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SOCIAL SERVICE AND PERSUASIVE INTERESTS OF A GROUP OF NON-SIBLING HIGH SCHOOL STUDENTS

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by
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CHAPTER I - THE PROBLEM

At the turn of this century, G. Stanley Hall made an observation that was to become a classic statement regarding the non-sibling child. He commented, "Being an only child is a disease in itself."[1] Even today popular opinion appears to point out the "only child" as a selfish, egotistical, and easily recognizable child. Although not all researchers concur in this opinion, it cannot be seriously denied that the "only child" grows up in a somewhat different world than other children. As Dr. William Menninger has stated, "Obvious facts: no sibling competition (or rivalry); undivided parental investment."[2]

Louis Taylor, using Fisher's[3] classification of man's basic motives, studied "only children" through case histories. He found the "only child" to have an underdeveloped allo-motive (welfare of the race) and an overdeveloped ego-motive (one's personal security). He felt that this tendency to be motivated by personal security put the "only child" in conflict with society, and that the non-sibling child therefore lives in an emotional state of anxiety.[4] It would appear from Taylor's

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[1] G. Stanley Hall, cited by A. A. Campbell, "The Personality Adjustments of Only Children," Psychological Bulletin, 31:193, March, 1934.

[2] William Menninger, lecture "Psychology of the Only Child," cited by Norma Cutts and Nicholas Moseley, The Only Child (New York: Putnam's Sons, 1954), p.8.

[3] V. E. Fisher, An Introduction to Abnormal Psychology (New York: Macmillan Company, 1937), pp. 164-70.

[4] Louis Taylor, "The Social Adjustment of the Only Child," American Journal of Sociology, 51:227-32, November, 1945.

study that the "only child" would not be interested in the welfare of other people.

Stanley Schachter stated in his book, The Psychology of Affiliation, that "only children" display a high need for affiliation with other people.[5] This need comes to the foreground when the "only child" is in a state of anxiety.

The studies of Taylor and Schachter appear to be contradictory and opposing. Taylor finds the "only child" to be interested in himself rather than other people. This anti-social interest leads to feelings of anxiety on the part of the "only child" as it puts him in conflict with society. Schachter, on the other hand, found that when the "only child" was in an anxious state he exhibited a need to be with other people.

As these two studies serve as important background and reason for the current investigation, they will be treated more completely in Chapter II.

According to current population statistics one child in twenty is an "only child".[6] As counselors will come into contact with a certain number of "only children", it is hoped that this study will serve to give some insight into the needs of the "only child".

Need

Much has been written about the personality and adjustment of the child without brothers and sisters, but a great void exists regarding

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[5]Stanley Schachter, The Psychology of Affiliation (Stanford: Stanford University Press, 1959), p.46.

[6]Edna LeShan, The Only Child, Public Affairs Committee, State of New York, Public Affairs Pamphlet No. 293, February, 1960, p.3.

the interests of these "only children", particularly their vocational interests. There seems to be a need for educators and counselors to better understand the "only child" in terms of his vocational desires in order to assist him generally to understand himself better.

This paper is an outgrowth of personal interest and observation, For two years while counseling in a senior high school, the writer has come in contact with a small number of "only children" who have wanted to investigate vocational choices. The observation made was that these students appeared to be interested in various occupations that have a major orientation toward being associated with other people, rather than in occupations where interpersonal relationships and contacts would be secondary. That is, these "only children" were interested in teaching, social work, psychology, medicine, nursing, and other social service occupations.

Purpose

This study is being carried out to check the validity of the assumption that "only children" are interested in occupations that would involve working with people. In other words, would the trend observed with a few "only children" be found true of a larger group?

The purpose of this study, then, will be to determine whether "only children" who attend Duluth Central High School show a distinct preference for vocational occupations which would require that they deal with people. This will be determined by the scores received by these "only children" on a standardized interest inventory.

Hypothesis

The hypothesis to be investigated is whether or not significant number of high school aged "only children" will score above the 50

percentile on the two vocational Kuder Preference Record scales of Social Service (an interest in helping people) and Persuasive (an interest in dealing with people).

Overview

To place the current study in proper perspective, Chapter II will contain a comparative analysis of the various studies dealing with the "only child". Chapter III will provide the format of this particular study, indicating the statistical method that was used to test the hypothesis. The statistical findings will be reported in Chapter IV. A discussion of the findings, along with the implications for further research will be the subject of Chapter V. The final chapter will consist of the summary of this study.

CHAPTER II - REVIEW OF THE LITERATURE

Introduction

The various studies conducted by researchers regarding "only children" will be classified in this chapter in two main categories. Those studies indicating negative characteristics will be presented first. All studies in this area will be compared to the pioneer research conducted by Bohannon. The other section will be devoted to the neutral or positive characteristics of the "only child". These studies will be presented according to the age of the "only child". The conclusions to be drawn from the studies will then be presented in the summary.

In considering characteristics of "only children", one is cautioned by Margaret Quayle, "Most of the assumed undesirable characteristics of only children derive from generalizations made on unscientific bases."[7] The research is also filled with "tendencies" rather than statements based on statistical significance. As Quayle states:

> While there are no statistically reliable differences between only and other children at any age level, a few different tendencies may be found. Only children are less likely than others to have infectious diseases. In studies made of personality characteristics between only and other children, there is little general agreement except that oneliness is a factor of little significance.[8]

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[7] Margaret S. Quayle, Encyclopedia of Modern Education (New York: F. Hubner and Company, 1943), p. 561.

[8] Ibid.

However, while stating that there are no significant differences, she continues with the "tendencies":

> Only children seem to be slightly less timid, less extroverted, less self-sufficient, and to have somewhat larger vocabularies; be a little more ambitious, unstable and irritable than other children.[9]

This seems to indicate a confusing picture: the "only child" is no different from other children, but the "only child" does tend to be different from other children.

The systematic study of "only children" has covered about a fifty year period of time. In 1898 Bohannon published the results of his pioneer study. His ideas went unchallenged until the 1920's when various researchers looked at his findings, questioned them, and developed ideas of their own. Following the World War II "baby boom" fewer studies were made, and the 1950's produced just a smattering of attention which diminished to practically nothing during this current decade.

There may be good reasons for the lessening of attention to "only children". Mainly, there has been little substantial proof that an "only child" differs in any real way from children with siblings, and researchers may be convinced that there is no point in any further study. The number of "only children" has not increased and thereby they have not become more noticeable. In 1960 one couple in six had an "only child".[10] (It is estimated that among well-educated city dwellers the number may be one couple in three.)[11]

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[9] Ibid.

[10] Le Shan, op. cit., p. 1.

[11] Dorothy Barclay, "When There is Only One Child," New York Times Magazine, September 12, 1954, p.47.

Today there are more adult "only children" than there are children without brothers or sisters; one of ten adults is an "only child", while only one of twenty youngsters is an "only child".[12]

While this paper deals with the vocational interests of "only children", the studies reviewed here deal with the adjustment or personality characteristics of "only children". These studies are felt by the writer to be of importance as they indicate the bulk of information that is available at this time. Also, these studies may serve to show that another direction in the investigation of "only children" needs to be taken to shed more light on the uniqueness or common placeness of the "only child".

Negative Characteristics

As stated earlier, E. W. Bohannon, pioneering in the study of "only children" presented a pessimistic picture of the "only child" that predominated for about 25 years. During this time parents were even advised to go so far as to adopt a second child if they could not themselves have more than one child.[13] Bohannon undertook the study of 381 "only children" of various ages. Primarily, he used case histories, but he also relied upon teacher ratings and anecdotal records. Using this approach, he produced quite a formidable list of characteristics found in "only children". He stated that "only children":

1. are below average in health and vitality
2. are nervous and subject to physical disorders

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[12] Ibid.

[13] Fransworth Crowder, "Is the Only Child Behind the 8 Ball," Better Homes and Gardens, 27:220-21, September, 1948.

3. are late in entering school; irregular in attendance; less successful scholastically than average

4. have less command of themselves socially than other children; social relations frequently characterized by friction

5. prefer quieter forms of amusement

6. prefer older associates and companions

7. are commonly precocious

8. are selfish but affectionate

9. are given to imaginary companions[14]

Many studies that followed Bohannon during the second quarter of the century supported these earlier findings. For example, the work done by Friedjung on the social adjustment of "only children" supports Bohannon's opinions of social characteristics, as well as mental and physical health.[15] Friedjung's study was also concerned with the neurosis of the "only child". He took data from 100 "only children" and 100 children with siblings. Both groups were involved in clinical experiences. His findings revealed that among the 100 "onlies" there were 87 cases that could be determined neuropathic, while among the 100 non-only children there were only 31 neuropathic cases.[16]

Further support is given to Bohannon's original findings in a study conducted by Ward. Using case histories, she followed up children from both non-sibling and three-child families who had been referred to a child guidance clinic. She found that the "only

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[14]E. W. Bohannon, "The Only Child in the Family," Journal of Genetic Psychology, 5:494, April, 1898.

[15]J. K. Friedjung, "Die Pathologie des Einzigen Kindes," Wein. med. Wock., 61:376-81, 1911, cited by A. A. Campbell, "The Personality Adjustments of Only Children," Psychological Bulletin, 31:194, March, 1934.

[16]Ibid.

children", when compared to the children with two siblings, showed a higher percentage of restlessness and over-activity, crying, nail-biting, and school difficulties.[17]

Taylor also worked with case histories, concentrating on the individual's life history. He felt that the adjustment of "only children" probably followed a normal curve, with just a small number of atypical cases. His investigation focused on the group of "only children" who appeared to be normal in adjustment, along with a control group of non-only children. Among the "only children" he noted an overabundance of minor physical disabilities, while no disabilities were found in the control group. He labeled these minor physical disabilities neurasthenic--a type of neurosis with symptoms of fatigue, depression, worry, and non-organic pains, usually the result of emotional conflict.[18]

Taylor probed each case history to determine what need was most prevalent in the life of the "only child". He used Fisher's classification of human motives:

1. somato-motives: bodily needs
2. allo-motives: welfare of the race
3. ego-motives: one's personal security[19]

In the case histories of these "only children", Taylor found an underdevelopment of the allo-motives and an overdevelopment of the ego-motives. He felt that this tendency to be motivated by personal security put the "only child" in conflict with society. The "only child" makes only an

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[17] A. Ward, "The Only Child: A Study of 100 Only Children Living at Home with Both Parents, Referred to a Child Guidance Clinic," Smith College Student Social Work, 1:41-65, 1930, cited by A. A. Campbell, op. cit., p. 195.

[18] Taylor, op. cit.

[19] Fisher, op. cit.

apparent adjustment socially, evidenced by the appearance of neurasthenic symptoms. This lack of basic adjustment is the source of the "only child's" personality disorder.

Cutts and Moseley cite findings of the Dutch psychiatrist, Dr. van Krevelen. In his book Het Eenige Kind, he comments on the overprotection of "only children" by their parents, as well as the aspects of indulgence and domination. He noted that this leads to a "fear of development" on the part of the "only child".[20] A few years later, findings of a clinical study carried on by van Krevelen were reviewed by Lassner. The general conclusion of van Krevelen's study indicated that the "only child" cannot be justifiably characterized with any particular disposition, but he did examine further the "developmental fear" aspect. In his clinical cases of "only children" suffering from psychoneurosis, the psychiatrist stated that such illnesses stemmed from entwicklongsangat--the fear of developing. He found a tendency for the "only child" to recoil from maturing and noted that their emotional growth required a prolonged period of time. van Krevelen also observed that they frequently did not feel at par in the daily struggle for life.[21]

Lending support to van Krevelen's claim of parental overprotection, David Levy, in his studies of maternal overprotection, found that of 20 cases of severe overprotection being treated in a hygiene clinc, 10 cases were "only children".[22]

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[20]D. A. van Krevelen, Het Eenige Kind (Utrecht: Erven Bijleveld, 1946), cited by Cutts, op. cit., p.31

[21]D. A. van Krevelen, "The Psychoneurosis of the Only Child," Kinderpsychist, 16:43-55, cited by R. Lassner, Psychological Abstracts, 25:90, 1951.

[22]David Levy, Maternal Overprotection (New York: Columbia University Press, 1950), cited by Cutts, op. cit., p. 226.

A natural partner to overprotection of "only children" would be the dependency exhibited by such children. Ann Haeberle analyzed the relationship of dependency to ordinal position in a group of nursery school children. Teachers rated each child for dependency on the teachers as well as the child's dependency on other children. She stated her findings:

> For both boys and girls, only children have a higher dependency scores than first-born and first-born children have higher scores than later-born children.[23]

The same implication was held as true in a study conducted by Sears. He found that second children were somewhat less dependent than first or "only children".[24]

Pointing up Bohannon's statement that "only children" are not as socially acceptable as other children, is the finding of a study carried out by Mary Finneran. Her conclusion was that first-born or "only children" are less popular than later-born children.[25]

One of the most recent works to shed any light on the characteristics of "only children" is the study by Stanley Schachter, the results of which are published in his book, The Psychology of Affiliation. The reason for his study was "to examine circumstances which affect man's desires to be alone or with others".[26] He points out that people, through interpersonal relationships, represent in and of themselves,

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[23]Ann Haeberle, "Interactions of sex, birth order, and dependency with behavior problems and symptoms in emotionally disturbed pre-school children" (paper read at Eastern Psychological Association, Philadelphia, Penn., 1958), cited by Schachter, op. cit., pp. 83-4.

[24]R. R. Sears, "Ordinal Position in the Family as a Psychological Variable," American Sociological Review, 15:397-410, June, 1950.

[25]Mary Finneran, "Dependency and Self-concept as Functions of Acceptance and Rejection by Others," American Psychologist, 13:332, July, 1958.

[26]Schachter, op. cit., p. 132

goals for each other. Approval, support, friendship, and prestige are recognized as needs of individuals. These needs can only be satisfied through personal relationships.[27]

Schachter demonstrated that there is a relationship among ordinal position, anxiety situations, and the need for affiliation. He studied the reactions of a group of 76 anxious subjects. Forty of these individuals were only or first-born children. In this group, when given the choice of retiring to another room with others or to a separate room where they could be alone, 32 chose to be together and only 8 chose to go to a room alone. In the group of later-born subjects, 11 chose to be together and 25 chose to be alone.[28] Schachter stated the results of this study as follows: ". . . anxiety produces considerably stronger manifestations of affiliative needs in first-born and only children than in later-born children".[29]

Neutral or Positive Characteristics

Other studies regarding "only children" attempt to show that the "only child" does not differ from the child with siblings or that the "only child" exhibits characteristics that are superior to characteristics displayed by non-only children.

Elementary aged "only children". One of the most extensive studies carried on regarding "only children" of earliest school age was conducted by Florence Goodenough and Alice Leahy. They studied 350 children enrolled in ten Minneapolis public school kindergartens. Teachers filled out a graphic rating scale for each student. While

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[27] Ibid., p.2.

[28] Ibid., p.61.

[29] Ibid., p.46.

their study was not concerned with just "only children" but with the characteristics of all children according to ordinal position, they found the "only child" to be rated as more aggressive and self-confident than any of the other children. The "only children" were also found to be highly gregarious in social interests and extremely fond of physical demonstration of affection. On a less positive side the researchers stated that the "only child" was unstable in moods, easily excited, and displayed a flighty and distractable attention span.[30] However, their final conclusion pointed out that, "Not just the only child is in danger of developing undesirable personality traits; every position in the family has its own peculiar nature and problem of adjustment".[31]

A study very similar to the one above was one conducted by Fenton. He used teacher ratings on twelve traits of character. His subjects ranged from kindergarten to grade six. In all, 193 children were rated; 34 were "only children". The findings revealed a median of 87.2 per cent overlapping on all traits. However, Fenton felt that there was a tendency for "only children" to be leaders, that they were superior in self-confidence, more aggressive, happy, and less conscientious in telling the truth.[32] Fenton's study parallels closely the Goodenough-Leahy study.

Helen Hooker, who matched 30 children, "only" and non-only, on the basis of school grades, sex, age, nationality, family status, and I.Q., conducted a similar investigation of school-aged children. She

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[30]Florence Goodenough and Alice Leahy, "The Effect of Certain Family Relationships Upon the Development of Personality," Journal of Genetic Psychology, 34:69-70, March, 1927.

[31]Ibid., p. 71.

[32]Norman Fenton, "The Only Child," Journal of Genetic Psychology, 35:546-55, December, 1928.

She tried to discover whether the "only child" at school differs in social and emotional adjustment from a child with siblings. Hooker used rating scales of a standardized nature and a questionnaire. The two groups were rated by both teachers and non-school interviewers. Her conclusion was: "Only children at school as a group differ little, if at all, from those with siblings."[33]

One final study conducted with elementary aged children was for a Columbia University master's essay written by Korn. Campbell reviews this study in which three groups--25 "only children", 25 oldest children, and 25 children of other ordinal position--were given the Mathews Emotional Stability Test, the Otis Suggestibility Test, were rated by teachers, and analyzed according to school records. They were compared in the areas of temperament, achievement, and school conduct. Korn found "only children" to be definitely superior in work habits, but significantly less emotionally stable than other groups. He also found the "only children" to be just as good mixers socially, but less apt to participate actively in athletics as the other groups.[34] His findings, too, seem closely in line with the Goodenough-Leahy study.

Adolescent "only children". Guilford and Worcester found a group of eighth grade "only children" to be superior in a number of personality traits when compared to a group of non-only children of the same grade. The 21 "only children" were compared to 141 children with siblings on 14 different personality traits as rated by teachers.

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[33]Helen Hooker, "Study of the Only Child at School," Journal of Genetic Psychology, 39:126, March, 1931.

[34]E. M. F. Korn, "The Relationship existing Between Order of Birth, Intelligence, and Temperament," (unpublished Master's Essay, Columbia University, 1923), cited by A. A. Campbell, op. cit., p. 196.

The 14 areas rated were: I.Q., school marks, personal orderliness and cleanliness, initiative, self-control, industry, truthfulness, dependability, health, law and order, courtesy, cooperation, fairness, and voluntary participation in extra-curricular activities. The "only children" were superior in 13 of the 14 characteristics. They tended to be slightly inferior only in voluntary participation in extra-curricular activities.[35]

One of the few studies carried out with senior high aged students was conducted by P. A. Witty. He found no significant differences in the mean scores nor standard deviation of two matched groups of eleventh and twelfth grade Chicago high school students on " . . . 18 measures and ratings of physical development, in socio-economic status, in test-intelligence, in school marks, and in 21 comparisons relating to social or emotional adjustment."[36]

College aged "only children". More research has been conducted with college aged "only children" than high school aged "only children". The earliest study conducted with the college group was initiated by A. A. Campbell with 200 University of Oregon young men and women who were given the Bernreuter Personality Inventory. The mean scores of the two groups, "only children" and intermediate children, did not prove to be critically significant; although he did find a greater incidence of atypicality (tendency toward unusual personality adjustment) among the "only children", particularly the girls.[37]

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[35] R. B. Guilford and D. A. Worcester, "A Comparative Study of the Only and Non-only Child," Journal of Genetic Psychology, 38:411-26, 1930.

[36] P. A. Witty, "Only and Intermediate Children of High School Ages," Psychological Bulletin, 31:734, November, 1934.

[37] A.A.Campbell, "Personality Adjustments of Only and Intermediate Children," Journal of Genetic Psychology, 43:197-204, November, 1933.

Dorothy Dyer reported findings of a dissertation written by William Carter at the University of Chicago (1937) which concludes: "In the studies of college students no significant differences were found between only children and others on nearly all tests in regard to emotional stability, neurotic tendencies, physical development, health, scholarship, and several personality traits."[38]

Lending even further support to the non-difference of the "only child" of college age, is the study conducted by Dyer herself on 100 "only" and non-only college freshmen members of a girls' college. Both groups were given the Bell Adjustment Inventory at the end of their first semester of college attendance. In comparing the total scores each woman received on the Inventory, Dyer found that "only children" seem to be as well-adjusted as non-only children.[39]

Adult "only children". Cutts and Moseley carried out an extensive study with adult "only children" who were graduates of Vassar, Mount Holyoke, and Yale. The "only children" themselves were interviewed, as well as their associates and their parents.

Some general statements concerning "only children" were made by the authors as a result of their study. They found these "only children" presented some feeding problems as young children.[40] Because of adult association, the "only children" were frequently ahead of age mates in word usage and knowledge, as well as reading ability.[41]

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[38] William P. Carter, "The Only Child in the Family: A Comparison with Other Orders of Birth" (unpublished Dissertation, University of Chicago, 1937), cited by Dorothy Dyer, "Are Only Children Different?" Journal of Educational Psychology, 36:298, May, 1945.

[39] Dyer, op. cit., p. 301-2.

[40] Cutts, op. cit., p.65.

[41] Ibid., p. 83.

It was found that 20 per cent of the men "only children" did not marry, while the women were as likely to marry as non-only children.[42] Of the 75 men interviewed in the study, only six could be classified as vocational failures.[43] Among the Mount Holyoke graduates, it was found that "Proportionately more onlies than non-onlies are engaged in religious work and fewer in business."[44]

As a conclusion to their study, Cutts and Moseley stated:

> Our case histories indicate that the great majority of only children grow up to be well-adjusted adults. They have jobs they like. They are happily married and raising families. They are taking an active part in the social life of their communities and bearing their fair share of public duties. These are signs of a healthy personality.[45]

Summary

A comparative analysis of the research and studies made concerning the characteristics of "only children" proves to be contradictory and somewhat confusing. The literature dealing with "only children" has general appeal to the reader in that any idea that he might wish to find supported can probably be found in one study or another.

Much has been written about the "only child"; unfortunately none of the studies reported have dealt with the specific interests of "only children", particularly their interests in the vocational areas. Dyer pointed this out in her study of college age "only children". She stated, "Little is known of the vocational adjustment of only children versus non-only children".[46]

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[42] Ibid., p. 89. [43] Ibid., p. 192. [44] Ibid., p. 181.

[45] Ibid., p. 179. [46] Dyer, op. cit., p. 302.

The purpose of this paper is to determine if there is a tendency for "only children" to be interested in occupations that deal with people. The studies cited herein offer very little support to the idea although the two studies conducted by Taylor and Schachter do deal with the "only child's" desire to be involved with or removed from other people.

Taylor found his group of "only children" to be in a state of emotional conflict as evidenced by neurasthenic symptoms. He believed the cause of the conflict was the "only children's" concern for their personal security rather than concern for the welfare of others. Therefore, Taylor's view is that "only children" are <u>not</u> people-oriented.

Schachter on the other hand, found that "only children" <u>do</u> want to be with other people. He found that when they are in a state of anxiety, "only children" manifest a real need for affiliation with others.

It is not the purpose of this paper to study cause and effect; however, one question must be acknowledged at this point. Although Taylor and Schachter seem to exhibit two opposing views, is there some connection between their findings? That is, do "only children" have a need (or interest) to be with other people because of anxiety feelings that are caused by a conflict of their allo-and ego-motives?

CHAPTER III - DESIGN

Sample and Procedure

The sample group of "only children" was drawn from the total student population of Central High School in Duluth, Minnesota. Central is one of four public high schools located in a city with a population of approximately 106,000. The school is situated in the center of the city, receiving its students mainly from lower middle class families. While the student population is heterogeneous, there probably is a greater number of culturally deprived families and fewer professional families than would be found in a normal cross section of population. All students in the sample were in grade 10, 11, or 12. They ranged in age from 15 to 19 years.

In a student body of about 1,500 students it would be expected that there would be about 75 "only children" for this study. However, the total number was 42 "only children" attending Central High School during the 1966-67 school year. These "only children" were identified from registration forms, cumulative records, and enrollment cards.

All 42 "only children" were given the Kuder Preference Record -- Vocational, Form C in late May, 1967. This inventory measures interest in occupational areas. The students had been contacted the previous week to ascertain that they were "only children" and were asked to take part in this study. Forty students took the test which was given in the morning during school time. Two students were absent the day of the test; both took the test three days later during their study periods.

The students were told the nature of the interest inventory, that the results would be available to them the following week, and that the survey was being done by the counselor to fulfill requirements for a degree at the University of Minnesota, Duluth. The counselor stated that the purpose of the research was to study the interests of "only children".

Standardized instructions printed in the Kuder Manual and test booklets were followed in the administration of the inventory. Two of the students had taken the test during the school year, but they both repeated the test with the rest of the group.

Scoring of the test and recording of the information was done by two very capable senior students employed by the school in the work-study program. The counselor re-scored each test.

Nine students were re-tested as their V (Validity) scores were above 44 or below 38. Scores outside this range cannot be interpreted with confidence. After re-testing, seven students still received a lower V score than is acceptable. In checking their cumulative records, it was found that all seven students had reading difficulties. (They scored below the fifth percentile on a Gates Reading test administered to them during their sophomore year.) These seven students were excluded from the study, leaving 35 "only children" to be studied. Of this group, 16 were girls and 19 were boys.

Instrumentation

Of the interest tests that are available, two are perhaps the most outstanding: the Strong Vocational Interest Blank and the Kuder.

The two instruments are contrasted by Barnette as being different types of inventories. He classifies the Strong as an empirical interest inventory, and the Kuder as a descriptive interest inventory.[47] Thorndike and Hagen contend that these two inventories actually serve two different purposes: (1) if the purpose of the instrument is job-oriented, then the Strong has the advantage as it appraises appropriateness of interests for a limited number of specific jobs, (2) if the purpose is to discover broad interest areas, within which a large number of jobs would fit, the Kuder would be more appropriate.[48]

Because of the general popularity of these two inventories, a number of researchers have chosen to compare the Strong and Kuder in various aspects.

About 30 years ago an extensive comparison of the Strong Blank for Men and Women and the Kuder, Form A was conducted jointly by the University of Illinois and the University of Minnesota. The study was designed to discover if common agreement could be established between the scales of each interest test. It was found that the interest areas of the Kuder were comparable to the Strong profile areas in all instances for the men, and in all instances for the women except the social service and persuasive scales.[49] When the Kuder, Form B was published (adding the mechanical and clerical scales) in

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[47]W. Leslie Barnette, Jr., Readings in Psychological Tests and Measurements (Homewood, Illinois: Dorsey Press, Inc., 1964), p. 303.

[48]Robert Thorndike and Elizabeth Hagen, Measurement and Evaluation in Psychology and Education (New York: Wiley and Sons, Inc., 1961), p.329.

[49]J. R. Wittenborn and others, "A Comparison of Interest Measurement by the Kuder Preference Record and the Strong Vocational Interest Blanks for Men and Women," Journal of Counseling Psychology, 3:254-5, Autumn, 1943.

1942, another study was conducted by the same researchers. The findings of the second study corresponded to the first study. Common agreement was found for the two new scales, except no pattern was apparent for women on the Strong to compare to the Kuder mechanical scale.[50]

One of the most comprehensive studies was conducted by Berdie through the Counseling Bureau of the University of Minnesota. A total of 500 men, mostly students with two years of college education, were given the Strong Vocational Interest Blank, the Kuder Preference Record, Form C, and a self-rating inventory. Berdie found a higher contingency coefficient between the Kuder and self-rating sacle (.52) than between the Strong and the self-rating scale (.43).[51]

In 1963 a study was conducted between the Strong Vocational Interest Blank for Men and the Kuder, Form D. A correlation of .37 was found between the twin scales of the two tests of scales that share the same name.[52]

In making a choice between one interest inventory or the other, King has stated: "The author (King) is not aware of any evidence that one test is superior to the other in performing the job for which is was designed."[53]

The Kuder was selected as the instrument to use in this investigation. As Froehlich points out in the Fifth Mental Measurements

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[50] Ibid., p. 255-6.

[51] Ralph Berdie, "Scores on the Strong Vocational Interest Blank and the Kuder Preference Record in Relation to Self Ratings," Journal of Applied Psychology, 34:42-49, February, 1950.

[52] Paul King and others, "Relationship Between Twin Scales on the SVIB and the Kuder," Journal of Counseling Psychology, 10:395-401, Winter, 1963.

[53] Ibid., p. 401.

Yearbook, "The Kuder is a good choice when the use of Strong's Blank is inappropriate or not feasible".[54]

Both the Strong and Kuder are termed appropriate for use with high school students. However, Thorndike suggests the Kuder for grades nine through twelve, while suggesting the Strong be used for those 17 years of age and older.[55] He further states, "The Kuder with its relatively general interest areas has been used satisfactorily at about ninth grade and above. The Strong, focusing on specific occupations and with particular emphasis upon occupations at the professional level, is suitable primarily for senior high school pupils with definite plans to go to college and for college groups".[56] The suggestion seems to be that the Strong is usable with specific portions of a general high school population such as the college-bound or professional job oriented student, while the Kuder would be generally more appropriate to all high school students.

Less than half of Central's students are college-bound. The "only children" taking this inventory as part of the sample range in age from 15 to 19 years. This age range is most adequately covered by the Kuder Preference Record.

Many other reasons made the use of the Kuder more feasible for this investigation. It is a test that is readily available in the Duluth Public School system; Central High School had adequate copies

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[54]Clifford P. Froehlich, The Fifth Mental Measurements Yearbook, ed. Oscar Buros (Highland Park, New Jersey: Gryphon Press, 1959), p.863.

[55]Thorndike, op. cit., p. 587

[56]Ibid., p. 332.

of all test materials. The scoring of the inventory can be done by hand, with no cost to the student and at minimal expense to the school. The Kuder results are in terms of broad interest areas rather than specific jobs. The subject of interest areas in this paper is of a broad nature. Then, too, it was on the Kuder Inventory that the trend was noticed by the investigator.

The Kuder Preference Record was developed by G. Frederic Kuder for the purpose of helping students narrow the many fields of job opportunities into smaller portions so that the individuals night investigate occupations most likely to interest them.[57]

The Kuder, Form A, was published during the 1934-35 school year. In the original test seven interest areas were investigated. In 1942 Form B, with nine interest areas, was published. Form C, used for this investigation, was published in 1948. This form includes ten interest areas and features a verification scale to check for understanding and truthfulness.

Following are the interest areas measured with a brief description of each area. The two that are important to this study are Persuasive and Social Service as they are the only scales that indicate a preference for helping or dealing with people.

Outdoor:	Indicates a preference for work that keeps one outside most of the time, usually dealing with animals and growing things.
Mechanical:	Indicates a preference for work with machines and tools.
Computational:	Indicates a preference for working with numbers.

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[57] Examiner's Manual for the Kuder Preference Record-Vocational Form C., Fifth edition (Chicago: Science Research Associates, 1953), p.1.

Scientific:	Indicates a preference for discovering new facts and solving problems.
Persuasive:	Indicates a preference for meeting and dealing with people, and promoting projects or things to sell.
Artistic:	Indicates a preference for doing creative work with one's hands.
Literary:	Indicates a preference for reading and writing.
Musical:	Indicates a preference for going to concerts, playing instruments, singing, or reading about music and musicians.
Social Service:	Indicates a preference for helping people.
Clerical:	Indicates a preference for office work that requires precision and accuracy.[58]

The purpose of the verification scale or V score is to check on the confidence that can be placed in a subject's answers. The publishers state that there are varied reasons for an improper V score. Such reasons might be: reading comprehension difficulty, misunderstanding, physical or emotional upset, lack of cooperation, poor testing conditions, or atypical interest patterns.[59]

The test is made up of 503 questions set up in triads, or sets of three options. An example of a typical set might be:

Go for along hike in the woods
Go to a symphony concert
Go to an exhibit of new inventions

With each triad, the student selects the one he would like to do most and the one he would like to do least. The answer is made by punching a hole in the answer sheet under the proper "most" or "least" column.

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[58] Administrator's Manual for the Kuder Preference Record-Vocational, Form C (Chicago: Science Research Associates, 1960), p.2.

[59] Ibid., p.5.

The inventory is untimed and usually takes high school students about 40 minutes or more to complete. Answers may be checked by hand or machine scored. The raw scores are converted into percentiles on a profile sheet for use in interpretation.

Reliability ranges from .85 to .93 in the ten different areas, as obtained by use of the Kuder-Richardson method of inter-item consistency.[60]

Two studies indicate the test-retest stability of the Kuder. A group of college freshmen were given the Kuder, Form B, 15 months apart. The result was a median correlation on all scales of .77.[61]

On the high school level, 91 boys and 86 girls were given the Kuder, Form C, in the ninth grade and again in the twelfth grade--a span of 32 months. The median correlation was found to be .61 for both boys and girls.[62]

The validity of the test is commented on by Pierce-Jones who states, "In the present Kuder Preference Record-Form C, mean profiles for small, not demonstratably representative occupational groups, constitute the main evidence of validity".[63] No reference to validity is found in the 1960 manual.

Froehlich, in reviewing the Kuder, has stated his impatience with the author and publisher for not making more data available for

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[60] Examiner's Manual, op. cit., p. 20.

[61] John Reid, "Stability of Measured Kuder Interests in Young Adults," Journal of Educational Research, 45:307-12, December, 1951.

[62] Nathan Rosenberg, "Stability and Maturation of Kuder Patterns During High School," Educational and Psychological Measurement, 13:449-58, Autumn, 1953.

[63] John Pierce-Jones, The Fifth Mental Measurements Yearbook, edited by Oscar Buros, (Highland Park, New Jersey: Gryphon Press, 1959), p. 863.

interpretation.[64] The writer of this paper agrees with Froehlich's impatience. A technical report, referred to in the 1960 Administrators Manual, never was published ". . . due to conflicting circumstances".[65]

One lack is the little information given in the Manual on the high school norm group. Following is information from a letter received from the publishing company regarding the norm group:

> In the high school studies, schools were selected to be representative of urban-rural and geographic region variables, and all freshmen, sophomores, junior and senior students in these schools were tested. In each case the four classes were weighted equally in computing percentile norms; 3,481 boys and 4,466 girls were included in the final norms developed.[66]

Statistical Hypothesis

The hypothesis to be tested is stated in the null form: There will be no difference in the number of high school aged "only children" who score above or below the 50 percentile on the Social Service and Persuasive scales of the Kuder Preference Record--Vocational, Form C.

Analysis

The hypothesis will be tested by the use of Chi square (X^2). The estimated frequency of "only children" scoring above or below the 50 percentile on each of the two Kuder scales (Social Service and Persuasive) is expected to be equal; that is, a 50:50 split.

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[64] Froehlich, op. cit., p. 863.

[65] Letter from Maria Broude, Editorial Assistant; Test and Guidance Division, Science Research Associates, Chicago, August 10,1967.

[66] Ibid

The formula to be used will be:

$$X^2 = \frac{(O-E)^2}{E}$$

O = Observed Frequency
E = Expected Frequency[67]

To determine if the results of X^2 are significant, a table showing the value of Chi square at the 1 per cent level of significance with one degree of freedom will be used.[68]

Summary

A group of 35 high school aged "only children" were selected to test the hypothesis that scores of "only children" on the Kuder Preference Record scales of Social Service and Persuasive would be equally distributed above and below the 50 percentile.

The Kuder Preference Record--Vocational, Form C was found to be an adequate instrument for this investigation as it best fits the general student population of the high school from the sample of "only children" was taken.

If the findings show that a significant number of the sample group score above the 50 percentile at the 1 per cent level of significance, the hypothesis will be rejected. If a sufficient number do not score above the 50 percentile at the 1 per cent level of significance, the hypothesis will be accepted.

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[67] B. J. Underwood and others, Elementary Statistics (New York: Appleton-Century-Crofts, Inc., 1954), p. 204.

[68] Ibid., p. 235.

CHAPTER IV - ANALYSIS OF RESULTS

A group of 35 "only children" were given the Kuder Preference Record--Vocational, Form C, to find their scores on the Persuasive and Social Service scales.

Table I provides the scores above the 50 percentile for the sample group on the respective scales. The table shows those "only children" who scored above the 50 percentile on the Persuasive scale and those who scored above the 50 percentile on the Social Service scale.

See Table I, page 30.

Statement of Hypothesis

The null hypothesis to be tested in this study was: There will be no difference in the number of high school aged "only children" who score above or below the 50 percentile on each of the Social Service and Persuasive scales of the Kuder Preference Record--Vocational, Form C.

The hypothesis was tested by the use of Chi square to determine if more than a 50:50 chance existed that the "only children" would score above or below the 50 percentile on each of the two scales. The findings must be significant at the 1 per cent level of confidence.

Statistical Analysis of the Findings

Each of the two Kuder scales, Social Service and Persuasive, were analyzed separately.

TABLE I

KUDER SCORES ABOVE THE 50 PERCENTILE
ON THE PERSUASIVE AND SOCIAL SERVICE SCALES
FOR A GROUP OF "ONLY CHILDREN"

"Only Child"	Above the 50%ile on Persuasive	Above the 50%ile on Social Service
1	x	
2	x	
3	x	x
4	x	x
5		x
6	x	
7		x
8		
9		x
10		
11	x	
12	x	
13		x
14		
15	x	
16	x	
17		x
18	x	
19	x	
20	x	
21		x
22		
23		x
24	x	x
25	x	
26		
27		x
28	x	x
29	x	
30		x
31	x	
32		
33	x	
34		x
35	x	
	19	14

N = 35

On the Social Service scale, 14 of the "only children" scored above the 50 percentile. It was found that $X^2 = 1.40$. Table II gives the information on the Social Service scale:

TABLE II

NUMBER OF "ONLY CHILDREN" SCORING ABOVE OR BELOW THE 50 PERCENTILE ON THE KUDER SOCIAL SERVICE SCALE

	Above	Below	Total
Observed	14	21	35
Expected	17.5	17.5	35

On the Persuasive scale, 19 of the "only children" scored above the 50 percentile. Using the given formula, $X^2 = .256$. This information is given in Table III:

TABLE III

NUMBER OF "ONLY CHILDREN" SCORING ABOVE OR BELOW THE 50 PERCENTILE ON THE KUDER PERSUASIVE SCALE

	Above	Below	Total
Observed	19	16	35
Expected	17.5	17.5	35

To be significant at the 1 per cent level of confidence, X^2 should equal 6.64 or higher. The findings of this sample group on the Social Service scale (1.40) and on the Persuasive scale (.256) are lower than the value of X^2 at the 1 per cent level of confidence. The findings on both scales are not significant at the 1 per cent level of confidence. Therefore, the null hypothesis is accepted.

Summary

The hypothesis that there would be no difference in the scores above or below the 50 percentile received by "only children" on each of the Social Service and Persuasive scales of the Kuder Preference Record was tested by the use of Chi square. No difference was demonstrated at the 1 per cent level of confidence. With the sample group it was found that there was no significant difference in the number of high school aged "only children" who scored above or below the 50 percentile on the Persuasive and Social Service scales of the Kuder Preference Record.

CHAPTER V - DISCUSSION, IMPLICATIONS, CONCLUSIONS

Previous studies concerning "only children" have mainly dealt with their emotional or social adjustment. This current investigation was designed to examine the vocational interests of a small group of "only children". The area of vocational interests was limited to the occupations that deal with people.

Discussion

A small group of "only children" were given the Kuder Preference Record--Vocational, Form C. Their scores on the Social Service and Persuasive scales were statistically tested to determine if the "only children" had an above average interest in those two scales. It was found that the "only children" in the sample group did not score significantly above average on the Social Service scale. The group also did not score significantly above average on the Persuasive scale.

Because the "only children" in this study did not indicate an above average interest in the two scales that are concerned with occupations that deal with people, it can be statistically assumed that these "only children" do not have an interest in "people-oriented" occupations.

This somewhat supports Taylor's findings that "only children" are not concerned about the welfare of the race. Taylor stated they are concerned about their own self needs. This places the "only child"

in conflict with society. According to Taylor, the result is that the "only child" is somewhat anxious.[69]

It is difficult to state whether or not the results of this investigation are in opposition to the findings of Schachter, who found that in anxiety situations "only children" show a need to affiliate with other people.[70] No measurement was made of anxiety feelings that may or may not have been present within the "only children" who took part in this current study.

The results of this study show statistically that "only children" do not have a significant interest in the Social Service and Persuasive scales on the Kuder Preference Record. There is however, in the data collected for this research, a certain degree of evidence that indicate a slight interest in the "people-oriented" scales.

Although the following observations are non-statistical, they do properly lend to the breadth of this study.

In Table IV the highest interest area of each individual in the sample group is ranked in choice preference. It is found that Social Service ranks first and Persuasive ranks among the top four out of ten different interest areas. (See Table IV, page 35).

It appears that there is a slight tendency for these "only children" to be interested in the Social Service scale. Conversely, Table IV on the following page shows which areas received negative consideration by the sample group. There seems to be an indication

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[69]Taylor, op. cit., pp. 227-32.

[70]Schachter, op. cit., p. 46.

TABLE IV

HIGHEST INTEREST PATTERN
ON THE KUDER PREFERENCE RECORD
SELECTED BY A GROUP OF "ONLY CHILDREN"

Name of Interest Scale	Times Chosen
Social Service	11
Artistic	5
Scientific	5
Persuasive	4
Literary	3
Musical	3
Computational	2
Outdoor	1
Mechanical	1
Clerical	0

that interest scales that do not show a preference for dealing with people are rejected by the sample group.

As an individual's profile may show more than one or two interest areas, all significant interests of the group of "only children" were summarized in Table V on page 36. (significant interest is one over the 75 percentile.) The majority of the sample group scored above the 75 percentile in two or more interest areas. A total of 77 high choices were made. The number of high interest areas chosen by members of this group is quite similar to the results found in a study conducted at the University of Minnesota. In a group of 500 men students, each person averaged 2.9 scores above the 75 percentile on the Kuder.[71] Table V indicates what the high interest areas are that were selected by the "only children". Both Social Service and Persuasive rank at the top of the list on the following page.

It is essential to this study that "only children" have an above average interest in the Social Service scale and an above average interest

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[71] Berdie, op. cit., p. 48.

TABLE V

INTEREST AREAS ABOVE THE 75%ILE
CHOSEN BY A GROUP OF "ONLY CHILDREN"
ON THE KUDER PREFERENCE RECORD

Scale	Times Chosen
Persuasive	13
Social Service	13
Computational	11
Scientific	8
Literary	7
Artistic	6
Mechanical	5
Musical	5
Clerical	5
Outdoor	4

in the Persuasive scale. However, if the "only children's" scores were allowed to be recorded as positive if they were above average on either Social Service or Persuasive, it was found that out of the group of 35 "only children" 29 did score above average on either one scale or the other. This is to say that a high number of the sample group was interested in one of the two scales.

While there may appear to be a slight tendency for "only children" of the sample group to be interested in the two scales that deal with people, it must be pointed out that statistically this tendency cannot be substantiated.

Limitations and Implications

Inherent in the design of this study are some basic limitations. The findings cited in Chapter IV are true for just this one particular group of "only children". The findings of this study cannot be directly applied to any other "only child" nor to any other group of "only children".

Furthermore, this study does not establish that "only children" have interests different from non-only children. Had a control group been used for purposes of comparison, this conjecture might have been investigated.

The findings of this investigation are confined to just the Kuder Preference Record. The use of another interest inventory such as the Strong Vocational Interest Blank may or may not produce similar results.

The various "tendencies" cited in this paper could be tested by a more sophisticated statistical method to determine what the vocational interests of "only children" are without the limitation of "people-oriented" scales.

Further research might be carried out to investigate in what occupations "only children" actually are employed.

This study, concerned with the vocational interests of a small group of "only children", is just a start in a potentially large area of investigation.

Conclusions

This study had one purpose: to investigate the casual observation that "only children" are interested in occupations that deal with people. A standardized interest inventory was chosen as the method to determine the "only child's" occupational interests. It was established by this study that the sample group of "only children" did not indicate a statistically significant interest in the Persuasive and Social Service scales on the Kuder Preference Record. That is, the group of "only children" did not indicate a better than chance interest in the Social Service nor in the Persuasive scale.

Therefore, the observation originally made was invalid. "Only children" in this particular group did not show statistically significant interest in the "people-oriented" scales.

CHAPTER VI - SUMMARY

The basic question that led to this study was: do "only children" have an interest in occupations that would bring them into contact with other people? The observation had been made with a few "only children" in a local high school that they tended to score higher than average on the Persuasive or Social Service scales of the Kuder Preference Record--Vocational, Form C. The problem was to see if the assumption held true for a group of "only children" drawn from the same high school population.

A review of the literature did not disclose any studies concerned with the vocational interests of "only children". Research has been done on the personality and adjustment of the "only child". In analyzing the literature, it was found that the research literature gives a very contradictory picture of the "only child". Furthermore, many studies were not based on statistically supported evidence, but rather on the researchers' feelings of "tendencies" that are characteristic of "only children".

The analysis of the statistical data of this present study indicated that "only children" are not significantly interested in occupations that deal with people. The findings of the study indicated that there is no significant difference between the number of "only children" who score above or below the 50 percentile on the Social Service and Persuasive scales of the Kuder Preference Record. The results of scores above or below the 50 percentile on the two scales taken separately indicated that the group of "only children" did not

have a significant interest in Social Service nor in Persuasive.

A slight tendency for interest in the "people-oriented" areas was noted in that the sample group did score above average on either the Social Service or Persuasive scales. Also, these two scales were among their highest and first choices.

Nevertheless, for this group of "only children", it was found that they did not have a significantly better than chance interest in each of the two scales that deal with people. It was this particular question that the hypothesis was to test.

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