Emotional Problems of Adolescents, New York, Oxford University Press, 1958, pp. 135-155.

³⁵Katrina de Hirsch, "Two Categories of Learning Difficulties," American Journal of Orthopsychiatry, Vol., 33, 1963, pp. 87-91.

Presbyterian Medical Center in New York City. Many of these adolescents had been referred to the clinic in earlier years, when they were young children, because of language disorders. On the Wechsler Intelligence Scale they were all intellectually bright. However, de Hirsch does not describe their range and levels of intellectual functioning. When these children were again seen in their adolescent years, they were referred to the clinic because of poor scholastic performance. De Hirsch was able to separate them into two general categories: Group "A" was suffering from severe, primary emotional disturbance; Group "B" suffered from a secondary emotional disturbance deriving out of difficulty with language usage. She further concluded that Group "A" suffered from a severe ego impairment manifested by a severe character disorder. Group "A" was passive and Group "B" was overtly aggressive and very angry.

The preceding authors are in agreement that underachievement generally results from multiple causes, poor mental health being among them. Others take the position that poor mental health is the primary cause for adolescent underachievement.

Pearson³⁶ observed through treatment of youths having learning disorders that some children fail to learn up to

³⁶Gerald G. Pearson, Psychoanalysis and The Education of the Child, New York, W.W. Norton, 1954, pp. 31-32.

capacity because of inner conflicts frequently not known to the children themselves. This may involve young children as well as adolescents. Kurtz and Swenson³⁷ studied the problem of underachievement in both elementary school and high school. Four methods were used in the study: (1) Student interviews; (2) Parent Interviews; (3) Teacher interviews; and (4) Classroom observation. The authors were concerned with gaining insight into the following areas: (1) Home conditions; (2) Peer relations; (3) Physical and mental well-being; (4) Academic inclinations; and (5) Aspirations and prospects for the future. The authors report that home conditions, peer relationships, and mental health of over-achieving students were better than those of underachieving students. Only underachievers and overachievers were used. Kurtz and Swenson used the Otis Intelligence test and the Iowa Every-Pupil Test of Basic Skills to select their population.

Barrett³⁸ studied thirty-two gifted students in the Toronto Public Schools. The case study method was used.

³⁷John Kurtz and Esther J. Swenson, 'Factors Related to Over-Achievement and Under-Achievement in School, School Review, Vol. 59, 1951, pp. 472-480.

³⁸Harry O. Barrett, 'An Intensive Study of Thirty-two Gifted Children,' Personnel and Guidance Journal, Vol. 36, November, 1957, pp. 192-194.

All of the subjects had intelligence quotients of 130 or above as measured by the Hannan-Nelson Advanced Test. The author arrived at the following conclusions from his study: (1) The pattern of underachievement is apparent by grade five; (2) Gifted children with high achievement in the elementary school maintain that standard in the secondary school; and (3) Children (gifted) with weak performance in the elementary school do even more poorly in the secondary school. Barrett also concluded that there are emotional disturbances among both achievers and underachievers. The achievers, however, tend to be more aware of the nature of their disturbances and to be more constructive in their efforts to cope with them. The third of Barrett's findings may be explained on the basis that secondary school work is more specialized and difficult. The student who has done poorly in elementary school has not gained adequate background to cope with the more difficult subject matter.

Shaw and Grubb³⁹ found significant differences between achievers and underachievers on personality and temperament scales. Eighty high school sophomores were used as subjects. To be classified as 'bright' and thus be included in the study, each subject had to score at the

³⁹Merville C. Shaw and James Grubb, "Hostility and Able High School Underachievers," Journal of Counseling Psychology, Vol. 5, Number 4, 1958, pp. 263-266.

seventy-fifth percentile or above on the test of Primary Mental Abilities in comparison to his total class of four hundred and twelve students. Twenty-two of the students were under-achieving females and sixteen were underachieving males. There were thirty-five achieving females and seventeen males. The personality tests used were: (1) The Social Scale from the Bell Performance Inventory; (2) The Cook Scale from the MMPI; and (3) The F and P Scales from the Guilford-Zimmerman Temperament Survey. No significant differences were found between the females on any of the scales. However, among the boys, a difference significant at the .05 level was found on the Social Scale and the Hostility Scale of the Guilford-Zimmerman Temperament Survey in favor of the achievers. A difference significant at the .01 level was obtained among the boys on the Cook Hostility Scale, again in favor of the achievers.

Ringness⁴⁰ used three self-report devices in his research with underachievers: (1) The California Test of Personality; (2) Hotter Sentence Completion Blank; and (3) A Self-Test developed by the California State Department of Mental Hygiene and Education. The subjects were ninth-grade boys with intelligence quotients of 120 or more. Differences

⁴⁰Thomas A. Ringness, "Emotional Adjustment of Successful and Nonsuccessful Bright Ninth Grade Boys," The Journal of Educational Research, Vol. 59, 1965, pp. 88-91.

were only slight and not statistically significant between achievers and underachievers in the areas of Sense of Personal Worth, Nervous Symptoms, Family Relations, and School Relations. Total Personal (self-concept) and Social Adjustment means did not differ significantly. No significant differences were shown on the Kotter Sentence Completion Blank for any of the groups; nor did the Self-Test show any differences between the two groups. Ringness⁴¹ found similar results in another study in which he sought to establish differences between achievers and nonachievers on aggressive maladjustment.

Hummel and Sprinthall⁴² studied one hundred and forty-seven suburban high school boys who measured high on tests of academic ability. Cumulative teachers' marks were used as measures of academic achievement, and the Wechsler Adult Intelligence Scale and the School and College Ability Test were used as measures for determining levels of brightness. The average I.Q. was 118 for the total population. The range, however, was not reported. The average cumulative

⁴¹Thomas A. Ringness, "Affective Differences Between Successful and Unsuccessful Bright Ninth Grade Boys," Personnel and Guidance Journal, Vol. 43, 1964-65, pp. 600-606.

⁴²Hummel and Sprinthall, op. cit., pp. 388-395.

teacher marks were 'C-' for underachievers, "B-" for par achievers, and "A" for superior achievers. The three groups were divided thus: (1) ninety-five underachievers; (2) twenty-four par achievers; and (3) twenty-eight superior achievers. The Strong Vocational Interest Blank and the Guilford-Zimmerman Temperament Survey were also used. The authors report that the profile of the superior achiever suggests that he is an independent, purposive, and efficiently organized individual who is likely to deal with academic tasks, whether interesting or dull, as a necessary condition of getting ahead in life. Obversely, the underachiever is less playful and less thoughtful in his orientation to life. He is inclined to be fatalistic in his expectations concerning outcomes of personal effort. Statistics are not reported in this study.

Taylor,⁴³ similar to Wylie, reviewed the literature on underachievement covering the period from 1933 to 1963. Taylor studied eleventh-grade students primarily. His findings are stated in terms of underachievement and factors which contribute to it, as follows: (1) The degree to which a student is able to handle his anxiety; (2) The value a

⁴³Ronald G. Taylor, "Personality Traits and Discrepant Achievement: A Review," Journal of Counseling Psychology, Vol. 11, 1964, pp. 76-82.

student places upon his own worth; (3) The ability to conform to authority demands; (4) Student's acceptance by peers; (5) Less conflict over independence-dependence; (6) Activities centered around academic interests; and (7) The realism of his goals. As has been implied in much of the research, multiple causes, many of which are not easily extricated, contribute to underachievement in adolescents.

Earlier in this chapter, the research reported by Blaine^{44,45} was discussed briefly. Blaine states: 'Causal factors contributing to underachievement are multiple and varied.' Blaine gives the following reasons for academic underachievement: (1) The simplest is preoccupation with other matters such as a relationship with a loved one, the death of a family member, or financial difficulties; (2) The second source of difficulty, which lies deeper below the surface than the first and is not easily perceived, is a feeling either conscious or unconscious on the part of the student that he is working in a void, that no one around him cares whether he does well or badly; (3) A third cause for underachievement is a need to fail, a complicated mechanism related to the exploitation of children by their parents. Here the author discusses parental goals of such magnitude

⁴⁴Blaine, Patience and Fortitude, pp. 35-42.

⁴⁵Blaine, Youth and Hazards of Affluence, pp. 29-32.

that they can never be reached, and exaggerated parental criticism as a response to poor schoolwork. Bettelheim⁴⁶ concurs with number three above.

Blaine continues: (4) Another reason is rebellion against authority, usually a parent or family member; (5) A factor which acts as a deterrent to study is a feeling of basic inferiority; (6) Still another factor is fear of aggression. Here the student equates study with aggression. Blaine arrived at these six reasons for underachievement during the process of psychotherapy with adolescents who were having scholastic difficulties in spite of apparent intellectual ability.

The observation that many adolescents are reacting to rebellion of authority is supported by Gallagher and Harris.⁴⁷ It is a form of passive-covert behavior. Bricklin and Bricklin⁴⁸ agree with Blaine on the idea of aggression in adolescent underachievement. They use the term "passive-aggressive." Their thesis is that the passive-aggressive child strikes back at his parents where it is likely to hurt the most, i.e., their pride in his

⁴⁶Bettelheim, op. cit., pp. 389-412.

⁴⁷Gallagher and Harris, op. cit., pp. 135-155.

⁴⁸Bricklin and Bricklin, op. cit., pp. 15.

achievement. The authors further state that these same adolescents seldom show overt signs of aggression; it is always covert. Bricklin and Bricklin arrived at their conclusion on the basis of material collected from protocols of the Rorschach. Their experimental (underachievers) subjects gave more aggressive responses than the control (achieving) subjects. Bricklin and Bricklin⁴⁹ found underachievers to be neurotic in the sense that they are sensitive to feelings of anger. The underachiever is afraid to express these feelings of anger overtly; therefore one of the most expedient and effective outlets is through underachievement. This thesis might in some way be associated with Blaine's⁵⁰ conclusion that underachievers equate studying with aggression.

The reports of Blaine, Gallagher and Harris, and Bricklin and Bricklin suggest that home situations might contribute significantly to adolescent underachievement. Frankel⁵¹ concluded the following from a study he conducted

⁴⁹Ibid., pp. 22-23.

⁵⁰Blaine, Patience and Fortitude, pp. 35-42.

⁵¹Edward Frankel, "A Comparative Study of Achieving and Underachieving High School Boys of High Intellectual Ability," Journal of Educational Research, Vol. 53, 1960, pp. 172-179.

at the Bronx High School of Science in New York City: (1) Underachievers come from homes with less education than those of achieving students; (2) Underachievers were absent more often than achievers; and (3) Underachievers, more often than achievers, had working mothers.

Kimball⁵² used the case study method to study twenty cases of adolescent boys in a private New England preparatory school. I.Q.'s ranged from 125 to 139 with a mean of 131. Scholastic achievement was based on school marks. A difference between achievers and underachievers was significant at the .01 level of confidence. Her findings resulted from a classification by I.Q., school marks, and data collected from the Thematic Apperception Test, the Rorschach Test, and a Sentence Completion Test. A control group based on the above criteria was used. She summarizes her findings as follows:

The major features of the personality which we feel is most susceptible to scholastic disability are as follows. The first and perhaps most important thing which appeared consistently in the material was a poor father-son relationship. The specific nature of the relationship varied from case to case, but we never found a warm, close attachment to the father. The problem of whether or not to follow in the father's footsteps for a future career was a prominent one

⁵²Barbara C. Kimball, "Case Studies in Educational Failure During Adolescence," American Journal of Orthopsychiatry, Vol. 23, 1953, pp. 406-415.

with some of the boys resenting such expectations on the father's part, others being afraid to enter into any competitive situation with the father. Frequently we saw a great deal of aggression toward father figures in the projective tests. In the interviews the fathers were described either as having a distant relationship with their sons or as strict disciplinarians who tried to dominate their sons. Obviously, neither of these patterns will lead to a positive identification with the father. In conjunction with this, an unusually high number of boys gave evidence of a primarily feminine identification. In the projective material we saw a tendency to interpret ambiguous figures (or those usually seen as men) as women. In the interview material, a close attachment to the mother with a feeling of being more like her than the father seemed to be the rule.

Roberts⁵³ found very slight differences in the home environment of low achievers and high achievers. The only significant difference was that fathers of achievers were younger. There are conflicting evidences relative to father-son relationships and academic underachievement.

In a study of fifty-seven boys and girls who were treated by a psychiatrist for academic underachievement, Holder⁵⁴ reported that underachievers' fathers spent a comparatively small amount of time with their sons. Unlike

⁵³H.E. Roberts, "Factors Affecting the Academic Underachievement of Bright High School Students," Journal of Educational Research, Vol. 56, December, 1962, pp. 175-183.

⁵⁴Richard A. Holder, "Round Table on Underachievement in Gifted Children," American Journal of Orthopsychiatry, Vol. 32, March, 1962, pp. 350-351.

Roberts, Holder does not discuss the age of the father as a factor for lack of involvement in his son's life. The findings of Kimball⁵⁵ also are different from those of Roberts.

Another important observation made by Bricklin and Bricklin⁵⁶ is that "when parents do not get along, the child's security is threatened. His personal sources of strength are failing him, and he may develop many negative reactions, one of which may be underachievement."

Harris,⁵⁷ a psychoanalyst, studied boys ranging in age from seven to sixteen years. Accordingly, he observed: "Out of the study emerged the truism that these boys did not learn because they were emotionally disturbed and that the reason for their emotional disturbance could be traced to unfavorable home conditions. However, emotional disturbance does not always lead to learning problems." Harris further observed that husband-and-wife disharmony could be a source of underachievement.

⁵⁵Kimball, op. cit., p. 406-415.

⁵⁶Bricklin and Bricklin, op. cit., p. 73.

⁵⁷Irving D. Harris, Emotional Blocks to Learning, New York, The Free Press, 1961, p. 3.

Such characteristics as obsessional, worrying, pleasure-seeking, and neurotic mentioned earlier in this chapter, have been ascribed to the underachieving bright adolescents. Bricklin and Bricklin⁵⁸ state that "a child with an obsessional orientation rarely has a clearcut feeling about anything or anyone." Further, they observe, he distrusts his own abilities and is likely to spend a great deal of time worrying. Conversely, Middleton and Guthrie⁵⁹ see the underachiever as one who enjoys having fun and one who is motivated by pleasure seeking.

Earlier in this chapter, Hummell and Sprinthall⁶⁰ were quoted as seeing the achieving student in a more positive light than the underachieving student. Barrett⁶¹ saw them as being essentially the same, both disturbed, but he reported that the achiever was more aware of his emotional problems. Bricklin and Bricklin⁶² see both underachievers

⁵⁸Bricklin and Bricklin, op. cit., p. 54.

⁵⁹George Middleton and George A. Guthrie, "Personality Syndromes and Academic Achievement," Journal of Educational Psychology, Vol. 50, April, 1959, pp. 66-69.

⁶⁰Hummell and Sprinthall, op. cit., pp. 388-395.

⁶¹Barrett, op. cit., pp. 192-194.

⁶²Bricklin and Bricklin, op. cit., pp. 167.

and achievers overly concerned with achievement, albeit in different ways. Both worry about parental approval or lack of it.

In support of the observation of Bricklia and Bricklin and Barrett, Wellington and Wellington⁶³ make the following observation:

Of the students we interviewed, many were physically attractive, poised, and well spoken. Very few exhibited any outward personality maladjustments. When it becomes necessary to assess the personality characteristics of underachievers, many studies have found that little or no difference exists between under- and overachievers.

The reason for the inconclusive and somewhat contradictory evidence on the relationship of total adjustment to achievement may lie in the problems inherent in assessing personality functioning and in the types of instruments available for assessment, as well as in the varying definitions of underachievement. Or it may be a spurious notion indeed that adequate school performance necessarily correlates with the commonly accepted standards of good adjustment.

The assumption that total adjustment measures do not seem to furnish a substantial explanation for underachievement suggests the need to study some of the components of personality which might influence positively or negatively the learner's behavior in school.

⁶³Wellington and Wellington, op. cit., pp. 20-21.

5. The Self-Concept and Achievement Levels

Problems of studying self-concept and its relationship to adolescent underachievement have been fundamentally the same as in attempts to study personality in general. Researchers have not been able to agree on what the self-concept is. If defined operationally, one might say that the self-concept is what the self-concept instruments measure. However, this method of defining the phrase lends itself to ambiguity and, consequently, to many interpretations. Unless researchers and other professionals concerned with self-concept and underachievement can come to some common agreement as to what self-concept means, we are not likely to arrive at any precise definition of what is meant when the concept of self is mentioned. One might be led to believe that there are as many definitions of "self-concept" as there are researchers concerned with the phenomenon. The following paragraphs will be devoted to a definition of the self-concept and related literature relevant to adolescent underachievement, adolescent par achievement, and adolescent overachievement.

The self-concept is perceived by some as a single aspect of an individual's way of perceiving himself; others think of the self-concept as being a multiplicity of aspects

involving the way one perceives himself. Brownfain⁶⁴ summarizes it thus: "The concept of self is a system of central meanings the individual has about himself and his relations to the world about him." Jersild,⁶⁵ somewhat more specific than Brownfain, says that the self-concept consists of a system of ideas, attitudes, appraisals, and commitments pertaining to one's own person. Anderson⁶⁶ speaks of a physical and a psychological self-image. She also says that a child learns to appraise himself both physically and psychologically in terms of the attitudes of others toward him, especially those who are significant in his life, such as his parents, his peers, and his teachers. From another point of view, Bruck and Bodwin⁶⁷ ascribe the following characteristics to

⁶⁴J.J. Brownfain, "Stability of the Self-Conception as a Measure of Personality." Journal of Abnormal and Social Psychology, Vol. 47, 1952, pp. 597-506.

⁶⁵A.T. Jersild, "Self Understanding in Childhood and Adolescence," American Psychologist, Vol. 6, 1951, pp. 122-126.

⁶⁶O.M. Anderson, "The Self-Image: A Theory of Dynamics of Behavior," Mental Hygiene, Vol. 36, 1952, pp. 227-244.

⁶⁷Max Bruck and Raymond Bodwin, "The Relationship Between Self-Concept and the Presence or Absence of Scholastic Underachievement," Journal of Clinical Psychology, Vol. 18, 1962, pp. 181-182.

the self-concept: (1) Self-confidence; (2) Freedom to express appropriate feelings; (3) Liking one's self; (4) Satisfaction with one's attainments; and (5) Feelings of personal appreciation by others.

Coopersmith⁶⁸ refers to the 'self' and describes it as "an abstraction that an individual has about the attitudes, capacities, objectives, which he possesses and pursues." Even though he uses the term 'self' in isolation in the preceding quotation, Coopersmith's book is based entirely on the self-concept. Therefore, this researcher infers that he is referring to the self-concept when he uses the term 'self.'

The previously-mentioned literature concerning self-concept has focused on definitions that lend themselves to interpretations which suggest that the self-concept is a complex, multidimensional entity.

The work of Coopersmith⁶⁹ may serve to help clarify the problem by providing a definition which lends itself to a multifaceted description of the problem of self-concept. Coopersmith feels that there are many self-concepts and that they are dynamic, fluid, and subject to change. He speaks

⁶⁸ Stanley Coopersmith, The Antecedents of Self-Esteem, San Francisco, W.H. Freeman, 1967, pp. 1-283.

⁶⁹ Ibid.

of proficiency in a particular skill and its relationship to self-concept in that skill. For example, if a boy is the best runner on the track team, his self-concept on the track team is going to be very positive. However, if this same boy is a nonreader, his self-concept relative to that task will be significantly different in a negative way as he goes from the track team back to the classroom where he is expected to read.

Rosenberg⁷⁰ defines the self-concept as follows:

We conceive of the self-image as an attitude toward an object. The term attitude is used broadly to include facts, opinions, and values with regard to the self, as well as favorable or unfavorable orientation toward the self. In other words, this study takes as its point of departure the view that people have attitudes toward objects and that the self is one of the objects toward which one has attitudes.

Bricklin and Bricklin⁷¹ believe that it is no exaggeration to say that a young child's self-worth depends almost entirely on what his parents think of him. The child adopts the same attitude toward himself that his parents have adopted. Rosenberg⁷² found that a child's self-attitude (concept) is closely associated with parental attitudes and

⁷⁰M. Rosenberg, Society and The Adolescent Self-Image, Princeton, N.J., Princeton University Press, 1965, p. 5.

⁷¹Bricklin and Bricklin, op. cit., p. 33.

⁷²Rosenberg, op. cit., p. 52.

interests. His observations, at least in part, support the definition given by Anderson⁷³ earlier in this chapter. Some researchers will object to the notion that the evolving of a self-concept is a sole function of parental attitudes. Others will assert that the self-concept is a primary function of parental attitudes affecting young children. If we accept this latter thesis, then we must also accept the principle held by some that the self-concept is formed very early in life and does not lend itself to change easily.

Bricklin and Bricklin^{74,75} state that "the child who is doing poor school work has a poor image of himself psychologically. Every person has some notion of what he or she is "worth." A person with a "healthy" sense of self-worth likes himself. The child with an "unhealthy" sense of self-worth thinks of himself as being a bad and unpleasing child. He feels inwardly that he is disliked by his parents and believes he deserves to be disliked."

The idea of the "reality" of one's self-concept has been discussed by some researchers; i.e., how does one's concept of himself correlate with the way he really is or

⁷³Anderson, op. cit., pp. 227-244.

⁷⁴Bricklin and Bricklin, op. cit., p. 10.

⁷⁵Ibid., p. 30.

with the way others perceive him? Wylie⁷⁶ makes the following observation:

It is implicitly or explicitly assumed by all theorists that the self-concept is not entirely "realistic," and that lack of "realism" may have psychodynamic significance and important behavioral consequences. The degree that a person's self-concept is realistic, he is said to have "insight" into himself.

Hurlock⁷⁷ believes that the adolescent who is anxious to be accepted by the social group but feels socially inadequate develops a feeling of personal inadequacy. Stated another way, the student described here suffers from a low social self-concept.

Bruck and Bodwin⁷⁸ studied self-concept and its relationship to underachievement at three levels: (1) Third grade; (2) Sixth grade; and (3) Eleventh grade. They used thirty achievers and thirty underachievers. The Self-Concept Scale of Machover Draw-A-Person was used. A relationship significant at the .01 level was established between

⁷⁶Wylie, op. cit., p. 5.

⁷⁷Hurlock, op. cit., p. 346.

⁷⁸Bruck and Bodwin, op. cit., pp. 181-182.

self-concept and underachievement at all levels. Morse⁷⁹ also analyzed data collected from over six hundred students at alternate grade levels from three through eleven. These students were administered the Coopersmith Self-Esteem Inventory. The author found that to a statement such as "I feel pretty sure of myself," twelve percent of third graders say, "unlike me," while thirty-four percent of eleventh graders give this response.

Morse⁸⁰ further reports that eighty-four percent of the third graders were proud of their schoolwork, while only fifty-three percent of the eleventh graders were proud of theirs. Without any definitive evidence beyond the data collected on the aforementioned checklist, Morse concluded that, from a mental health point of view, the young child perceives school as a secure place to be, but as the child grows older, this confidence diminishes. Morse's conclusions imply that a significant amount of damage is done to the child's self-concept during his experiences with

⁷⁹William C. Morse, "Self-Concept Data in the University School Project," The University of Michigan School of Education Bulletin, Vol. 34, January, 1963, pp. 49-52.

⁸⁰Ibid.

school personnel and peers. Blair and Jones⁸¹ make the following observation:

Because many adolescents are the victims of years of adverse influence and defects in school tasks, negative attitudes are firmly entrenched. These adolescents have developed a poor self-image and a low aspirational level, which makes it unlikely that the ordinary school program can have much of an impact upon them.

Blair and Jones, and Bricklin and Bricklin⁸² concluded that the self-concept is almost exclusively a function of parent-child relationships. On the other hand, Kagan⁸³ sees the whole notion of self-concept development as a relative phenomenon, varying from person to person. He sums it up as follows:

The development of a self-concept is often framed in absolute terms. The classic statement assumes that direct social reinforcement and identification models have fixed, invariant effects on the child. Praise and love from valued caretakers are assumed to lead the child to develop positive self-evaluations; whereas criticisms and rejection presumably cause self-derogatory beliefs.

It appears that one might infer from Kagan's comments that there is no one set of criteria which can be used to

⁸¹Glenn Myers Blair and R. Stewart Jones, The Psychology of Adolescence for Teachers, New York, Macmillan, 1964, p. 62.

⁸²Bricklin and Bricklin, op. cit., p. 30.

⁸³Jerome Kagan, "On The Need For Relativism," American Psychologist, Vol. 22, 1967, pp. 131-141.

determine what one's self-concept will be. What makes for a negative self-concept in one child may have little or no effect on another.

Shaw, Edson, and Bell,⁸⁴ in addition to Shaw and Alves,⁸⁵ established a relationship between negative self-attitudes and achievement but failed to support the thesis that a negative self-attitude is necessarily a causal factor in the level of achievement. Their research was conducted on a sample of high school juniors and seniors. In Shaw, Edson, and Bell's study, an Adjective Check List was used to measure self-concept. In Shaw and Alves' study, the Bills Index of Adjustment and Values was used to measure self-concept.

As measured by a nonparametric statistical technique (chi square) Fink⁸⁶ found differences between achieving boys

⁸⁴ Merville C. Shaw, Kenneth Edson, and Hugh Bell, "The Self-Concept of Bright Underachieving High School Students as Revealed by an Adjective Check List," Personnel and Guidance Journal, Vol. 39, 1960, pp. 193-196.

⁸⁵ Merville C. Shaw and Gerald Alves, "Self-Concept of Bright Academic Underachievers," Personnel and Guidance Journal, Vol. 42, 1963, pp. 401-403.

⁸⁶ Martin B. Fink, "Self-Concept as it Relates to Academic Underachievement," in Milton Kornrick, (ed.), Underachievement, Springfield, Illinois, Charles G. Thomas Publishers, 1965, p. 73-78.

and underachieving boys but found no differences between achieving girls and underachieving girls. Subjects in Fink's study were matched on the basis of achievement tests and intelligence quotients. Fink used the following instruments in his study: (1) California Psychological Inventory; (2) Bender-Visual Motor Gestal Test; (3) Draw-A-Person Test; (4) Gough Adjective Check List for Pupils; and (5) Gough Adjective Check List for Teachers. The subjects were tenth-grade high school students. It is no surprise that the author found no significant differences between the two groups of girls but did find significant differences between the boys inasmuch as most studies indicate that girls react differently to low self-concepts and underachievement. Conversely, Coopersmith⁸⁷ found that students low in self-concept are academically and socially unsuccessful and that they are pupils who have to live with the unhappy reality of their inferiority. He finds this observation to be true of both boys and girls. Although it is not stated, one might assume the term "inferiority" used by Coopersmith need not represent "reality" as has been previously mentioned in this chapter. It might represent the individual's distorted conception of himself and his personal worth.

⁸⁷Coopersmith, op. cit., p. 14.

Combs⁸⁸ selected twenty-five underachievers, experimental subjects, and twenty-five achievers, control subjects. The two groups were selected from the eleventh grade in suburban communities from Westchester County, New York. The groups were comparable with respect to sex, race, socio-economic status, nationality, age, grade, and intelligence. All subjects showed measured full-scale I.Q.'s of 115 or more on the Wechsler Adult Intelligence Scale. Cumulative grade point averages were used to establish achievement levels. The author found differences at the .001 level on six points. Underachievers saw (1) themselves as less adequate; (2) themselves as less acceptable to others; (3) their peers as less acceptable; (4) adults as less acceptable; (5) themselves as inefficient and less effective in approaches to problems; and (6) themselves as having less freedom and adequacy of emotional expressions. TAT stories were used to arrive at these conclusions.

In keeping with the observations of Cooper-Smith, Bricklin and Bricklin⁸⁹ state: "The underachiever typically

⁸⁸ Charles F. Combs, "Perception of Self and Scholastic Underachievement in the Academically Capable," Personnel and Guidance Journal, Vol. 43, number 1, 1964, pp. 47-51.

⁸⁹ Bricklin and Bricklin, op. cit., p. 15.

equates his entire sense of self-worth as an individual with his ability to achieve academically.' As implied in this quotation, the student achieves commensurate with the way he perceives himself.

Earlier in this chapter the concept of "aspirational level" and its relationship to self-concept were briefly mentioned. In his initial conclusion relative to aspirational level, Coopersmith⁹⁰ states that the absolute level the individual sets for himself is unrelated to his self-appraisal or behavioral poise. This means that the person who does not think highly of himself is as likely to set lofty goals as is the person who concludes that he is a worthy person.

Wellington and Wellington⁹¹ make the following comment about aspiration level and self-concept: The relationship between level of aspiration and self-concept is not necessarily, as it would appear on the surface, that the underachiever has a low self-concept.

A discussion of the instruments which have been used to measure self-concept in previous research seems in order. According to Wylie's⁹² review of the literature,

⁹⁰Coopersmith, op. cit., p. 144.

⁹¹Wellington and Wellington, op. cit., p. 34.

⁹²Wylie, op. cit., p. 65.

the most frequently used types of instruments for inferring overall or general self-regard are questionnaires, rating scales, and adjective check lists. The worth of such research depends upon the characteristics of the measuring instruments used. Many instruments have been used, the majority of them only once or twice; and little or no information on reliability and construct validity is available for a great many of these measuring instruments.⁹³

Many problems of self-image research, according to Rosenberg,⁹⁴ are technical and methodological. He continues: "There is no generally accepted measure of self-esteem, the phenomenon is not easily amenable to experimental manipulation and the problem of validating something so quintessentially phenomenological is difficult in the extreme." The statements made by Wylie and Rosenberg strongly support the need for further research. Rosenberg⁹⁵ also says: "Further research, however, must also be concerned with multidimensional typological classifications. If we can classify people into terms of meaningful types, we will be better able

⁹³Wylie, op. cit., p. 114.

⁹⁴Rosenberg, op. cit., p. 272.

⁹⁵Ibid, pp. 275-276.

to understand why people with the same level of self-esteem so often behave differently."

Some previous researchers advocate a need for research on the subject of self-concept. For example, Wylie⁹⁶ states that "theories for research in the past have in many ways been ambiguous, overlapping, and no one theory has received a large amount of systematic empirical exploration." Rosenberg⁹⁷ states: "It is an unfortunate fact that, although hundreds of self-concept studies have been conducted in recent years, no generally accepted measure of self-esteem is available in the literature."

In her concluding chapter, Wylie⁹⁸ summarizes the problem:

On the whole, we have found that there are enough positive trends to be tantalizing. On the other hand, there is a good deal of ambiguity in the results, considerable apparent contradictions among the findings of various studies, and a tendency for different methods to produce different results. In short, the total accumulation of substantive findings is disappointing, especially in proportion to the great amount of effort which obviously has been expended.

⁹⁶Wylie, op. cit., p. 3.

⁹⁷Rosenberg, op. cit., p. 15.

⁹⁸Wylie, op. cit., p. 317.

6. Study Methods and Attitudes Toward School and Achievement Levels

This section is devoted to a discussion of the relationship between adolescent underachievement and the adolescent's attitude toward study and appropriate study methods. As has been shown in the preceding sections on personality and self-concept, researchers present conflicting evidence relative to any relationship between adolescent underachievement and attitudes toward study and study methods. It is believed that the extent to which a student fails to develop a system of studying and techniques for implementation of this system will be the extent to which his learning will be impaired. Furthermore, a positive attitude toward school may be associated with an appropriate system of organizing and planning one's methods of study.

Hurlock⁹⁹ states, "The better adjusted adolescent develops better study habits than the poorly adjusted adolescent who suffers from feelings of inadequacy and emotional stress.... Adolescents who have learned to study effectively tend to achieve more than those who study ineffectively."

⁹⁹ Hurlock, op. cit., pp. 344-347.

Bricklin and Bricklin¹⁰⁰ give some support to Harlock's observation that adjustment factors and study methods are a function of each other. They state: "The majority of books of study habits cannot really help an underachiever because underachievement is caused by emotional conflict." Bricklin and Bricklin¹⁰¹ also say that the child who is inwardly thwarted by emotional conflict cannot even learn proper study habits, just as he cannot learn other material taught to him. This observation has some implications for further investigation and intervention when improper study methods are discovered. In several suburban Massachusetts school systems, Wellington and Wellington¹⁰² studied underachievers and conducted some group work to help underachievers overcome poor study habits. They summarized their observations thus:

One place where this study did discover similarity of feeling about the environment was the underachiever's attitude toward studies: These are ambivalent and confused between what others want for them in comparison to what they want for themselves. Further investigation in comparing these attitudes for under and high achievers should be undertaken.

¹⁰⁰Bricklin and Bricklin, op. cit., p. 108.

¹⁰¹Ibid. p. 154.

¹⁰²Wellington and Wellington, op. cit., p. 68.

In their Winchester, Massachusetts study, Wellington and Wellington¹⁰³ used the California Study Methods Survey. After a period of group work with underachieving adolescents, the authors observed positive changes in two of the areas tested: (1) Attitude and (2) Planning. Mechanics scores were negative. Sixty-nine percent of the students interviewed by Wellington and Wellington¹⁰⁴ indicated that they spent from one to two hours per night studying. They further state: "With the pressure in schools today, many achieving junior high and high school students spend four to six hours per day on their outside homework." Thirty-five percent of the underachieving students initially expressed dislike for studying. Over fifty percent said they tended to put off studying and that they did not set study schedules.¹⁰⁵

Roberts¹⁰⁶ compared the study habits of high achievers and low achievers at high school level. She

¹⁰³Ibid. p. 85.

¹⁰⁴Ibid. p. 64.

¹⁰⁵Ibid. p. 60.

¹⁰⁶Helen E. Roberts, "Factors Affecting The Academic Underachievement of Bright High School Students," Journal of Educational Research, Vol. 56, December, 1962, pp. 175-183.

found that high-achieving bright students, when compared to low-achieving bright students, spent more time studying. Her findings were significant at .01 level of confidence. Carter¹⁰⁷ studied eighty-three matched pairs of junior high school students. His objective was to answer the following question: Do underachievers and overachievers differ systematically, relative to study methods and attitudes toward school as measured by the California Study Method Survey? A t test showed better than a .01 level of confidence on all three scales, i.e., attitudes towards school, mechanics of study, and planning and system in favor of the overachievers. Carter¹⁰⁸ reported similar findings in a previous study using fifteen hundred high school students.

Carter¹⁰⁹ in a study using secondary school students as subjects found a correlation of .45 between a study test

¹⁰⁷ Harold D. Carter, 'Overachievers and Underachievers in the Junior High School,' California Journal of Educational Research, Vol. 12, 1961, pp. 51-56.

¹⁰⁸ Harold D. Carter, 'Improving the Prediction of School Achievement by Use of the California Study Methods Survey,' Educational Administration and Supervision, Vol. 45, 1959, pp. 255-260.

¹⁰⁹ Harold D. Carter, 'Methods of Learning and Factors in the Prediction of School Success,' Journal of Psychology, Vol. 26, 1948, pp. 249-258.

and an achievement test. Two hundred subjects, which included one hundred achievers and one hundred underachievers, were used.

Serene¹¹⁰ interviewed high school students who showed a marked discrepancy between ability and achievement. He concluded that most underachievers had no kind of study schedule. Among Serene's estimated causes for underachievement were lack of study, poor planning, and poor organization.

Norton¹¹¹ used ninth-grade boys and girls enrolled in general science to study the problem of underachievement and its relationship to study habits. The author sought to answer the following question: Does achievement in ninth grade general science relate more closely to study habits than to intelligence, reading ability, and aptitudes? The question was answered in the negative.

Bond¹¹² developed a questionnaire of thirty-nine factors to study two hundred and twenty-nine high school

¹¹⁰Michael F. Serene, "An Experiment in Motivational Counseling," Personnel and Guidance Journal, Vol. 31, 1952-53, pp. 319-324.

¹¹¹Daniel P. Norton, "The Relationship of Study Habits and Other Measures of Achievement in Ninth Grade General Science," Journal of Experimental Education, Vol. 27, 1958, pp. 211-217.

¹¹²Jesse E. Bond, "Analysis of Factors Adversely Affecting Scholarship of High School Pupils," Journal of Educational Research, Vol. 46, 1952, pp. 1-16.

students who had been classified as underachievers. The author found that all groups of students with low marks claimed that a major reason for inferior scholarship was that lack of success in study had caused them to develop a dislike for study with consequent insufficient attention given to it. The same groups claimed that it was difficult to improve study habits.

7. Summary, Conclusion and General Hypothesis

From this review of the literature it is apparent that research in underachievement, par achievement, and overachievement has been highly varied. Many researchers have tried to sieve out the cause or causes for underachievement, par achievement, and overachievement in adolescents. Much diversity of opinion exists among researchers relative to factors involved in underachievement, par achievement, and overachievement. Further conflict or differences in opinion prevail relative to classification and selection of subjects for research in underachievement, par achievement, and overachievement at all levels. Appropriate research designs and relevant hypotheses also have been presented as sources of uncertainty and varied

opinions. As Wylie,¹¹³ Thorndike,¹¹⁴ and Wellington and Wellington¹¹⁵ have indicated, many studies have reported inconclusive results and in some cases the results actually have been misleading.

In some cases, the literature suggests that maladjustment (personality) is a prime factor contributing to underachievement. Other literature suggests that personality maladjustment represents but one aspect of the problem of underachievement and that the problem is multifaceted.

Self-concept has been seen by some, such as Morse,¹¹⁶ as the primary cause for underachievement. Others claim that study methods and attitude toward school contribute significantly, if not totally, to the problem of underachievement in adolescents. Many other reasons have been given: family relationships, peer relationships, curriculum, and poor teaching methods, environmental factors, and broken homes.

¹¹³Wylie, op. cit.

¹¹⁴Thorndike, op. cit.

¹¹⁵Wellington and Wellington, op. cit.

¹¹⁶Morse, op. cit.

Thorndike¹¹⁷ has made some specific observations and recommendations for research models on underachievement. For example, he denounces the use of two equivalent forms of a test administered at different times. He states this as follows:

If we test a group of children with form "A" of an aptitude test this week and with form "B" next week, we fail to get identical results for each individual, for a number of reasons. The most obvious reasons are: (1) The specific tasks in the two forms are different, and some children will be better able to do one set of tasks than the other; (2) Some children will feel better, work a little harder, or be a little more attentive on one occasion than on the other; (3) A certain amount of guessing at answers will take place, and some children will be more lucky on one occasion than the other.

Thorndike takes this same position relative to personality tests, check lists, rating scales, and questionnaires. On the basis of Thorndike's suggestions, it seems inadvisable to use an equivalent form of any type of test and expect comparable results. Even if one does, he cannot safely conclude anything from them.

On the basis of the review of the literature, further research was conducted in the three broad areas: (1) Personality; (2) Self-concept; and (3) Study methods and attitudes toward school.

¹¹⁷ Thorndike, op. cit., p. 7.

It has been shown in the review of the literature that some researchers agree that personality factors alone are the antecedents to adolescent underachievement. Other researchers feel that personality factors represent but one factor among many factors contributing to adolescent underachievement. Still others believe that the problem of underachievement in adolescents can be directly associated with poor study habits and negative attitudes toward school. A poor self-concept is believed by some researchers to be the main factor contributing to adolescent underachievement. It is this great diversity of opinions among previous researchers that has led to the need for the current research.

The general hypothesis for the research is stated thus: There is no significant difference between bright adolescent underachievers, bright adolescent overachievers, and bright adolescent par achievers on measures of personality, self-concept, study methods and attitude toward school.

Chapter Two will present the methodology followed in conducting this research.

CHAPTER II

METHODOLOGY AND PROCEDURE

This chapter presents the procedure used in testing the general hypothesis proposed in chapter one. It begins with a listing of the specific hypotheses which are followed by a presentation of the test instruments used. The characteristics of the sample population and the statistical analysis are also presented.

1. Specific Hypotheses

As is explicit in the general hypothesis, this research has focused on the relationships between personality, self-concept, study methods and attitudes toward school in bright adolescent underachievers, bright adolescent overachievers, and bright adolescent par achievers. Both male and female subjects were used.

Nine null hypotheses were formulated and are stated as follows:

1. There is no significant difference between total groups of girls and total groups of boys, i.e., tenth, eleventh, and twelfth grade underachievers; tenth, eleventh, and twelfth grade overachievers; and tenth, eleventh, and twelfth grade par achievers, on measures of mental health, self-concept, and study methods and attitudes toward school.

2. There is no significant difference between total groups of girls, i.e., tenth, eleventh, and twelfth grade underachievers; tenth, eleventh, and twelfth grade overachievers; and tenth, eleventh, and twelfth grade par achievers, on measures of mental health, self-concept, and study methods and attitudes toward school.

3. There is no significant difference between total groups of boys, i.e., tenth, eleventh, and twelfth grade underachievers; tenth, eleventh, and twelfth grade overachievers; and tenth, eleventh, and twelfth grade par achievers, on measures of mental health, self-concept, and study methods and attitudes toward school.

4. There is no significant difference between bright adolescent underachieving tenth grade boys, bright adolescent overachieving tenth grade boys, and bright adolescent par achieving tenth grade boys on measures of mental health, self-concept, and study methods and attitudes toward school.

5. There is no significant difference between bright adolescent underachieving tenth grade girls, bright adolescent overachieving tenth grade girls, and bright adolescent par achieving tenth grade girls on measures of mental health, self-concept, and study methods and attitudes toward school.

6. There is no significant difference between bright adolescent underachieving eleventh grade boys, bright adolescent overachieving eleventh grade boys, and bright adolescent par achieving eleventh grade boys on measures of mental health, self-concept, and study methods and attitudes toward school.

7. There is no significant difference between bright underachieving adolescent eleventh grade girls, bright overachieving adolescent eleventh grade girls, and bright par achieving adolescent eleventh grade girls on measures of mental health, self-concept, and study methods and attitudes toward school.

8. There is no significant difference between bright adolescent underachieving twelfth grade boys, bright adolescent overachieving twelfth grade boys, and bright adolescent par achieving twelfth grade boys on measures of mental health, self-concept, and study methods and attitudes toward school.

9. There is no significant difference between bright adolescent underachieving twelfth grade girls, bright adolescent overachieving twelfth grade girls, and bright adolescent par achieving twelfth grade girls on measures of mental health, self-concept, and study methods and attitudes toward school.

2. The Test Instruments

Five tests were used in this research. Two of the tests, The California Test of Basic Skills and The California Mental Maturity Test - S.F., 1963, were used for purposes of selecting the sample population. The other three, The California Test of Personality, the Self-Esteem Inventory, and The California Study Methods Survey tests were used to measure mental health status, self-concept, and study methods and attitudes toward school. Each of the five tests is discussed in detail in the paragraphs which follow.

The California Test of Basic Skills¹ was used in this research to measure the student's level of achievement in the basic academic subject areas:² (1) Reading, (2) Language and Usage, (3) Arithmetic, and (4) Study Skills. Study skill scores from this test have not been used in this research because a separate test designed to measure study methods and attitudes toward school was included in the battery of tests.

¹J.D. Ayers, W.E. Kline, V. White, P.H. Weber, G. Burket, and J.C. Duran, California Test of Basic Skills Manual, Form Q, Level 4, California Test Bureau, 1968, 72 pp.

²Ayers, et al, Ibid. 72 pp.

Skills measured in the reading sub-test are recognition of the meaning of words in context; symbol and sound correspondence; recognition of directly stated details; comprehension of the meaning of words and phrases expressed in synonymous terms or parallel form; comprehension of the meaning of ideas by paraphrasing; identification of main purpose of ideas, sentences, and paragraphs; perception of relationships, i.e., cause-effect, time, size, whole-part, structure of prose and poetry, and sequence; the drawing of conclusions from given facts and statements and ideas, and recognition of omitted information; recognition and interpretation of tone, mood, and author's intent.

Skills measured in the language sub-test are the recognition of correctly and incorrectly spelled words; the recognition and application of rules of punctuation and capitalization; the application of correct grammatical principles; the selection of the word, phrase, or sentence which provides the greatest clarity and economy of expression; perception of the relationships of different parts of sentences and recognition of inappropriate relationships; comprehension of author's implication in an incomplete sentence and the selection of the appropriate word to complete it.

The arithmetic sub-test measures competency in the use of whole numbers, fractions, decimals, percents, ratios, measures and currency, algebraic equations, geometric figures, statistics, and logic.

The standardization of The California Test of Basic Skills³ was designed to provide norms for all fifty of the United States and the District of Columbia. All socio-economic groups were included as were all racial and ethnic groups. At the upper level, secondary, The California Test of Basic Skills⁴ correlates with the California Test of Mental Maturity⁵ short form as follows: total reading .71, total language .74, and total arithmetic .92. For the total battery the correlation for the two tests is .78. This correlation does not include the study skills sub-test of the California Test of Basic Skills.

The California Test of Mental Maturity⁶ was used to establish levels of intellectual functioning. Instead

³Ayers, et al, Ibid. 72 pp.

⁴Ayers, et al, Ibid. 72 pp.

⁵Willie W. Clark and Ernest W. Tiegs, California Test of Mental Maturity Manual, Monterey, California Test Bureau, 1953, 63 pp.

⁶Clark and Tiegs, Ibid. 63 pp.

of the traditional Intelligence Quotient, scores were reported as intellectual status indexes. This allowed the researcher to select underachievers, overachievers, and par achievers by comparing each subject's anticipated achievement expanded standard score with the actual achievement score which he produced on the California Test of Basic Skills.⁷ The anticipated score shows the level of achievement the subject should have attained, and the actual achievement score shows what he actually did achieve. The difference between these two scores was used to classify underachievers, overachievers, and par achievers. Anticipated achievement scores are determined by both, the subject's intellectual status index and his grade level. Age does not become a factor in this system. The California Test of Mental Maturity⁸ yields a verbal I.Q., a non-verbal I.Q., and a total I.Q. Total scores were used from both of the tests discussed above for purposes of this research.

The next three tests to be discussed were selected for purposes of testing the specific hypotheses presented in section one of this chapter.

⁷Clark and Tiegs, op. cit., 72 pp.

⁸Clark and Tiegs, op. cit., 63 pp.

The California Test of Personality⁹, Form AA was used to measure overall mental health. This instrument has two broad general categories, Personal Adjustment and Social Adjustment. Each of the broad categories has six sub-categories. The personal adjustment section yields scores for self reliances, sense of personal worth, sense of personal freedom, feeling of belonging, withdrawing tendencies, and nervous symptoms. A total personal adjustment score and a percentile ranking can be derived by adding the raw scores and percentile scores of the six sub-categories.

The social adjustment section has six sub-categories also. They are social standards, social skills, anti-social tendencies, family relations, school or occupational relations, and community relations. Each sub-category yields a raw score and a percentile ranking as does the personal adjustment section.

For purposes of this research, both sub-test scores and total scores were studied for each group, i.e., under-achievers, overachievers, and par achievers at each of the three grade levels. A raw score of forty or less on the California Test of Personality suggests precarious

⁹Louis P. Thorpe, Willis W. Clark, and Ernest W. Tiesse, California Test of Personality Manual, Monterey, California Test Bureau, 1953, 32 pp.

adjustment which might be a signal for some kind of psychological or psychiatric intervention. This applies to both personal adjustment and social adjustment and each sub-category also.

The California Test of Personality is a self report device consisting of one hundred and eighty items. Subjects must respond to each item by marking "yes" or "no" signifying that the statement does or does not apply to him.

The California Study Methods Survey¹⁰ was used in this research to measure the subject's methods of study, techniques of planning for study, and his general attitude toward school. The California Study Methods Survey¹¹ yields scores in the following four areas: 1) Attitude toward school; 2) Mechanics of study; 3) Planning and system; and 4) Verification.

The test used to measure self-concept was the Self-Esteem Inventory¹², a fifty eight item check list devised

¹⁰Harold D. Carter, California Study Methods Survey Manual, Monterey, California Test Bureau, 1958, 28 pp.

¹¹Ibid. p. 16.

¹²Stanley Coopersmith, Antecedents of Self-Esteem, San Francisco, W.W. Freeman and Company, 1967, 262 pp.

and published by Coopersmith in 1967. Fifty of the items measure self-esteem and eight of the items are used as verification factors - lie items. The mean range, according to Coopersmith is 70-80.

Scores are derived on the Self-Esteem Inventory by multiplying the number correct by two, the maximum score being one hundred. Coopersmith standardized this test on middle class caucasian children, but he claims that it can be used effectively with any group, adults included. Also, he further claims that it can be used reliably with all ethnic and racial groups regardless of socio-economic status.

3. The Sample Population

The sample of subjects in this research consists of three hundred and thirty one bright high school boys and girls selected from grades ten, eleven, and twelve, all from one high school. The school is located in a middle class caucasian community about thirty miles outside of the City of Boston, Massachusetts, U.S.A. Initially, the two tests already alluded to for purpose of selecting the sample population were administered to the entire school population, i.e., tenth, eleventh, and twelfth grades. If a student was absent on the day he was scheduled for testing, make-up tests were scheduled for

him at a later date. This totaled approximately one thousand students. Four hundred and twenty seven students qualified as either underachievers, overachievers, or par achievers.

In order to qualify for participation in this research, a student must have an I.Q. of 110, or better. Underachievers must show a discrepancy of minus thirty points or more between anticipated achievement and actual achievement. Overachievers must show a discrepancy of plus thirty points or more between anticipated achievement and actual achievement. Par achievers must show a discrepancy of less than thirty points, plus or minus. Thirty points are equivalent to one academic year. Thus, a student who shows a minus thirty points is underachieving one year as measured by the California Test of Basic Skills.

As was mentioned before in this chapter, only one school was used in this research. This was based on observations made by Thorndike already alluded to in chapter one and the researcher's attempt to control for such variables as psychological climate which varies from school to school, community influence, teachers' attitudes, and divergent curricula.

Seventy eight underachievers, one hundred and sixteen par achievers, and one hundred and thirty seven overachievers participated in the research. One hundred and

eighty four of the subjects were male and one hundred and forty seven were female.

4. Statistical Analysis

All the data was transferred to code sheets, punched on to IBM cards and analyzed on the 7094 computer according to programs based on the Data-Text System, a computer language for social science research developed at Harvard University. A one way analysis of variance was used to analyze the data when more than two groups were involved. When there was testing for differences between only two groups, t tests were used. The .05 level of confidence was selected as the minimum level of significance acceptable in this research.

Chapter three presents the results of the research and chapter four presents an interpretation of the results and their implications and recommendations for future research.

CHAPTER III

RESULTS AND DISCUSSION OF RESULTS

The results of the research are reported in this chapter. The focus of this research has been on testing out the general hypothesis of no significant difference between bright adolescent underachievers, bright adolescent overachievers, and bright adolescent par achievers on measures of self-concept, mental health, and study methods and attitudes toward school.

1. Results

Three hundred and thirty one subjects participated in the study. Seventy eight were underachievers, one hundred and sixteen were par achievers, and one hundred and thirty seven were overachievers. Three grades, tenth, eleventh, and twelfth, were included and both male and female subjects participated. A summary of the analysis of variance is presented in light of the specific hypotheses.

1. Hypothesis one. There is no significant difference between total groups of boys and total groups of girls on measures of mental health, self-concept and study methods and attitude toward school. One hundred and eighty four boys and one hundred and forty seven girls participated in the research. The two groups did not show significant differences on the self-concept scale. Significant

differences were produced between boys and girls on five sub-tests of the California Test of Personality. A difference significant at the .05 level was shown on Self Reliance and Feeling of Belonging. On Social Standards a difference significant at the .01 level was reported. The .001 level of confidence was achieved on Personal Worth and Social Skills. Total score for the Social Adjustment section of the personality test produced a difference significant at the .05 level of confidence. All of the differences shown on the personality test were in favor of the girls, i.e., girls produced higher mean scores on all of the above sub-tests and the total score of the social adjustment section. These results suggests that girls are better adjusted than boys on at least five of twelve sub-tests of the California Test of Personality.

The two groups did not show significant differences on the study methods survey.

2. Hypothesis two. There is no significant difference between total groups of girls, i.e., tenth, eleventh, and twelfth grade underachievers; tenth, eleventh, and twelfth grade par achievers; and tenth, eleventh, and twelfth grade overachievers on measures of mental health, self-concept, and study methods and attitude toward school. One hundred and forty seven girls participated in the research.

Twenty six were underachievers; forty six, par achievers; and seventy five, overachievers. Girls failed to show significant differences on any of the measures. Therefore, hypothesis two was supported.

3. Hypothesis three. There is no significant difference between total groups of boys, i.e., tenth, eleventh, and twelfth grade underachievers; tenth, eleventh, and twelfth grade overachievers; and tenth, eleventh, and twelfth grade par achievers on measures of mental health, self-concept, and study methods and attitudes toward school. One hundred and eighty four boys participated in the research. Fifty two were underachievers, seventy, par achievers; and sixty two, overachievers. On the measure of self-esteem, male subjects did not show any significant differences. Hypothesis three was supported on this measure.

Male subjects produced differences significant at the .05 level of confidence on sub-tests Nervous Symptoms and Family Relations of the California Test of Personality. The results suggests that underachieving males show more nervous symptoms and more difficulty with family relationships than do par achievers and overachievers. Since only two of twelve sub-tests on the California Test of Personality revealed significant differences, hypothesis three seems to be supported on overall mental health.

Groups of male subjects were differentiated significantly on all sub-tests and total score also on the California Study Methods Survey. All differences on this measure were significant at the .001 level of confidence. Table I presents the statistical data for study methods on male subjects.

Table I

Statistical Results For All Male Subjects On
Study Methods and Attitudes Toward School

Group	N	Attitudes Toward School				Mechanics of Study			
		Mean	S.D.	F	P	Mean	S.D.	F	P
U*	52	23.942	5.410	12.663	.001	36.615	6.869	9.530	.001
PA**	70	28.300	6.231			39.786	6.460		
O***	62	29.839	7.318			41.919	6.144		

U* Underachievers

PA** Far Achievers

O*** Overachievers

CONTINUED ON NEXT PAGE

Table I

(Continued From Preceding Page)

Statistical Results For All Male Subjects On
Study Methods and Attitudes Toward School

Group	N	Planning and System				Total Score			
		Mean	S.D.	F	F	Mean	S.D.	F	F
U*	52	12.538	4.629	7.742	.001	72.942	13.535	12.212	.001
PA**	70	15.371	4.524			83.343	13.537		
O***	62	16.435	6.743			86.758	18.419		

It is suggested from data presented in Table I that under-achieving males have a more negative attitude toward school and that they are more poorly organized for study than par-achieving and overachieving males.

4. Hypothesis four. There is no significant difference between bright adolescent underachieving tenth grade boys, bright adolescent overachieving tenth grade boys, and bright adolescent par-achieving tenth grade boys on measures of mental health; self-concept; and study methods and attitudes toward school.

Eighty four tenth grade boys participated in this research. Nineteen of them were classified as underachievers, thirty two as par-achievers, and thirty three as overachievers. Hypothesis four is supported and retained on the Self-Esteem Inventory. No significant difference was shown by the analysis of variance on the measure of self-concept for the three groups of tenth grade boys.

Tenth grade boys did show differences significant on two sub-tests of the Study Methods Survey. The two sub-tests were Attitude Toward School and Mechanics of Study. Since two of the three sub-tests on the Study Methods Survey produced significant differences, hypothesis four was rejected, at least in part. These two sub-tests were significant at the .01 level of confidence. Table II

presents statistical data relative to the sub-tests for tenth grade boys on study methods and attitudes toward school.

Table II

Statistical Results on Two Sub-Tests of The
California Study Methods Survey For Tenth Grade Males.

Group	N	Attitude Toward School				Mechanics of Study			
		Mean	S.D.	F.	P.	Mean	S.D.	F.	P.
U*	19	23.632	5.718	3.836	.05	37.211	6.033	5.268	.01
FA**	32	26.875	5.604			38.375	6.588		
O***	33	28.515	6.797			42.333	5.851		

* Underachievers

** Far Achievers

*** Overachievers

Tenth grade males showed a difference significant at the .05 level of confidence on only one sub-test of the California Test of Personality. That sub-test was Nervous Symptoms. Since twelve sub-tests make up the total test and only one sub-test revealed a significant difference, the hypothesis of no significant difference must be retained. However, tenth grade underachieving males can be assumed to be more nervous than tenth grade par achieving males and tenth grade overachieving males.

5. Hypothesis five. There is no significant difference between bright adolescent underachieving tenth grade girls, bright adolescent overachieving tenth grade girls, and bright adolescent par achieving tenth grade girls on measures of mental health, self-concept, and study methods and attitude toward school.

Fifty four tenth grade girls participated in the research. Seven were classified as underachievers, fifteen as par achievers, and thirty two as overachievers. Tenth grade girls did not show a significant difference on the Self-Esteem Inventory. Therefore, hypothesis five was retained on the measure of self-concept. Further, tenth grade girls failed to show a significant difference on both measures of mental health and study methods and attitude toward school. Hypothesis five was retained on these measures also.

6. Hypothesis six. There is no significant difference between bright adolescent underachieving eleventh grade boys, bright adolescent overachieving eleventh grade boys, and bright adolescent par achieving eleventh grade boys on measures of mental health, self-concept, and study methods and attitude toward school.

Seventy one eleventh grade males participated in the research. Twenty were classified as underachievers, twenty four were classified as par achievers, and twenty seven were classified as overachievers. Eleventh grade males did not show a significant difference on the Self-Steem Inventory. Hypothesis six of no significant difference was retained for self-concept. Eleventh grade males also failed to show a significant difference on all of the sub-tests of the California Test of Personality and on all three total scores of the same test also. Thus, hypothesis six was retained on the mental health measure.

Eleventh grade males did show significant differences on two of the three sub-tests of the Study Methods Survey and the total score. The two sub-tests were Attitude Toward School and Planning and System. The difference was significant at the .001 level on Attitude Toward School and the total score. Planning and System was significant at the .01 level. Table III presents the statistical data for the two sub-tests and the total score.

Table III

Statistical Results on Two Sub-Tests of The California Study
Methods Survey and The Total Score For Eleventh Grade Males.

Group	Attitude Toward School			Planning and System			Total Scores					
	Mean	S.D.	F.	Mean	S.D.	F.	Mean	S.D.	F.			
U*	22.000	4.413	10.40	.001	11.000	3.656	6.027	.01	70.800	11.437	8.264	.001
PA**	24	28.458	6.890		15.083	3.889			84.333	12.917		
OSA**	27	30.593	7.418		17.481	8.881			88.222	13.427		

* Underachievers

** Par Achievers

*** Overachievers

7. Hypothesis seven. There is no significant difference between bright adolescent underachieving eleventh grade girls, bright adolescent overachieving eleventh grade girls, and bright adolescent par achieving eleventh grade girls on measures of mental health, self-concept, and study methods and attitudes toward school.

Fifty eleventh grade girls participated in the research. Seven were classified as underachievers, fourteen as par achievers, and twenty nine as overachievers. Hypothesis seven was supported on all variables studied in the research and was therefore retained.

8. Hypothesis eight. There is no significant difference between bright adolescent underachieving twelfth grade boys, bright adolescent overachieving twelfth grade boys, and bright adolescent par achieving twelfth grade boys on measures of mental health, self-concept, and study methods and attitudes toward school.

Twenty nine twelfth grade boys participated in the research. Thirteen were classified as underachievers, fourteen as par achievers, and two as overachievers. Twelfth grade males did not show any significant differences on the measure of self-esteem. Thus, hypothesis eight is supported on this measure. Twelfth grade males did not show significant differences on total scores of the California Test of

Personality but they did show significant differences on the two sub-tests, Self Reliance and Nervous Symptom. These differences were significant at the .05 level of confidence.

Twelfth grade males also produced significant differences on all measures of the California Study Methods Survey except Mechanics of Study. A difference significant at the .01 level was produced on the sub-test, Attitudes Toward School. On Planning and System a difference significant at the .05 level was achieved and a difference significant at the .01 level was produced on the total score of the California Study Methods Survey. Table IV presents the statistical data on study methods.

Table IV
 Statistical Results For Twelfth Grade Males
 On The California Study Methods Survey

Groups	N	Attitudes Toward Study				Planning and System				Total Score			
		Mean	S.D.	F.	P.	Mean	S.D.	F.	P.	Mean	S.D.	F.	P.
U*	13	27.385	5.026	6.081	.01	12.692	4.171	4.386	.05	74.308	15.348	6.550	.01
PA**	14	31.286	5.703			17.071	4.323			89.071	10.937		
O***	2	41.500	3.536			18.500	0.707			102.000	4.243		

- * Underachievers
- ** Far Achievers
- *** Overachievers

The number of overachieving twelfth grade males (two) left some doubt as to the validity of the statistics. Because of this doubt, a t test was run for differences between underachieving twelfth grade males and par achieving twelfth grade males. No significant differences were shown on the test of self-esteem between these two groups. Also, only one of the twelve sub-tests of the California Test of Personality produced a significant difference. The sub-test, Nervous Symptoms showed a difference significant at the .05 level. The difference suggests that underachieving twelfth grade boys are more nervous than par achieving twelfth grade boys. This difference was also shown when all three groups were studied, i.e., underachievers, par achievers, and overachievers.

On the measures of self-esteem and total personality, twelfth grade boys support the hypothesis of no significant difference between underachievers and par achievers. This pattern is similar to tenth grade males and eleventh grade males. Also, the overall pattern produced by the three groups of twelfth grade boys is similar to tenth grade boys and eleventh grade boys in spite of the small number of overachieving twelfth grade boys. This does give some support to the validity of the statistics reported for all three groups of twelfth grade boys.

On t test results for underachieving and par achieving twelfth grade boys, significant differences were produced on Mechanics of Study, Planning and System, and the total score of the Study Methods Survey. The difference was significant at the .05 level on Mechanics of Study and Planning and System. On the total score the difference was significant at the .01 level of confidence. The results of the Study Methods Survey suggests that the hypothesis of no significant difference between these two groups be rejected. Underachievers do not know how to organize and plan for studying as well as do par achievers. These results are similar to those for all three groups of twelfth grade boys and also for tenth grade and eleventh grade boys. Table V presents the statistical results.

Table V

Statistical Results For Twelfth Grade Underachieving and Par Achieving Males on The California Study Methods Survey

Group	N	Mechanics of Study				Planning and System				Total Score			
		Mean	S.D.	t	P	Mean	S.D.	t	P	Mean	S.D.	t	P
U*	13	34.231	8.786	-2.364	.05	12.692	4.171	-2.675	.05	74.308	15.348	-2.895	.01
PA**	14	41.357	6.823			17.071	4.323			89.071	10.937		

* Underachievers

** Par Achievers

9. Hypothesis nine. There is no significant difference between bright adolescent underachieving twelfth grade girls, bright adolescent overachieving twelfth grade girls, and bright adolescent par achieving twelfth grade girls on measures of mental health, self-concept, and study methods and attitudes toward school. Forty three twelfth grade girls participated in the study. Twelve were under-achievers; seventeen, par achievers; and fourteen, over-achievers. Twelfth grade girls did not show any significant difference on measures of self-esteem and the personality test. Hypothesis nine was supported on these two measures for twelfth grade girls.

Twelfth grade girls produced a difference significant at the .05 level of confidence on the sub-test Attitude Toward School of the California Study Methods Survey. No significant difference was shown on the sub-tests Mechanics of Study and Planning and System. Also, no significant difference was shown on the total score of the California Study Methods Survey for twelfth grade girls. Hypothesis nine was supported on all measures of the Study Methods Survey except Attitudes Toward School. Contrary to other groups, twelfth grade underachieving girls did not show the lowest mean on attitudes toward school. The lowest mean on this measure was shown by twelfth grade par achieving girls. Table VI presents these results.

Table VI

Statistical Results On Attitudes Toward Study
For Twelfth Grade Girls

Group	N	Attitudes Toward Study			
		Mean	S.D.	F.	P.
Underachievers	12	29.083	7.077	3.652	.05
Par Achievers	17	27.294	5.509		
Overachievers	14	33.429	6.745		

Chapter four presents a discussion of the results, summary, conclusions, and recommendations.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this research was to investigate whether or not any significant differences existed between bright adolescent underachievers, bright adolescent par achievers, and bright adolescent overachievers on measures of mental health, self-concept, and study methods and attitudes toward school. Much of the literature gives support to the general hypothesis of this research while there is an abundance of literature to justify a rejection of the general hypothesis. This conflict in opinion by previous researchers justifies the need for further research.

Three hundred and thirty one subjects participated in the research. They were tenth, eleventh, and twelfth grade high school boys and girls. Subjects were classified on the basis of test results from the California Test of Basic Skills and the California Mental Maturity Test. In order to qualify for inclusion in the research subjects had to produce a total I.Q. of at least 110 or better.

In order to test out the hypothesis of no significant difference, each subject was administered the California Test of Personality, the Coopersmith Self-Esteem Inventory, and the California Study Methods Survey. The results were tested out by an analysis of variance.

All groups failed to show significant differences on the self-concept scale. Thus, the hypothesis of no significant difference was supported on the self-concept scale. The groups also failed to show significant differences on total scores of the California Test of Personality. However, significant differences were shown on some of the sub-tests of the personality test. Tenth grade underachieving boys and twelfth grade underachieving boys produced a lower mean score on the sub-test, Nervous Symptoms, than did their par achieving and overachieving peers. Ringness¹ found that boys produced differences on some of the sub-tests of the California Test of Personality, but they did not show differences on total scores.

Twelfth grade underachieving boys also produced a lower mean score on the sub-test Self-Reliance. Twelfth grade girls did not show significant differences on personality measures.

When total groups of boys, i.e., underachievers, par achievers, and overachievers, were compared, differences significant at the .05 level were shown on the sub-tests Nervous Symptoms and Family Relations. Again

¹Thomas A. Ringness, "Emotional Adjustment of Successful and Nonsuccessful Bright Ninth Grade Boys, The Journal of Educational Research, Vol. 59, 1965, pp 86-91.

underachievers achieved the lowest mean score, suggesting more nervous symptoms and poor family relationships.

When total groups of girls were compared to total groups of boys, they produced the following significant differences on the California Test of Personality: On Self-Reliance and Feeling of Belonging a difference significant at the .05 level was shown; On Social Skills and Personal Worth, a difference significant at the .001 level was shown and an .01 level of confidence was produced for Social Standards and total score of the Social Adjustment section. Girls produced higher mean scores than boys on all of the sub-categories mentioned above in this paragraph. This suggests that girls are better adjusted than boys in at least some categories.

Tenth grade underachieving boys produced results indicating negative attitudes toward school and poor mechanics of study. The differences were significant at the .05 level of confidence and the .01 level of confidence respectively. Tenth grade girls failed to show any differences on the measure of study methods and attitudes toward school. In reference to the Study Methods Survey, eleventh grade boys produced significant differences on Attitudes Toward School, Planning and System, and Total Score. Attitude Toward School and Total Score were

significant at the .001 level. The .01 level of confidence was achieved on Planning and System. Underachievers produced the lowest mean scores on all of the sub-tests mentioned above. This suggests that underachieving eleventh grade boys have more negative attitudes toward school and that they lack adequate planning and organization for study when compared to their par achieving and overachieving peers. Eleventh grade girls failed to show a significant difference on any part of the Study Methods Survey. Conversely, twelfth grade underachieving boys evidenced more negative attitudes toward school and a less well organized system of planning for study than did their par achieving and overachieving male classmates. Twelfth grade par achieving girls produced results which suggests a more negative attitude toward school than their underachieving and overachieving female classmates. The difference was significant at the .05 level.

An analysis of variance for all males of each classification produced results for all sub-tests and total score of the Study Methods Survey significant at the .001 level of confidence. Again, all differences were in favor of par achievers and overachievers suggesting that underachievers are negative toward school and that their study methods are poor. Total groups of girls failed to show

significant differences on the Study Methods Survey. Carter ^{2,3} found significant differences between both male and female achievers and underachievers on methods of study and attitudes toward school. Achievers had better study habits and liked school better.

The results of this research support some aspects of each hypothesis while other aspects had to be rejected. Consistently, male underachieving subjects produced scores which suggest that they are negative in their attitudes toward school and that their study methods are poor. Underachieving males also seemed to have more nervous symptoms than did their par achieving and overachieving counterparts. When total groups were compared, i.e., males compared to females, male subjects showed more personality maladjustments than did females. However, this data must be interpreted cautiously since neither group produced significant differences on most of the personality test. The difference shown might be attributed to chance. If not, the number of sub-tests which did reveal differences

²Harold D. Carter, "Overachievers and Underachievers in the Junior High School," California Journal of Educational Research, Vol. 12, 1961, pp 51-56.

³Harold D. Carter, "Improving the Prediction of School Achievement by Use of The California Study Methods Survey," Educational Administration and Supervision, Vol. 45, 1959, pp 255-260.

is not great enough to infer a major personality maladjustment in the males.

The number of underachieving boys who participated in the research exactly doubled the number of girls. There were twenty six underachieving girls and fifty two underachieving boys. This pattern is in keeping with the pattern found in the literature. Underachieving boys far out number underachieving girls. This is similar to findings of Hurlock⁴, Bricklin and Bricklin,⁵ and Thorndike⁶, the majority of underachievers are boys.

The results of this research leave some questions unsatisfactorily answered. On the question of self-concept, it seems quite clear that either the subjects in this research did not have self-concepts that were significantly different notwithstanding the classification or that the instrument used did not measure self-concept. The personality test revealed some differences but overall

⁴Elizabeth B. Hurlock, Adolescent Development, New York, McGraw-Hill, 1967, p. 347.

⁵Barry Bricklin and Patricia Bricklin, Bright Child-- Poor Grades: The Psychology of Underachievement, New York Delacorte, 1967, p. 4.

⁶Robert E. Thorndike, The Concepts of Over- and Underachievement, New York, Columbia University Bureau of Publication, Teachers College, 1963, pp. 17-18.

differences were not forthcoming. More research is needed on the measure of personality factors.

Male subjects quite clearly indicated that they had a more negative attitude toward school than the female group. Also, male underachievers showed a negative attitude toward school when compared to par achievers and overachievers. Male subjects produced results which suggests more disorganized study habits than females. Underachieving males showed this same pattern when compared to par achieving males and overachieving males.

The results achieved on the self-concept scale clearly justify maintaining the hypotheses for each group on this measure. If this instrument is valid and does in fact measure self-concept, the issue seems closed: there is no significant difference between adolescent bright underachievers, adolescent bright par achievers, and adolescent bright overachievers. It is recommended, however, that further research be conducted, possibly using the same model as was used in this research but expanding it to include other kinds of groups with a larger number of subjects.

More extensive research is needed on the total evaluation of personality. Like the findings of much previous research, the results from the personality test in

this research leave the researcher with inconclusive evidence.

Results from the study methods survey quite clearly revealed that study methods and attitudes toward school are not as good in underachievers as they are in par achievers and overachievers. Evidence on this measure seems to give adequate information to be helpful to parents, teachers, guidance counselors, administrators, psychologists, social workers and others concerned with problems of underachievement.

BIBLIOGRAPHY

Blaine, Graham B., Patience and Fortitude: The Parent's Guide To Adolescence, Boston, Little-Brown and Co., 1962, pp. 35-42.

A presentation of causes for underachievement in adolescents was the focus of this section of the book.

Bricklin, Barry and Patricia Bricklin, Bright Child-Poor Grades: The Psychology of Underachievement, New York, Delacorte, 1967, 1 - 173 pp.

This reference presented valid data on causes for underachievement.

Carter, Harold D., 'Overachievers and Underachievers in The Junior High School,' California Journal of Educational Research, Vol. 12, 1961, pp. 51-56.

An excellent article presenting the relationship of study methods and attitudes toward school to under- and overachievement.

Coopersmith, Stanley, The Antecedents of Self-Esteem, San Francisco, W. H. Freeman, 1967, 1-283 pp.

This book presents definitions of self-concept and an instrument for evaluating self-concept.

Gallagher, Roswell and Herbert I. Harris, Emotional Problems of Adolescence, New York, Oxford University Press, 1958, pp. 135-155.

Multiple causes for underachievement was the focus of this section of the book. Personality factors were presented.

Liss, Edward C., 'Learning Difficulties: Unresolved Anxiety and Resultant Learning Patterns,' American Journal of Orthopsychiatry, Vol. 11, 1941, pp. 520-523.

The article gives evidence to support the claim that underachievement has multiple causes and that they are not all necessarily related to poor mental health.

Morse, William C., 'Self-Concept Data in University School Project,' The University of Michigan Education Bulletin, Vol. 34, January, 1963, pp. 49-52.

This article gives some good theoretical guidelines for causes of negative and positive self-concepts.

BIBLIOGRAPHY

Thorndike, Robert R., The Concepts of Over- and Underachievement, New York, Columbia University, Bureau of Publications, Teachers College, 1963, 1-79 pp.

The book presents constructive criticisms of the literature and helpful hints for classification of underachievers. Also, suggestions are presented for research designs.

Wellington, C.E. and Jean Wellington, The Under-achiever: Challenges and Guidelines, Chicago, Rand McNally, 1965, 1-122 pp.

An excellent monograph with guidelines for research models as well as methods for selecting underachievers.

Wylie, Ruth C., The Self-Concept: A Critical Survey of Pertinent Research Literature, Lincoln, University of Nebraska Press, 1961, 1-390 pp.

A presentation of research data on the self-concept through 1959. Of particular interest for this research was the author's constructive criticisms of previous research designs for studying underachievers.

APPENDIX I

ABSTRACT OF

Personality, Self-Concept, Study Methods and Attitudes Toward School and Levels of Achievement of Adolescents in Grades Ten, Eleven, and Twelve¹

This study was undertaken to investigate the problem of adolescent underachievement as it relates to personality, self-concept, and study methods and attitudes toward school. A sample of three hundred and thirty one subjects participated in the study. Subjects were classified into three categories on the basis of data gathered from the California Test of Basic Skills and the California Mental Maturity Test. The three categories were underachievers, par achievers, and overachievers. Both male subjects and female subjects were included from grades ten, eleven, and twelve. All subjects had I.Q.'s of 110 or better.

In order to test out the general hypothesis of no significant differences between the three groups, the California Test of Personality, the California Study Methods Survey, and the Coopersmith Self-Esteem Inventory were administered to all of the subjects.

¹Mayfield Peterson, Ph.D. thesis presented to the Faculty of Education of the University of Ottawa, 1969,

APPENDIX I

Subjects failed to show significant differences on the self-esteem inventory. The general hypothesis of no significant difference was retained for all groups on this measure. Boys produced significant differences on some sub-tests of the Personality test when compared to the girls. The male underachievers had lower mean scores. Male underachievers, also, tended to show more nervous symptoms than did their par achieving and over-achieving counterparts.

Male subjects produced significant differences on all categories of the California Study Methods Survey when compared to females. The male group produced lower mean scores which suggest that they have more negative attitudes toward school and that their study habits are not as good as the females. Male underachievers also achieved lower mean scores on the study methods survey than their par achieving and overachieving classmates.

Ranges of Intellectual Status Index Scores
For All Subjects

R.O.S.*	110-113	114-117	118-121	122-125	126-129	130-133	134-137	138-148	Mean=121.411
N.O.S.**	65	48	64	56	46	24	20	8	S.D. = 7.695

* Range of Scores

** Number of Subjects

Anticipated Achievement Scores For All Subjects

R*	640	665	680	694	709	718	726	733	741	749	759	768	774	783	793	808	825	825	Mean=724.193
	660	679	691	706	716	724	731	739	748	758	766	773	781	790	800	825	858	858	S.D.= 48.933
S**	40	21	33	34	26	21	15	21	21	12	18	16	9	14	14	10	7	7	Total = 331

* Range

** Subjects

Actual Achievement Scores For All Subjects

N*	525	575	614	626	640	650	661	673	687	700	714	735	762	795	836	887	Mean = 737.886
	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
	573	612	624	636	648	659	671	684	696	710	731	756	788	827	876	923	S.D. = 73.527
S**	5	7	7	7	7	13	15	23	24	23	27	45	47	41	32	8	Total = 331

Difference Scores Between Anticipated Achievement
Scores and Actual Achievement Scores

Range	0-9	10-19	20-29	30-40	41-50	51-60	61-73	76-86	88-99	100-115	116-129	130-224	Mean = 50.952
Number of Subjects	40	35	44	38	25	34	29	29	16	19	12	10	S.D. = 37.658

November 5, 1969

Mr. Mayfield Peterson
Dept. of Rehabilitation and Special Education
Northeastern University
43 Leon Street
Boston, Massachusetts 02115

Dear Mr. Peterson:

In reply to the request you made via telephone, I can state that:

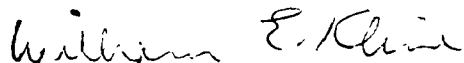
For students in grades 11 and 12, who take Level 4 of the Comprehensive Tests of Basic Skills, a difference of 30 points on the Expanded Standard Score Scale for the examinee's "Total Battery Score" is the equivalent of one year on the scale of grade equivalents.

This figure of 30 is an approximate average, for the difference varies from 28 to 32, depending upon the level of the student's ability. For your study I would recommend that you use the 30 operationally. The minor deviations are not worthy even of recognition.

In short, it is safe for you to assume that a person whose actual scale score is 30 points above his Anticipated Achievement Scale Score is achieving one year ahead of his expectation. Similarly, a person whose actual grade score is 30 points below his Anticipated Achievement Scale Score is underachieving by one year.

If I have failed to supply you with the information you need, please do not hesitate to call again.

Sincerely yours,



William E. Kline
Director, Test Development

WEK:hj



DEPARTMENT OF
EDUCATION

TUFTS UNIVERSITY

MEDFORD, MASSACHUSETTS 02155

October 9, 1968

Professor Mayfield Peterson
Conductor, Program for Mental Retardation
School of Education
Northeastern University
Boston, Mass. 02115

Dear Professor Peterson:

I am very much interested in your doctoral thesis dealing with the underachiever. The more I read the more confused I become with how underachievers can be identified and with the research dealing with programs to assist these people. I have been attempting to keep up-to-date on research in this area and find the USOE publication ERIC the most helpful.

Of course when one reads Robert T. Thorndike's book The Concept of Over- & Underachievement I wonder again if there is such a learner as we are attempting to define. There are certainly many contradictions in the research since seldom do two researchers use the same criteria to single out the underachiever. I feel more and more that one is not an underachiever "across the board" so to speak but underachievers in one or two subject areas in most cases. I do feel that anyone who has ever taught can perceive the good student after a few days in class and can generally tell when this person is not doing his work as he should. As you know there are many variables in the learner, not the least of which are interest, motivation and maturity. These characteristics are not easy to hold constant in any study and they become so involved with one's self concept.

I feel there is a need for a study that will further explore the various conflicts found in much of the research. Some attempts are certainly needed to synthesize the rather large amounts of research done recently. The AERA is having a panel on the topic at Los Angeles in February, I understand. Will you be there? I was asked to be a member of this group but unfortunately I cannot get away at this time.

Concerning the tools to measure achievement and personality, I feel any well standardized achievement test and group intelligence test will do the task required. The California Study

Skills test and the California Test of Personality are in my opinion as good as any group test. I just feel we have to realize the test limitations and use teacher evaluations to supplement the standardized test results.

I should hope your study could pull together information on such things as who are the underachievers, what approaches can be used by teachers and guidance personnel to help these people learn more wisely, and what are the relationships between a learner's self concept and his general level of aspiration?

Mrs. Wellington and I look forward to being your guest
March 27.

Cordially yours,

C. Burleigh Wellington

C. Burleigh Wellington
Professor of Education

CBW:efg