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Use of the PALS Test to differentiate between High Achieving and Low Achieving Fifth GradeStudents: A Validity Study

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USE OF THE PALS TEST TO DIFFERENTIATE BETWEEN HIGH ACHIEVING AND LOW ACHIEVING FIFTH GRADE STUDENTS
A VALIDITY STUDY

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INTRODUCTION

The school psychologist is called on to deal with a multitude of problems. Any time a child's behavior in the classroom becomes a puzzle or a problem to the teacher she will refer him to the psychologist and expect some help in understanding the nature of his problem as well as some suggestions as how best to deal with him in the classroom. In the process of evaluating the child and his problems, the family is usually involved and they also want to know how to help the child through their efforts at home.

The literature indicates that the relationship which a child has with his parent(s) is extremely important in his over-all adjustment at school (Gilmore, 1969). The importance of the parent-child relationship, as well as parent attitudes and practices regarding child raising, has been widely investigated. The general results of these studies seem to indicate that a warm, loving relationship between a child and both his parents is important for normal adjustment, e.g., Sears, et. al. (1967), Haas (1965) and Watson (1960). In view of this evidence, Haas (1965) has said that the only advice a psychologist should give

to parents is to "avoid extreme punishment, recognize the capabilities of your children, hold them to thier responsibilities, and train them in any way, as long as you love and respect them."

Sears, et. al. (1957) studied the child rearing practices of 379 American mothers who reared their children from birth to kindergarten. They used an extensive interview with each mother. Most mothers applied some physical punishment in the disciplining of their children. About three-fourths of these mothers would spank only occasionally. The most popular form of punishment was deprivation of privileges. Many of these mothers would use a threat to withdraw affection as a control device. About one-half of these mothers used reasoning to explain why certain behaviors were undesirable while reward for good conduct was much in use. Also, three-fourths of these mothers used models which they would ask their children to emulate. They found that "harsh physical punishment was associated with high childhood aggressiveness and with the development of feeding problems." Sears and his associates feel that parental attitudes toward their children are of central importance in determining a child's behavior and personality. They concluded that "Mothers who are cold, unaccepting, and unloving tend to have children who develop many problems--particularly feeding difficulties and bed-

wetting. On the other hand, the loving, accepting mother has fewer difficulties with her child."

Haas (1965) offers further support for the importance of a loving relationship between parent and child. He says that . . . "those children who have been given the most reassurance of their independent worth are likelier to give up sheer negativism before others." Even the effects of punishment are more favorable when parents are warm and accepting rather than hostile or rejecting toward their children. He feels that a loving, sensitive relationship maintained between good parents and their children will seldom be damaged by techniques recommended by supposed experts. He also said that parents who have little regard or love for their children and attempt to substitute "expert" recommendations for their shortcomings are unable to compensate for their inability to love and understand their children.

The relative merits of the permissive versus the disciplined home was investigated by Watson (1960). He reported that

> Forty-four children brought up in good, loving, but strictly disciplined homes were compared with 34 children from the same community and also brought up in good, loving homes but with an extraordinary degree of permissiveness. Two periods of psychological testing, supplemented (in 38 cases) by teacher rating, have yielded measures of nine dimensions of personality. . . . None of the personality differ-

> ences applied to all cases; some children from strict and some from permissiveness homes may be found at every level on every characteristic tested.

These two types of homes were really very similar but different in degrees of discipline-permissiveness, e.g., there were limits concerning safety in both types of homes. This study supports the importance of love and acceptance of children and indicates that the relative degree of permissiveness-discipline is less important.

Bronfenbrenner (1961) summarized the changing trends in parent-child relationships in the United States for five areas: (a) greater parental permissiveness, (b) freer expression of affection, (c) increased reliance on indirect "psychological" techniques of discipline (such as reasoning or appeals to guilt) versus direct methods (like physical punishment, scolding, or threats), (d) a narrowing of the gap between social classes in their patterns of child rearing (all closer to middle class values), and (e) in succeeding generations the father becoming more affectionate and less authoritarian with the mother becoming relatively more important as an agent of discipline, especially for boys.

Further evidence of the importance of parents showing love and affection toward their children is reported by Williams (1958, 1961, 1964). He found that children who

were classified as delinquent by the courts were more likely to rate their parents as socially undesirable (SU) than was a matched group of children who were not delinquents. The SU parent, according to Williams, is one who is seen as rejecting by the child (or low in love as measured by the PALS Tests). In contrast to this, the non-delinquent group was more likely to rate their parents as socially desirable (SD). Also, according to Williams, the SD parent is seen by the child as loving (or high in love as measured by the PALS).

In view of the above studies it would seem that the importance of the parent-child relationship has been established. The extent and direction of the possible influences of this relationship on the child's behavior is still being studied. The exact nature and variable quality of the parent-child relationship is also an area lacking in sufficient research data.

One area of interest to many investigators has been the relationship between family factors and academic performance. Lavin (1965) reports that such studies fall into two categories. First are the studies which focus on certain demographic characteristics of the family such as number of siblings and birth order, in relation to school performance. Secondly are studies concerning the relationship of various characteristics of family interaction to a

student's school performance. In the later studies, inferences concerning the quality of interaction are not made first hand, but rather made on the basis of information about attitudes of family members.

Drews and Teahan (1957) in a study of gifted high school students used Shoben's Parent Attitude Survey (PAS). They reported that "the mothers of high achievers were more authoritarian and restrictive in the treatment of their children than the mothers of low achievers." In this study there were no differential results between boys and girls nor were the father's attitudes considered. Also important for the present study,the parent-child relationship as viewed by the child was not considered.

Another study by Coleman and Bronston (1958) reported that mothers of boys with reading disabilities tend to be domineering and the fathers tend to be inadequate models for making masculine identification. Coleman and Bronston also used a Parent Inventory rather than the child's rating of his parents. They did not control for education of the parents, nor did they include girls in the study.

Pierce and Bowman (1960) tend to reconcile the conflicting results of the Coleman and Bronston study and the Drews and Teahan (1957) studies. Using the Parent Attitude Research Inventory (PARI) they found that mothers of high achieving girls were more authoritarian than mothers of

low achieving girls which agrees with the Drews and Teahan (1956) study when there was no separation by sex of the children. They also found that high achieving boys had mothers who were less authoritarian than mothers of low achieving boys which agrees with Coleman and Bronston (1958) who used only boys. This study did not control for the socioeconomic level or education of the parents, nor were the attitudes of the father considered.

A recent study (Rich 1965) using the PARI found that there was no correlation between achievement for children and parents' expressed attitudes on authority and control. He also found that the higher the education of the parents, the less likely they are to answer the PARI items in the authoritarian-control or hostile-rejection direction.

Shaw and Dutton (1962) found that parents of high school underachievers had significantly stronger negative attitudes toward their underachieving offspring than did parents of high achieving children, as measured by the PARI. Again, this study did not control the socio-economic level or education of the parents.

Tibbets (1955) compared boys matched for aptitude but with widely varying academic performance. He found that the higher achieving boys and their parents were more satisfied with family relations, that the boys had a greater motivation to please their parents, and that they more often

describe their parents as thoughtful, understanding, and interested in them.

In line with the above study, Kimball (1958) investigated the case histories of 20 boys, ages 14-18, who had high IQ's and low level of scholastic achievement. She found that "the first and perhaps most important thing which appeared consistently in the material was a poor father-son relationship." The exact nature of this relationship varied from case to case, but there was never a warm, close attachment to the father as seen by the son.

So far, the review of the literature indicates that the parent-child relationship is important, that the factors of authority, love, permissiveness, etc., may influence behavior, including the academic achievement of the child. It also seems evident that the results have not been clear or conclusive by using the various parent attitude rating scales. How a child sees this relationship, as in the Kimball (1953) study and the Williams (1958, 1961) study, may be more important to understanding his behavior than is the expressed attitudes of his parents on a rating scale.

Williams, (1958, 1961, 1964) has developed an instrument which he claims will measure how a child perceives his parents on two factors, love and authority. He has demonstrated that by the use of his PALS Tests he can differentiate between two groups of children, one group which

is classified as acting out or delinquent and the other group as normal.

Williams (1961) indicates that each of his subjects rated each parent into one of the five (Appendix E)

> "types, i.e., Authoritarian, Democratic, Permissive, Ignoring, or Psychologically Unknown (when both axes show . . . cancellation of plus and minus scores to a near zero point on both.) Since every child has two parents, each with five possibilities, there are 25 possible parental combinations . . .

In his study, Williams classified the parents as Socially Desirable (SD), if both parents were seen as high in Love on the PALS results and as Socially Undesirable (SU), if either or both parent(s) was seen as low or neutral in love. Therefore, of the 25 possible combinations, only four are SD while 21 are SU (Appendix E.) A total of two hundred Ss were used. These consisted of 50 acting-out (referral to some social agency for behavior problems) boys and 50 acting-out girls. These two groups were matched (as to intelligence, race, living at home with both natural parents, and socio-economic status, by matching occupation of fathers) with 50 each, normal girls and boys. He found that 88% of the normals rated their parents as SD while only 53% of the acting-out children rated their parents as SD on the combined results of the Child's PALS with the PEN PALS. There were no sex differences on the combined results of the two parts of the test. In looking at them separately,

however, the two groups were much closer on the direct rating scale (Child's PALS), 97% of the Normals and 64% of the Acting-outs rated their parents as loving, while on the projective part of the test (PEN PALS), 79% of the Normals and only 31% of the Acting-outs saw their parents as loving. He also found that no Normal girl rated her mother unfavorably, and no Normal boy rated his father unfavorably. In conclusion Williams said that:

> The High Authority-High Love, or Democratic father, seems especially important in the viewpoint of Normal Boys, Normal girls may see both parents as Permissive, although this is not the favored pattern, and they too prefer to place Authority in the father as a general rule. For both sexes, a loving mother seems essential for normal development.

In a later study Williams (1964) took a closer look at the 52% of the delinquent or acting-out group of children who rated one or both parents as rejecting. The typical delinquent pattern is an Authoritarian father with the mother rated in any of the five possible categories. In this study the basic problem was:

> Even though the father is seen as rejecting, is there a difference in the personality of the delinquent child who sees the mother as loving, as distinguished from the personality of the delinquent child who also sees his mother as rejecting or unpredictable?

Fifty delinquent boys who saw both parents as rejecting were compared with 50 delinquent boys whose father rejected them but whose mother was seen as loving. These

two groups were matched on only three variables; both were in the normal range of intelligence, both had been referred for delinquent behavior, and both were boys. These two groups were compared by non-statistical, clinical techniques. It was hypothesized that the group who saw both parents as rejecting would have more abnormal characteristics resembling the clinical category of psychopathic character disorders, i.e.,"poorly internalized standards, little anxiety, and poor prognosis." It was further hypothesized that the children who saw their father as rejecting but who saw their mother as loving would more closely resemble the clinical category of neurotics, i.e., "showed knowledge of societal standards, felt anxious and guilty, and responded well to treatment." Williams concluded that his data supported his hypotheses; however the data was not subjected to statistical analysis. His conclusions were based on subjective analysis though it would appear that the trends noted were obvious enough to have stood statistical analysis.

Statement of Problem

The purpose of this investigation was to determine if the PALS Tests (Williams, 1958, 1961, 1964) would significantly differentiate between low achieving and high achieving 5th-grade students. The basic design was the same basic design as used by Williams (1961), except that

high achieving and low achieving students were used instead of acting-out and normal children. It was intended that this research supplement existing data concerning validity of the PALS Tests. The test author (Williams 1958, 1961, 1964) seems to be the only person who has conducted research regarding the PALS.

In the present study, a group of low achieving and a group of high achieving students were compared on the PALS results. The following hypotheses were tested:

1. In comparing all Ss, the results of the Child's PALS will not differ significantly from the results of the PEN PALS on the SD-SU categories.

2(a). On the combined PALS results, significantly more low achieving than high achieving Ss will rate their parents as SU.

2(b). On the combined PALS results, significantly more low achieving than high achieving male Ss will rate their parents as SU.

2(c). On the combined PALS results, significantly more low achieving than high achieving female Ss will rate their parents as SU.

3(a). On the Child's PALS section of the PALS Tests, significantly more low achieving than high achieving Ss will rate their parents as SU.

3(b). On the Child's PALS section of the PALS Tests, significantly more low achieving than high achieving male Ss will rate their parents as SU.

3(c). On the Child's PALS section of the PALS Tests, significantly more low achieving than high achieving female Ss will rate

their parents as SU.

4(a). On the PEN PALS section of the PALS Tests, significantly more low achieving than high achieving Ss will rate their parents as SU.

4(b). On the PEN PALS section of the PALS Tests, significantly more low achieving than high achieving male Ss will rate their parents as SU.

4(c). On the PEN PALS section of the PALS Tests, significantly more low achieving than high achieving female Ss will rate their parents as SU.

The first hypothesis states that the two parts of the PALS, the PEN PALS and the Child's PALS, are measuring the same factors. Hypotheses two, three, and four taken together are predicting that high achieving students will see their parents as more loving (socially desirable) as measured by the PALS than will the low achieving students.

Since there is no published data available on the reliability of the PALS, another purpose of this study was to determine the test-retest reliability of the PALS Tests.

CHAPTER II

METHOD

Research Design

In this study, the measures of parental love and authority were considered as the dependent variables, and the children's achievement scores were the independent variables. Originally it was tried to match the samples for age, sex, race, IQ, acting-out behavior, socio-economic level of the family, education of head of the household, and number of parents in the home. Thus, a matched group design was to be used, with the high one-third of the sample on academic achievement being compared with the low one-third.

It was impossible to get matched groups of sufficient size, however, and an alternate control method was adopted after most of the data was collected. An attempt was made to obtain the matched groups using the card sorter at the Walla Walla Community College Computer Center. It soon became evident, however, that several of the factors were highly correlated with achievement, e.g., IQ, education of the head of the household, economic level, and teacher rating. Therefore, with each sorting, the groups became

smaller until they were too small to be adequate samples. It was then decided to ask the basic questions without matching the samples and to run correlations on all variables to see which ones were significantly correlated with achievement. Correlations were not possible on three of the control variables, sex, race, and number of parents in the home. Sex differences were checked by a t-test between males and females on achievement. Only Caucasians were in the final sample. There were nine homes with only one parent in the low achieving group, and three homes with only one parent in the high achieving group.

On the control variables, IQ was determined from the California Test of Mental Maturity (CTMM), age was calculated in months, education of the father and socio-economic level of the family was taken from the parent questionnaire sent to all Ss.

Assessment Instruments

The measuring instruments used in this study were the PALS Tests, the California Test of Mental Maturity, the Iowa Test of Basic Skills, and a teacher rating. A discussion of each follows:

Williams (1958) introduced the two separate tests which compose the PALS Tests (Parental Authority Love Statements) battery; the PEN PALS (Projected Essential

Needs) and the Child's PALS (a rating scale).

The PEN PALS (Appendix F) is a projective type test with objective scoring. It consists of 16 cartoon pictures, 8 for each parent. In each cartoon the child is shown in a need (food, sleep, elimination, overt affection, independence, aggression, socialization, and succorance) situation. The child in the cartoon is saying something and there are four choices as to what the pictured parent might answer. The tested subject simply chooses the answer which he feels will be appropriate. Each response is scored either high or low on the two dimensions of Love and Authority. The results of the PEN PALS are considered to be at a deeper level of consciousness than on the Child's PALS. These results are a description of the child's perceived relationship to his parents. The PEN PALS is always given first, since the child is directly asked to rate each of his parents on the Child's PALS section.

The Child's PALS (Appendix G) is a simple rating scale where 32 statements are rated as being either like or not like the respective parent. Williams (1958) says the results of this test more closely resemble those obtained from the child in an interview report of the parent-child relationship.

Both tests are geared to the third grade reading level. They are easy to administer and score. According

to Williams (1965) the information obtained from these tests and that of the parent-child relationship is not readily obtained from other tests. (See Appendix H for sample of scoring sheet and instructions.) The PALS Tests are used to evaluate the parent-child relationship as viewed by the child. This relationship is studied according to the child's perception of his parent's roles: (a) as Authority (a person who should or must be obeyed for some reason) and (b) as Love (a person who is source of warmth and emotional support.) Both parents are evaluated by the child on both these dimensions, high or low in authority and high or low in love, on a battery of two tests, one a projective and one a rating scale. The scoring is objective.

Each of these two dimensions is placed on a continuum, from low to high, on a circular graph. On this graph, the ordinate is the Authority dimension and the abscissa is the Love dimension. The graph is thus divided into four quadrants: (a) high Authority, low Love, (b) high Authority, high Love, (c) low Authority, high Love, and (d) low Authority, low Love. According to Williams (1965), each of these dimensions is independent (Appendix E).

Each item of the test was judged by a group of experts in parent-child relations as falling high or low on each dimension. Hence, the algebraic sum of the test items would place the parent in one of these quadrants. When

the algebraic summation of each dimension was zero, a fifth category was recorded--the Psychologically Unknown Parent.

Each of the five categories provides a meaningful definition of parental characteristics as perceived by the child (Appendices E and H).

Ex. (a) high Authority with low Love (rejecting, authoritarian)
(b) high Authority with high Love (over-protecting or over-posessive)
(c) low Authority with low Love (ignoring)
(d) low Authority with high Love (over-indulgent)
(e) zero Love with zero Authority (psychologically unknown)

The California Test of Mental Maturity (CTMM) is routinely administered to all fifth-grade students in Walla Walla in the fall of each year. The Full Scale IQ from this instrument was used as the measure of intelligence. The background and technical data for the CTMM are found in the Technical Report (California Test Bureau, 1965). The CTMM was originally developed by Dr. Elizabeth T. Sullivan, Dr. Willis W. Clark and Dr. Ernest W. Tregs in the Los Angeles City Schools. They intended to develop a test suitable for testing children in large numbers based on the same rationale as the Stanford-Binet I.Q. Test. The original work was done in 1926 and first published in 1936. It has been revised several times since. The CTMM is similar to the Binet in "the type of mental abilities tested, standard deviation of 16 IQ points, and use of mental age

and IQ concepts." This instrument yields a Language and Non-Language IQ, total IQ, and M.A. The Total, or Full-Scale, IQ was used in this study.

The standardization sample for the CTMM represented "253 schools selected from seven geographic regions representing 49 states." The reliability coefficients for Level I of the test, which was used in this study, range from .87 to .91 on the individual factors and .95 for the overall test. The Full Scale IQ for Level II correlated .74 with the Stanford-Binet Form L-M, 1960 Revision. When the Full Scale IQ is compared with the Otis Quick-Scoring Mental Ability Test, the Henmon Nelson Test of Mental Ability, the School and College Ability Tests, the Multiple Aptitude Tests and the California Analogies and Reasoning Test, the correlations range from .56 to .81.

The Iowa Test of Basic Skills (ITBS) is also routinely administered to fifth-grade students in Walla Walla. The composite grade level achievement score was used in this study as a measure of achievement. The technical data for the ITBS is contained in the test Manual (Lindquist, 1964). The ITBS is designed to test grade levels three through nine in five major areas: vocabulary, reading, language, work study, and arithmetic. The scores are also combined to yield a composite score. There is a separate battery of tests for each grade level utilizing a single booklet

with 1,232 items. No grade takes more than 507 items and each grade begins and ends on a different page. The emphasis is on generalized skills rather than specific content.

The ITBS was developed over a period of 30 years at the State University of Iowa. This includes 14 editions of the earlier Iowa Every-Pupil Tests of Basic Skills. The split-half reliability coefficient for the 5th grade composite score was .98 and the equivalent forms reliability was .87. The 8th grade ITBS correlated .54 to .59 with high school grade point average. When the ITBS 8th grade was correlated with first semester college grade point average, the correlation was .40 and when correlated with the first year grade point average in college, it was .41.

In order to determine the relative level of behavioral difficulty for each child, some measure of classroom behavior was required. It was decided to use the classroom teacher as a rater. Each child was rated from least to most difficult to control in the classroom. This was a forced choice, with the teacher placing all her students into three groups of equal size rated 1, 2, or 3, with 1 being least difficult and 3 being most difficult to control (Appendix C).

Subjects

The total population sampled in this study included

all the fifth grade students in the Walla Walla City Public Schools during the 1968-69 academic year. For those selected in the final sample, one parent had to sign a written permission (Appendix A). There were 493 students in the initial population. Each of the parents was sent the Parent Questionnaire (Appendix B) and a letter (Appendix A) explaining the project, with a place to sign at the bottom giving permission for his child to be used in the study. If both parents, or only a father were in the home, the questionnaire was designated for the father, and if only a mother was in the home, the questionnaire was designated for the mother. Of the 493 letters sent to parents, 240 were returned with the permission slip signed. Of the 240 returns, 225 had all the relevant data available, (including all the information on the Parent Questionnaire, all the group test scores from the standardized achievement and intelligence tests, and finally, were present at school on the day the PALS was administered at their school.) The correlation coefficients were computed using these 225 students. The sample used to test the hypotheses listed in Chapter I consisted of the high and low one-third of these 225 students in achievement as measured by the Iowa Test of Basic Skills.

Ninety-seven Ss were readministered the PALS for a test-retest reliability study. These Ss were selected by

retesting all the Ss in three of the eight elementary schools in the population. These schools were chosen as a cross section of the Walla Walla school district population.

Procedure

The proposal for this study was written during the summer session of 1968 at Central Washington State College. Then, late in August of 1968, the Director of Special Education, the author's immediate supervisor, was approached regarding procedure for getting approval to do the study. An appointment was made to present the proposal to the Superintendent's Cabinet in September. the cabinet approved the study, but recommended that it also be presented to the elementary school principals for their approval at their next meeting, which was in October. The principals were very cooperative and the study was given final approval at this meeting. The principals suggested that everything possible be done to insure teacher cooperation. They suggested that: (a) all the Parent Questionnaires be mailed rather than asking students to take them home to reduce extra work for the teachers, and (b) that the study be presented to the teachers at the next regular meeting in November so that they would be fully aware of the nature of the study and what would be expected of them.

The entire study was explained to the fifth grade teachers by the E at their regular Curriculum Day meeting in November. At this time, copies of the form for the rating of pupils (Appendix C) and student roster (Appendix D) were given to the teachers. They were asked to fill out all the information on the roster for each of their pupils. They were also instructed to rate each student as to degree of misbehavior in the classroom. All of the information from the teachers was returned to the E by the last week of school prior to Christmas vacation.

During the period between April 14, 1969, and May 7, 1969, the E administered the PALS to all the Ss. At each school all of the Ss were taken from their classrooms to the library. The E then passed out all the booklets and answer sheets for the PEN PALS. The Ss were then reminded that this was part of an experiment. They were instructed not to write on anything until instructed to do so. The directions on the front of the test booklet were then read to the Ss. They were instructed to put the required information at the top of the answer sheet. At this point, they were instructed to write only on the answer sheet and not in the booklet, as the written directions had read. They were also told to write a 1, 2, 3, or 4 on their answer sheet for each page in the test booklet. This was to be in lieu of circling the answer in the test booklet. The

Ss were then instructed to procede with the test and to raise their hand if there were any questions, and to raise their hand when the test was completed. As each S completed the PEN PALS, the E would take the test and give him a copy of the Child's PALS with the verbal instructions to check each statement as either like or not like the father and then to turn the test over and do the same for the mother. With each group, the faster students finished both tests in about thirty minutes and the slower ones took nearly one hour to complete the test.

In the three schools which were used in the retest, the same procedures were followed. The groups were retested during the period between May 27 and June 2. The students finished much faster on the retest, however, and in no case did it take more than thirty minutes to complete both parts of the test. After all of the testing was completed, a high school senior girl was hired to score all the PALS Tests. Her scoring was spot checked by the E and no errors were found.

After all the tests were scored, a secretary compiled the PALS test scores, group test scores, and control variables into a single list for each school. This list was then taken to the Walla Walla Community College Computer Center where all of the data were transferred to punch cards by the Computer Center key punch operator.

These cards were then taken to the Computer Center at Central Washington State College, where all the statistics were computed.

CHAPTER III

RESULTS

The first hypothesis in Chapter I states that both forms of the PALS Test will yield the same results on overall Socially Desirable (SD) or Socially Undesirable (SU) categories. This hypothesis was tested by a *t*-test of difference between means. Hypotheses two, three, and four taken together predict that high achieving children will be more likely to see their parents as SD than will low achieving children. These hypotheses were also tested by a *t*-test of difference between means. The five percent level of confidence was used for all tests of significance.

Table 1 below summarizes the findings for the first hypothesis.

TABLE 1

A Comparison of the Child's PALS with the PEN PALS as to Number of Scores in Each Category (SD or SU)

	SD	SU	No. of Scores
Child's PALS	137	13	150
PEN PALS	68	82	150
Total	205	95	300

$df = 298 \quad t = 13.646 \quad p < .05$

These results indicate that the two parts of the PALS Test, the Child's PALS and the PEN PALS, apparently do not measure the same factors. From these results, it would seem that the student was more likely to see his parents as SD on the Child's PALS, where they are directly rating their parents, than on the PEN PALS, which, according to the test author, assesses a deeper perception of the parents. These findings are in accord with Williams (1964). This difference between tests was particularly true of the boys, who accounted for a high percentage of the SU ratings on the PEN PALS. A visual inspection of the data in Table 2 indicated that girls are more likely to see their parents as SD than boys on the overall PALS. This difference is primarily on the PEN PALS, while the Child's PALS results are quite similar.

Table 2a, Table 2b, and Table 2c summarize the findings for hypotheses 2(a), 2(b), and 2(c).

TABLE 2a

Number of Scores in Each Category (SD or SU) on the Combined PALS Results for all Ss

Subjects	SD	SU	No. of Scores
High achievement	102	48	150
Low achievement	103	47	150
Total	205	95	300

df = 148 t = 0.1318 $p > .05$

TABLE 2b

Number of Scores in Each Category (SD or SU)
on the Combined PALS Results for all Boys

Boys	SD	SU	No. of Scores
High achievement	39	27	66
Low achievement	54	22	76
Total	93	49	142

df = 76 t = 1.7704 $p > .05$

TABLE 2c

Number of Scores in Each Category (SD or SU)
on the Combined PALS Results for all Girls

Girls	SD	SU	No. of Scores
High achievement	54	20	74
Low achievement	49	25	74
Total	103	45	148

df = 72 t = 0.9111 $p > .05$

A t-test was run between the means of the high and low achieving groups for the SU category. These results indicate there is no significant difference between how low achieving and high achieving students see their parents on the PALS Test. This is not taking into account the sex of the parent nor is it controlling for any of the variables which were originally scheduled for control.

Table 3a, Table 3b, and Table 3c summarize the findings for hypotheses 3(a), 3(b), and 3(c).

TABLE 3a

Number of Scores in Each Category (SD or SU) on the Child's PALS for All Subjects

Subjects	SD	SU	No. of Scores
High Achievement	69	6	75
Low Achievement	68	7	75
Total	137	13	150

df = 148 t = -.2883 $p > .05$

TABLE 3b

Number of Scores in Each Category (SD or SU) on the Child's PALS for All Boys

Boys	SD	SU	No. of Scores
High Achievement	31	2	33
Low Achievement	36	2	38
Total	67	4	71

df = 76 t = 0.4569 $p > .05$

TABLE 3c

Number of Scores in Each Category (SD or SU)
on the Child's PALS for All Girls

Girls	SD	SU	No. of Scores
High achievement	33	4	37
Low achievement	32	5	37
Total	65	9	74

df = 72 t = 0.3511 $p > .05$

Again a t-test was run between the means of the high and low achieving groups. These results indicate there is no significant difference between how low achieving and high achieving students see their parents on the Child's PALS.

Table 4a, Table 4b, and Table 4c summarize the findings for hypotheses 4(a), 4(b), and 4(c).

TABLE 4a

Number of Scores in Each Category (SD or SU)
on the PEN PALS for All Subjects

Subjects	SD	SU	No. of Scores
High achievement	33	42	75
Low achievement	35	40	75
Total	68	82	150

df = 148 t = .3259 $p > .05$

TABLE 4b

Number of Scores in Each Category (SD or SU) on the PEN PALS for All Boys

Boys	SD	SU	No. of Scores
High achievement	8	25	33
Low achievement	18	20	38
Total	26	45	71

df = 76 t = 1.9080 $p > .05$

TABLE 4c

Number of Scores in Each Category (SD or SU) on the PEN PALS for All Girls

Girls	SD	SU	No. of Scores
High achievement	21	16	37
Low achievement	17	20	37
Total	38	36	74

df = 72 t = 0.923 $p > .05$

The t-test was between the means of the high and low achieving groups on the SU category. The nonsignificance indicates that there is no significant difference between how low achieving and high achieving students see their parents on the PEN PALS.

The second part of this study was concerned with

determining if the original control variables correlated significantly with achievement.

Table 5, below, summarizes these findings.

TABLE 5

Correlation Between Each Control Variable and Achievement

Age	Economic Level	Teacher Rating	IQ	Education of Head of Household
-.253	.306	-.305	.839	.340

These Pearson Product Moment correlations are based on all 225 subjects. All correlations are significant at the 5% level of confidence and each is in an expected direction. The positive correlations are as would be expected. As the economic level of the family, the IQ, and the education of the parents rise, so does achievement. On the teacher rating, the higher the numerical rating, the more the child was classified as a "behavior problem." Thus, this factor would also be expected to correlate negatively with achievement. Finally, the older children in the class would tend to be those who had been retained, and hence age would tend to be negatively correlated with achievement.

To test for sex differences, a t-test was run for difference between girls and boys on achievement. The mean

grade level achievement score was 5.461 for boys and 5.747 for girls. The t was -2.040, which is not significant at the 5% level of confidence.

Other correlations contributing to the understanding of the obtained data are presented here in Tables 6 and 7.

TABLE 6

Correlations between Achievement and Each Factor of the PALS for the Father

Child's PALS Authority	Child's PALS Love	PEN PALS Authority	PEN PALS Love
.129	.097	.027	.016

TABLE 7

Correlations between Achievement and Each Factor of the PALS for the Mother

Child's PALS Authority	Child's PALS Love	PEN PALS Authority	PEN PALS Love
.153*	.157*	.025	.147*

* $p < .05$

The correlations reported in Table 6 are not significant. Three of the four correlations in Table 7 are significant at the 5% level of confidence. The exception

is for authority on the PEN PALS. These two tables indicate that the child's perception of his father as measured by the PALS is not significantly correlated with academic achievement. This is not the case, however, with the mother. The data of the children's rating of their mothers as positive Love and Authority figures on the Child's PALS is correlated with achievement. On the PEN PALS (the projective test), the correlation between achievement and Love is statistically significant, but achievement and Authority did not correlate significantly.

Another part of this study was to check the test-retest reliability of the PALS. The Ss from three schools, consisting of 89 students, were retested on the PALS one month after the initial testing. These 89 students were all the students from these three schools who were present for both tests. The correlations for the test-retest are reported in Tables 8 and 9.

TABLE 8

Test-Retest Correlations for the Child's PALS

Father		Mother	
Authority	Love	Authority	Love
.507	.432	.498	.572

TABLE 9

Test-Retest Correlations for the PEN PALS

Father		Mother	
Authority	Love	Authority	Love
.378	.736	.508	.643

All of the correlations in Tables 8 and 9 are significant at the 5% level of confidence.

CHAPTER IV

DISCUSSION

The results recorded in Table 1 indicate that the two sections of the PALS Tests did not measure the same factors. This would indicate that the second hypothesis and its two sub-hypotheses are meaningless, since the two test sections should not be combined as if they were equivalent.

The results obtained regarding hypotheses two, three and four in Tables 2, 3 and 4, indicate that the PALS will not adequately distinguish between low achieving and high achieving students when used as a group test. This was true when the Ss were considered by sex as well as when both sexes were taken together. In either case, the scores for both parents were averaged and not considered separately. This design did not take into account the average student who was neither high nor low achieving. Another limitation was the failure to control for age, socio-economic level, IQ, and education of the parents. The reasons for this lack of control were explained in Chapter II.

Table 5 records the correlations of achievement

with age, economic level, teacher rating, IQ, and education of the head of the household. The correlation between achievement and IQ was statistically significant and relatively high (.839), but not as high as might be expected if the IQ test is really a measure of scholastic aptitude as it was designed and reported to be in much of the literature (Gilmore, 1969, Cronbach, 1960 and California Test Bureau, 1965). There was also a significant correlation between achievement and each of the other variables. A limitation of the correlational approach used is the failure to partial out the effects of each of the variables. Therefore, it is impossible to tell if the variables are measures of the same, or mutually exclusive, entities. A partial correlation design would help to answer some of these questions.

An interesting possibility was suggested by the data reported in Tables 6 and 7. All the students are considered without regard to achievement levels and then achievement correlated with each factor of the PALS for each parental figure separately. When the same data is examined in this manner, the mother figure becomes quite important and the father less so. Three of the four factors on the PALS for the mother correlated significantly with achievement. It would seem that a child who both perceives and rates the mother as a source of Love will

achieve higher. The authority factor seems less important, in that a child may rate his mother overtly as high in authority, but may actually perceive her either high, low, or neutral in authority. The results coincide with those of Haas (1965) who said that it is most important for a parent to give a child love and respect. The importance of the mother-child relationship, is also emphasized. It should be noted also that while the correlations reported in Table 7 are significant, they are actually quite low and would not justify the use of group data from the PALS Tests to make interpretations concerning individual children.

The results of the test-retest reliability coefficients reported in Tables 8 and 9 are all statistically significant. However, they are not high enough to warrant use of any single subtest as being diagnostically significant for individual children. Since there is no overall score on the PALS Tests, no overall reliability coefficient was computed.

The main problem with this study was using the PALS as a group test. Even though the author of the test says it is appropriate for group use, it was noted that in his three studies (Williams, 1953, 1961, 1964) the test was given individually. The PALS has also been used extensively by the E as an individual clinical tool. One prob-

lem is the major assumption of the PALS that the child will respond to the test items as if they were representing his parents. If the instrument is administered individually and the E has any reason to doubt a child's response, he can always employ further inquiry. For example, on one occasion the E was using the PEN PALS with a sixth-grade girl. When she had completed the test, the E asked her if she had answered the items as if they were concerning her parents. She seemed surprised and replied that she had answered them for parents on a television show. She was then asked to repeat the test and answer the questions for her own parents. It might also be noted that the "television parents" were both high in love, while the father was high in Authority and the mother low in Authority. When the girl rated her own parents, the father was low in Love and Authority, while the mother was high in Authority and inconsistent in Love. Clinical observation supported the latter as a truer picture of her parents, with a passive alcoholic father and an aggressive inconsistent mother. This example illustrates what can happen when the test is administered. It was the E's observation that many of the Ss tested in this study were not taking the test seriously, and that in many cases they put down what they thought were the "right" answers rather than answers which would accurately describe their parents.

Another problem concerns the original design. It would probably have taken an infinite population to get matched groups on all the control variables. Since this was not possible, the groups could not be adequately controlled. Also, this design did not take the parents into account separately. As the correlations showed, the parents are often viewed differently, and one parent may be viewed as a more significant person than the other on any or all of the test variables. Also, this design does not take into consideration the average student. A correlational design which can utilize all Ss and all available data would be an improvement over a matched group design of high and low achieving Ss. A partial correlation design could single out the effects of the various control variables.

The underlying philosophy and general format of the PALS Tests offer to those professionals working with children a potentially very useful tool. There are some limitations, however, which should be pointed out. Considerably more research will have to be done with the present test before definitive statements can be made. There is an obvious need for more items, particularly on the PEN PALS, to improve both its reliability and validity. Several of the items on the Child's PALS need rewording for easier understanding by the child taking the test. For example, item 18 for the mother says, "Is looked up to by everybody",

and it was found that a large number of the fifth-grade Ss in this study could not understand the meaning of this statement. The lack of a manual was also found to be a limitation of this instrument.

From the results of this study, it would seem that the potential for use of the PALS as a group instrument should be limited to research. If the results are to be used for individual diagnostics, then the test should be individually administered and the results used with great care. Before any conclusions are reached regarding the validity of an individual profile, careful checks should be made with other instruments and family data obtained from interviews.

If the PALS Tests can be perfected it would be useful for extensive research into the effects of the parent-child relationship on many aspects of child development, including choice of vocation, degree of success within a particular vocation, achievement in school, anti-social behavior, school drop-out, etc. Also, once the instrument is perfected or improved significantly, it should be a valuable tool to the school psychologist, school counselor, clinical psychologist, social workers, and others who work with children and families.

CHAPTER V

SUMMARY

The problem concerned the PALS Test's ability to distinguish between high achieving and low achieving fifth-grade students. A second objective was to check the test-retest reliability of the PALS. The results failed to show a difference between high and low achieving Ss; however, several correlations shed some light on the importance of the mother-child relationship and the fact that a loving mother, as seen on the PALS results, is positively correlated with achievement. It was also concluded that a correlational design would be superior to a matched groups design for this type of study.

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APPENDIX A

WALLA WALLA PUBLIC SCHOOLS
DISTRICT NO. 140

January 6, 1969

Dear Parents:

The Walla Walla Public Schools are cooperating with Central Washington State College in a study of the parent-child relationship and school achievement. We believe that this relationship is of importance in determining a child's success in school.

Students from all the fifth grade classrooms in Walla Walla Public Schools, District #140, will be used in this study. The total time involved for each child will be about one hour. The students selected will take a paper and pencil test concerning the parent-child relationship. These results will be compared to the results of the achievement tests which were routinely administered a few weeks earlier. The results will not be considered on an individual basis but will be part of a large group.

If you agree to your child being used in this study, please check "yes" and sign below. Otherwise, check "no." In either case, please sign and return the letter and questionnaire.

If you have any questions, please call Mr. Parson at JA-9-0602. When the study has been completed, a report of what we have learned will be made available to you at your request.

Please complete the enclosed questionnaire as soon as possible--tonight if possible. When it is completed, seal the questionnaire in the enclosed self-addressed envelope and mail it along with this letter to Mr. Parson.

Sincerely,

Mickey H. Parson
School Psychologist

( ) Yes, I do agree to my child being used in the above mentioned study.

( ) No, I do not agree to my child being used in the above mentioned study.

_____
Parent's Signature

APPENDIX B

APPENDIX B

PARENT QUESTIONNAIRE

I

Read the different kinds of occupational work listed and circle the number which most nearly describes your work.

1. Unskilled labor or farm labor

2. Rent and operate a farm

3. Truck driver, machine operator, service station attendant, waiter, clerk

4. Carpenter, machinist, plumber, mason, printer, barber, cook, salesman, secretary, stenographer

5. Farm owner or manager, (As manager you would receive a definite salary from the owner.)

6. Office supervisor or manager, sales manager, insurance adjustor, technician

7. Retail dealer, contractor, owner or manager of a repair shop

8. Physician, dentist, teacher, minister, engineer, lawyer

9. Bank manager, owner or manager of a manufacturing plant

II

Circle the highest grade you attended in school:

Grade and High School	Beyond High School
5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th	1 year, 2 years, 3 years, 4 years, 5 years or more

APPENDIX C

APPENDIX C

TEACHER RATING

Place each student by name into one of the three categories. Put the same number of students in each. For example, if you have 25 students there should be eight students in two categories and nine in the third.

Rate each student in terms of behavioral difficulties (misbehavior in class and/or playground) and need for discipline from least to most difficult.

1) LEAST DIFFICULTY	2) ABOUT IN THE MIDDLE	3) MOST DIFFICULT TO CONTROL

APPENDIX D

APPENDIX D

STUDENT ROSTER

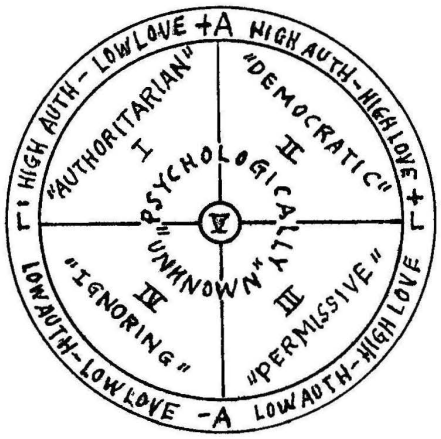
Name	Address	Parent's names	Bd.	Sex	Race	No. of parents in home

APPENDIX E

APPENDIX E

EVALUATION OF THEIR OWN FATHERS AND MOTHERS BY ACTING-OUT CHILDREN, USING THE PARENTAL AUTHORITY-LOVE STATEMENTS (PALS TESTS)

Schematic presentation of parental types



"Socially Desirable" Combinations (Both High in Love)

	FATHER Shown as:	MOTHER Shown as:
1.	II	II
2.	II	III
3.	III	II
4.	III	III

"Socially Undesirable" Combinations (One or Both Low in Love)

	FATHER Shown as:	MOTHER Shown as:
5.	II	I
6.	II	IV
7.	II	V
8.	III	I
9.	III	IV
10.	III	V
11.	IV	I
12.	IV	II
13.	IV	III
14.	IV	IV
15.	IV	V
16.	V	I
17.	V	II
18.	V	III
19.	V	IV
20.	V	V
21.	I	I
22.	I	II
23.	I	III
24.	I	IV
25.	I	V

Twenty-five hypothesized possible PARENTAL COMBINATIONS

APPENDIX F

Note: Appendix F has been redacted due to copyright restrictions. It contains a 16 page pamphlet "Pen Pals" by Walter C. Williams, Psychiatric Clinic for Children, Department of Psychiatry, University of Washington.

APPENDIX G

APPENDIX G

CHILD'S PARENTAL AUTHORITY-LOVE STATEMENTS (CHILD'S PALS)

(TWO DIRECT RATING SCALES: ONE FOR FATHER; ONE FOR MOTHER)

MY MOTHER:	Like My Mother	Not Like Mother
1. Says how nice everybody is to us		
2. Likes to meet my friends		
3. Thinks she is better than anybody else		
4. Thinks she has to work too hard all the time		
5. Does not like to argue with anybody		
6. Helps me with my homework		
7. Brags a lot		
8. Won't talk to me when she is mad at me		
9. Always agrees with other people		
10. Shows me how to do things when I ask for help		
11. Argues a lot		
12. Says I do bad things just to make her feel bad		
13. Gives me anything I want		
14. Does my homework for me when I can't do it		
15. Wants to have more things than anybody else		
16. Tells father on me when I do something		
17. Likes to have lots of friends		
18. Is looked up to by everybody		
19. Gets mad if I try to explain why I did something		
20. Says we would be better off without her		

MY MOTHER:	Like My Mother	Not Like Mother
21. Believes everybody is good and kind		
22. Always does a good job		
23. Spanks me no matter what I do		
24. Is always giving excuses why she can't do things		
25. Is always kissing and hugging me		
26. Shows people what to do		
27. Always tells the truth even if it hurts somebody		
28. Acts like everybody is better than she is		
29. Loves everybody		
30. Helps people do things the right way		
31. Does not like the way I act		
32. Doesn't care what I do		

MY FATHER:	Like My Father	Not Like Father
1. Asks other people what to do about things		
2. Lets me help him sometimes		
3. Thinks he knows more than anybody else		
4. Says people pick on him all the time		
5. Always gives his paycheck to mother		
6. Doesn't get mad if I break something without meaning to		
7. Acts like a big-shot		
8. Goes off by himself when he does not like something		
9. Wants to be like other fathers		
10. Teaches me how to play games		
11. Does not let anybody cheat him		
12. Says nobody ever tells him what is going on		
13. Wouldn't hurt anything, even a fly		
14. Helps me even when I don't ask him to		
15. Is selfish		
16. Thinks everybody and everything is against him		
17. Brings me presents so I will love him best		
18. Knows the answers to most questions		
19. Says children should be seen and not heard		
20. Always says go ask mother--she is the boss		
21. Would rather do things for other people than himself		
22. Is the greatest man I know		
23. Is too busy to talk or play with me		
24. Does not like to work with other people		

MY FATHER:	Like My Father	Not Like Father
25. Never gets mad at anybody		
26. Likes to help other people do a good job		
27. Does not agree with me most of the time		
28. Is afraid he will lose his job		
29. Likes to play tickle games with me		
30. Likes to teach people how to do things		
31. Acts like he is mad all the time		
32. Gives up easily when things are hard to do		

APPENDIX H

Note: Appendix H has been redacted due to copyright concerns. It contains a 2 page scoring rubric for the test contained in the pamphlet in appendix F.