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Birth Order and its Effect on the Attainment of The Eagle Scout Status

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BIRTH ORDER AND ITS EFFECT ON THE ATTAINMENT OF THE EAGLE SCOUT STATUS

by

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Kevin Randy Moesser

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ABSTRACT

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of The Eagle Scout Status

by

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The effects of birth order on achievement have been under investigation continually resulting in reported prominance of first born children in various areas of achievement. The purpose of this study was to provide further investigation into the effects of birth order on the achievement hypothesis using the attainment of the Eagle Scout Award as the dependent variable. Five hypotheses were formulated from a review of literature which included: (1) boys in the first born position are more likely to attain the Eagle Scout Award than boys in later born positions, (2) family income is associated with attaining the Eagle Scout Award, (3) high scores on the Ignoring scale by the mothers are associated with attaining the Eagle Scout Award, (4) high scores on the Dominance scale by the mothers are associated with attaining the Eagle Scout Award, (5) low scores on the Possessive scale by the fathers are associated with attaining the Eagle Scout Award.

One hundred ten families with at least one son who had attained the Eagle Scout Award were included in the study. Each parent was

asked to complete a questionnaire which provided information concerning family demographics such as parents' birth order, birth order and sex of children, highest scouting award of male children and the father, religious attendance of parents and scouts, education level of parents, occupations of parents, and family income. Parents were asked to report the supportive actions they provided for their sons in scouting activities and their perceived strength of the troops' programs, and importance of selected individuals to their sons attaining the Eagle Award.

Chi-square tests calculated for the formulated hypotheses gave the following results: (1) boys from later born positions were just as likely to attain the Eagle Scout Award as boys in the first born position, (2) families of lower income levels were just as likely to have multiple Eagles within their families as families of higher income levels, (3) mothers who scored low on the Ignoring scale were just as likely to have multiple Eagles in their families as mothers who scored high on the Ignoring scale, (4) mothers who scored low on the Dominance scale were just as likely to have multiple Eagles in their families as mothers who scored high on the Dominance scale, (5) fathers who scored high on the Possessive scale were just as likely to have multiple Eagles in their families as fathers who scored low on the Possessive scale.

(80 pages)

INTRODUCTION

Since Adler (1928) first published his work on the effect of birth order on personality development, the subject has received continual examination. Birth order has been assessed in regard to the achievement variable numerous times. Everyone is born into some type of family and there receives major socialization necessary to survive in society. Within the family into which one is born there are usually more people than just one's parents who are an active part in this socialization process, namely one's siblings. Parental expectations of those children born into particular birth positions, and the influence of their child rearing attitudes along with the influence and expectations siblings have on and of one another, all act as agents for the development of the individual. While there have been numerous studies conducted using birth order, and some dealing with sibling constellation as independent variables as they relate to achievement, the results have not been conclusive. Of 26 articles reviewed which were published between 1963 and 1974, 16 reported significance in birth order and achievement with the first-born being the high achiever. Ten reported no significance of birth order as it relates to achievement. Sutton-Smith and Rosenberg (1970) report findings which may indicate that it is not entirely the birth order of a child which increases ability or desire to achieve, but also the sibling constellation and the relationships between the siblings. Since the studies which have been completed are far from conclusive about the effects of birth order and sibling relationships on human development, this

suggests that further study is necessary to over come some of the methodological problems which have plagued birth order and sibling relationship studies.

The Problem

The study of birth order and sibling relationships has encountered various methodological problems. Schvaneveldt and Ihniger (1979) indicate that there have been errors made in sampling, methodology dealing with sex, sibship size, age spacing, sex ratio, and multiple sibling units. Studies which have been done concerning the oldest child have failed to distinguish between the "oldest" child and the "only" child, thus bringing a bias into the studies. Some researchers while comparing first born with last born children have asserted that differences which exist are due to birth order effects when in fact this may merely be a function of historical events separating the first born and last born. Schvaneveldt and Ihniger report that Schooler indicates

> sampling errors, failure to control for social-economic status, and the demographic make up of populations tend to neutralize or even dismiss most of the reputed relationships between birth order status and dependent variables such as success of the first born children. (Schvaneveldt and Ihniger, 1979, p.454)

Other problems that have occured in sampling include samples that are too small, non-random, and overuse of student-type subjects. Additionally, studies that assess birth order and do not have complete families as their subjects, seriously detract from the reliability of the studies. Furthermore, the variables assessed in regard to birth order and achievement have not been sufficiently rigorous in regard to determining whether birth order is a real factor in the causal chain. It is

quite apparent that the research conducted thus far has not had as exact a research design as would be desired to have studies that would produce the validity and reliability to assess the importance of the effects of birth order and sibling relationships in regard to human development.

Purpose

This study was undertaken to examine the general birth order achievement hypothesis that first born children are higher achievers than later born children. In specific, this investigation studied the influence of birth order on the attainment of the Eagle Scout Award. The Eagle Scout Award was deemed to be a reliable indication of achievement since the effort to attain the award is mostly voluntary on the part of the boy and it requires a good deal of effort. Less than 5 percent of the boys involved in scouting programs ever attain the Eagle Scout Award. Secondary areas of family income level, parental attitudes, and sibship composition as they relate to attaining the Eagle Scout Award were also examined.

REVIEW OF LITERATURE

Adler (1928) was among the first to publish about the effects of birth order on human development and since that time birth order effects have continued to be examined by investigators. Birth order has been associated with numerous dependent variables including achievement, anxiety, intelligence, grade point average, marriage and self esteem. Much of this research has been plagued with methodological problems as reported by Schvaneveldt and Ihniger (1979). They report that many of the studies reporting birth order-sibling effects have not been focused directly on these issues, and any report of the effects that birth order or sibling interaction have, tended to be after the fact.

The current investigation of birth order focuses primarily on birth order and sibling composition as they relate to achievement. The effect that parental support and parenting attitudes have on achievement is also examined. It is the aim of this literature review to examine the methodology of some of the research conducted on birth order and sibling interaction since 1973 to show the advances which have been made in this area since Schvaneveldt and Ihniger (1979) began their review.

This is followed by a review of various studies conducted on birth order and sibling effects on achievement, followed by a review of the effects of parental support and parenting attitudes and the effect these variables have on the achievement of offspring. This is followed

by a summary of the hypotheses which were extracted from the literature in the context of the areas dealing with achievement.

Methodological Strengths and Weaknesses of Current Research

Schvaneveldt and Ihniger (1979) indicate that in birth order-sibling research errors have been made in sampling, methodology dealing with sex, sibship size, age spacing, sex ratio, and multiple sibling units. Samples have tended to be too small, non-random, and have over used student-type subjects. Furthermore, the lack of using completed families detracts from the validity of the studies assessing birth order effects. Investigators have not always made a distinction between first borns and only children when studying the effects of birth order. Control factors such as parents' education and occupation have not been controlled adequately. These methodological problems, as reported by Schvaneveldt and Ihniger (1979), have caused doubt concerning the role of birth order in human development.

Fourteen recently published articles reporting effects of birth order-sibling research in relation to achievement were reviewed to assess sample concerns. These studies range in sample size from 36 to almost 800,000 subjects (Breland, 1974, N=796,406; Rhine, 1974, N=128; Montgomery et al., 1975, N=443; Bernstein and Grambs, 1976, N=414; Nuttal et al., 1976, N=553; Lindert, 1977, N=1,087; Schubert, Wagner, and Schubert, 1977, N=80; Kunz and Peterson, 1977, N=6,642; Cicirelli, 1977, N=160; Vonderheide, 1978, N=78; Marjoribanks, 1978, N=500;

Kaltsounis, 1978, N=36; Olneck and Bills, 1979, N=346, 900-1000; Edwards and Thacker, 1979, N=326). Small sample sizes was a concern mentioned by Schvaneveldt and Ihniger (1979), however if these studies are representative, investigators have begun to use larger sample sizes which will add to the validity and reliability of birth order-sibling research.

An over use of student-type audiences for samples was another voiced concern. Only two of the fourteen studies reviewed dealt with adults (Lindert, 1977; Olneck and Bills, 1979) and one of these (Olneck and Bills, 1979) obtained the names of the subjects from the records of public schools. Indications are then that there is still too frequent use of student-type subjects.

Samples have tended to be non-random and of the 14 studies reviewed only 3 studies specifically report the type of sample with which they were dealing (Montgomery, Puetz, and Montgomery, 1975; Kunz and Peterson, 1977; Vonderheide, 1978). Of these three studies only the Kunz and Peterson study is large enough to perhaps generalize from, and they have problems of over- and under-representation in certain areas of their cluster sample. Breland (1974) while not mentioning the specific type of sample used in his study, uses for his subjects almost 800,000 National Merit Scholarship participants. The remainder of the reviewed studies either made no attempt to define their sample or obtained them from school records, where the subjects were attending schools or universities at the time of the study, or from already collected data.

Two studies (Schubert, Wagner, and Schubert, 1977; Kunz and

Peterson, 1977) did not control for the sex of their subjects in the analysis of their data. This small percentage again indicates that investigators are improving the methodology of their studies.

The number of children in a family may have an effect on birth order-sibling study results and therefore should be controlled. Of the 14 studies reviewed, only 3 (Rhine, 1974; Montgomery, Puetz, and Montgomery, 1975; Schubert, Wagner, and Schubert, 1977) made no mention of such a control factor.

Spacing between children has been studied by various researchers. Koch (1955b) and Grotevant (1978) conducted studies which report significant findings of the effect of age-spacing. Six studies (Breland, 1974; Nuttal et al., 1976; Bernstein and Grambs, 1976; Lindert, 1977; Kaltsounis, 1978) controlled for spacing effects in their studies, and Marjoribanks (1978) controlled for spacing effects with only the adjacent siblings of his subjects.

Sutton-Smith and Rosenberg (1970) in a study of sex interests reported that the effect of brothers on sisters was as noticeable as the effect of sisters on brothers. Grotevant (1978) also showed evidence for the impact of opposite sex siblings on interest scores from children in two-child families. Sutton-Smith and Rosenberg (1970) also state that same-sex siblings strengthen interests typical to their sex. Some of the findings reported by these researchers show differences as to what effect the sex-ratio has on the members of the family and it should be looked at carefully in birth order-sibling research. Five studies in the current review controlled for sex-ratio.

These include Breland (1974), Bernstein and Grambs (1976), Cicirelli (1977), Kaltsounis (all boys), (1978), and Edwards and Thacker (1979).

Adams (1972) called for better control in methodology and among other areas of concern he specifically named multiple sibling units. Nuttal et al. (1976), while not dealing with multiple sibling units specifically, did deal with crowding effects. Using a rooms per child index which divides the number of rooms by the number of people in the family, Nuttal found that "among zero-order correlations the rooms per child index was significantly associated with academic achievement for both boys and girls (t .13 for boys, t .12 for girls)" (p. 220). This was the only study reviewed which dealt with any type of space effects.

As already mentioned sex-ratio effects have been studied. Sex of siblings also needs to be controlled. Seven studies in this literature review specifically mention controlling for sex of sibling (Breland, 1974; Bernstein and Grambs, 1976; Lindert, 1977; Cicirelli, 1977; Kaltsounis, 1978; Olneck and Bills, 1979; Edwards and Thacker, 1979).

One of the major errors in birth order research has been that of treating only children as first born children. Five studies in this review did not control for onliness (Rhine, 1974; Montgomery, Puetz, and Montgomery, 1975; Bernstein and Grambs, 1976; Nuttal et al., 1976; Vonderheide, 1978). Three studies where only children were studied separately from first borns were Cicirelli (1977), Kaltsounis (1978), and Edwards and Thacker (1979).

Adequate control measures such as social class of parents and education level of parents were mentioned by Schvaneveldt and Ihniger

(1979) as an area which needs to be improved. Only four studies (Montgomery, Puetz, and Montgomery, 1975; Bernstein and Grambs, 1976; Schubert, Wagner, and Schubert, 1977; Edwards and Thacker, 1979) did not have such control factors.

Studies dealing with birth order-sibling effects that do not have completed families as their population of subjects cannot report valid findings since the birth of another child may alter the family system. Many of the studies done in these areas have used mainly two- or three-child families (Sutton-Smith and Rosenberg, 1970) thus limiting the generalizability to larger family systems. One of the major works done on large families was published by Bossard and Boll in 1956. Of the studies reviewed here none specifically report their families as being complete or they do not define any limits for their families and then classify them as completed families. However, due to the ages of their subjects ten of these studies may have had completed families in their investigations (Breland, 1974; Montgomery, Puetz, and Montgomery, 1975; Bernstein and Grambs, 1976; Nuttal et al., 1976; Lindert, 1977; Kunz and Peterson, 1977; Vonderheide, 1978; Kaltsounis, 1978; Olneck and Bills, 1979; Edwards and Thacker, 1979).

Of the concerns voiced by Schvaneveldt and Ihniger (1979), many have been controlled for in these articles. If these 14 articles are indicative of the research being done there are some areas which need more emphasis to achieve methodological improvement. The majority of the subjects for these studies were acquired from some type of student population. Variables such as age-spacing and sex-ratio need to be controlled. The subject of multiple sibling units is by far the factor

which needs to be controlled more carefully by its addition as a variable in studies of birth order-sibling research.

The recommendations for future research given by these investigators coincide with those of Schvaneveldt and Ihniger. Three other areas of concern which were mentioned are parental characteristics (Lindert, 1977), cultural tradition and general social situation (Cicirelli, 1978).

Birth Order and Achievement

Birth order has long been associated with achievement assertions. Past research has shown that those children who are born first into a family will be the highest achiever among the children in the family. In her literature review Taylor (1975) noted that 32 studies on achievement, intelligence, and aspiration found first borns superior to those children born later, and 14 studies in which other birth positions were superior or there was no significant relation between birth order and achievement. Of 12 studies reviewed which were published since 1973, 7 found first born superiority while 5 found no support for this assumption.

Breland (1974) in his study using three samples for a total of almost 800,000 participants of the National Merit Scholarship test found that first borns from small families (2-3 children), regardless of sex had the highest scores. Eighty-two sibling compositions existed in this sample and the first 14 high scores were all first borns. He also reported that last borns from large families (4-5 children), had the lowest scores.

Montgomery, Puetz, and Montgomery (1975), tested to see if first borns were more likely to be married than later borns while in college. They found no relationship between these two variables. However when testing to see if more first borns than later borns attended graduate school, their results were significant at the .001 level for males. Eighty-eight percent of the sample of male graduate students (121 of 138) were first borns. For the female graduates 100 percent (5 of 5) were first borns. However this sample size was too small for any conclusions. No controls for number of children in the family, age spacing, or sex of nearest sibling were used. Only children were also grouped with first borns, thus causing some concern of the validity and reliability of this study.

Bernstein and Grambs (1976) found no sex differences in the tendency to be high achievers, however the relationship between birth order and scholastic achievement did show a strong link. Of the 414 graduate students in this study, first born children from two- and three-child families were over represented.

Nuttal et al. (1976), in their study of academic achievement, reported a sex specific pattern in relation to birth order. First born girls had higher academic achievement than later born girls. This held true when IQ or family size was controlled. For boys the significant variable associated with achievement was family size with those boys from small families receiving better grades.

Schubert, Wagner, and Schubert (1977) found first borns to be over represented among classical music composers. This significance only appeared when only children were included with eldest children.

This particular investigation was compared to a study conducted by Bliss (1970) on the birth order of creative writers and the results of the comparison indicated more first borns among composers than among writers.

Marjoribanks (1978) in his study with Australian 11 year olds reported that the highest regression-fitted intelligence test scores were achieved by first born children with one year age spacing from a younger sibling. Seventh born children who were the last born in their family also had the highest scores. These results concur with Adler's (1928) statement concerning the similarity of first and last born in that they share similar family circumstances.

Cicirelli (1978) after reviewing numerous articles covering the effects of birth order and/or sibling structure, concluded among other things that ability and achievement decrease as family size increases. Therefore those in the first born position would have the advantage and should have more ability and higher achievement.

Five studies did not find support for first born superiority. Kunz and Peterson (1977) in a study of 6,642 adolescents from 46 high schools in the United States reported no statistically significant advantage for first borns in academic achievement. This holds true for both birth order and family size.

Kaltsounis' (1978) study of creative performance with 9 sets of 4 brothers to each set reported that second borns performed significantly better on the tests that were administered. Vonderheide (1978) in a study of grade point average in college and birth order found no significant differences between the GPA's of first born children versus

later born children. Females had a higher mean GPA as did students with three or less siblings.

In a study conducted by Edwards and Thacker (1979) on two-child families, birth order was not significantly related to GPA. In this study, females earned significantly higher GPA's and sibling gender was not related significantly.

Olneck and Bills (1979) while studying 346 pairs of brothers on educational and occupational achievement reported that birth order effects were small. Family size spuriously inflated the effects of birth order and the effects of birth order were statistically insignificant.

An attempt has been made to explain the discrepancies in birth order studies by Zajonc, Markus, and Markus (1979) who reviewed the birth order studies and explained these discrepancies using a Confluence Model. These investigators explained that a Confluence Model assumes that

> family influences that contribute significantly to intellectual growth can be divided into two sources. Specifically, the rate of intellectual growth is hypothesized to be a function of the intellectual environment within the family, α, and a factor, λ, associated with the special circumstances of last children. (Zajonc, Markus, and Markus, 1979, p. 1327)

Using a Confluence Model, Zajonc explains that discrepancies which appear between birth order studies with subjects of different ages are a product of where the family intellectual level is and the opportunity of older children to act as intellectual resources for younger siblings, an experience that last children do not have. Thus a first born child is in a better intellectual environment than younger siblings, will have the opportunity to teach younger brothers

and sisters, and these experiences help the first born to attain eventual intellectual superiority over his siblings.

Much of the research on birth order reports significant findings of the superiority of first born children. Taylor (1975) in her review of literature reported a majority of the studies with findings which support first born superiority. As did the Taylor (1975) review, the current review of literature shows a majority of literature with findings that support the assertion that first born children are superior, that they achieve more than later born children. Because of the abundance of literature with results in this direction, the following hypothesis is formed:

> Boys in the first born position are more likely to attain the Eagle Scout Award than boys in later born positions.

Siblings and Achievement

Seven studies were reviewed concerning sibling effects and achievement. Five of these studies noted that subjects in their studies who were from small families (2-3 children), were higher achievers than those subjects from large families (Nuttal et al., 1976; Kunz and Peterson, 1977; Cicirelli, 1978; Vonderheide, 1978; Olneck and Bills, 1979). In the Kunz and Peterson (1977) study the effects of birth order and family size disappear when social-class is controlled. Two other studies (Marjoribanks, 1978; Edwards and Thacker, 1979) found no relation between number of siblings and achievement.

Cicirelli (1977) reported a sex effect concerning sibling sex composition and achievement. First born children with brothers had

lower GPA's than later born children with brothers. First born children with sisters had higher GPA's than later born children with sisters.

In his 1978 review of literature entitled "The Relationship of Sibling Structure to Intellectual Abilities and Achievement," Cicirelli made the following conclusions:

1. Based on a number of large-scale studies, ability and achievement decrease as family size increases.

2. Ability and achievement decrease as birth order position increases (within a given family size).

3. Large-scale studies indicate that, overall, ability and achievement decrease as spacing between siblings decreases.

4. Sex of the subject in relation to that of the sibling(s) seems to be associated with ability and achievement.

5. There is some evidence for a developmental trend in the effects of birth order and sibling sex; that is, a sibling structure which is associated with enhanced development of a child's abilities at a certain age may be less facilitating at a later stage in development.

6. Certain recent studies have suggested that effects of sibling structure variables may also depend on the particular cultural setting in which the family is found.

Mussen et al. (1974) reported that 80 percent of American children grow up with brothers and sisters, and as past research has shown, siblings have effected one another in various ways. Parents undoubtedly have also had an effect on the development of their children and it is to this area that this review of literature now turns. What effect does parental support, both economical and emotional have on the ability of offspring to achieve? What about parenting attitudes? Do dominating or permissive parents have high achieving children?

Economic Support

It has been well established (Blau and Duncan, 1967) that those families who belong to the higher social classes have the financial means to provide learning experiences which may facilitate achievement for their offspring. The residential area in which families live, schools attended, and learning experiences can all provide an atmosphere conducive to achievement. One could hypothesize then that those in the upper-middle or lower-upper social classes would have higher achieving children. Results of the Blau and Duncan (1967) study lead to the following hypothesis:

> Family income level is associated with attaining the Eagle Scout Award.

Parental Attitudes

Two studies used the Drews and Teahan (1957) scale for measuring Parental Attitudes and Academic Achievement which measures attitudes of dominance, ignoring, and possessiveness and reported the following results. Drews and Teahan (1957) in their study of mothers of gifted and average junior high school students reported that mothers of children in both groups who were high achievers scored significantly higher on the Ignoring scale of the test than mothers of low achievers. The mothers of the gifted high achievers also scored significantly higher on the Dominance scale.

Because the current study deals with a within group comparison, and from the findings of the Drews and Teahan (1957) research the following hypotheses are drawn:

High scores on the Ignoring scale by the mothers are associated with attaining the Eagle Scout Award.

High scores on the Dominance scale by the mothers are associated with attaining the Eagle Scout Award.

Teahan (1963) in a study of Parental Attitudes and College success reported that fathers and mothers of high female achievers were significantly lower on the Ignoring scale than the parents of low achievers. For sons he reports that fathers of high achievers were significantly lower on the Possessive scale than the fathers of low achievers. The following hypothesis is drawn:

Low scores on the Possessive scale by the fathers are associated with attaining the Eagle Scout Award.

Gill and Spilka (1962) in a study measuring parental attitudes and academic achievement using Mexican-American secondary school students reported that underachieving boys and achieving girls came from homes where the mother is more dominating than mothers of achieving boys or underachieving girls. This study adds support to the findings of Drews and Teahan (1957).

Summary

At the beginning of this chapter some methodological concerns of Schvaneveldt and Ihniger (1979) concerning birth order-sibling research were assessed. This was followed by a review of studies published since 1973. It was concluded that many of their methodological concerns had been dealt with in a variety of recent investigations. However, there are multiple variables which needed to be studied more effectively. Areas of concern by the investigators in the review of literature were then listed.

Four content areas relevant to the current study were then reviewed and hypotheses were formed for three of these areas.

1. Birth Order and Achievement

   Hypothesis: 1

   Boys in the first born position are more likely to attain the Eagle Scout Award than boys in later born positions.

2. Economic Support and Achievement

   Hypothesis: 2

   Family income level is associated with attaining the Eagle Scout Award.

3. Parental Attitudes

   Hypothesis: 3

   High scores on the Ignoring scale by the mothers are associated with attaining the Eagle Scout Award.

   Hypothesis: 4

   High scores on the Dominance scale by the mothers are associated with attaining the Eagle Scout Award.

   Hypothesis: 5

   Low scores on the Possessive scale by the fathers are associated with attaining the Eagle Scout Award.

PROCEDURE

Sample

A sample of families who had sons that received the Eagle Scout Award during the calendar years 1969-1971 was obtained from the records of the Cache Valley Council of the Boy Scouts of America. The sample consisted of 110 families with at least one son from each family who had received the Eagle Award. The total number of Eagle Awards received by sons of these families was 218. The 110 boys who received the Eagle Award during the sample years had a mean age of 14.8 when they received the Eagle Award.

Because the study dealt with birth order and sibling composition, completed whole families were of prime importance. Completed whole families were defined as families where both parents were married and living together, and the youngest male child was no younger than 14 years of age. Age 14 was used as a cut off point because most boys who earn the Eagle Award have manifest intense interest in scouting by that age and it is typically the earliest age for a boy to attain that rank. It is important to control for this factor as each boy in a sibling context should have equal opportunity to attain Eagle status if one is to convincingly assess the relationship between birth order and scouting achievement as measured in this study.

The families in this study came from several communities and represent various socio-economic groups throughout the Cache Valley area of Northern Utah. The communities involved were Logan, a

quasi-urban community; Smithfield, Wellsville, Hyrum, Richmond, Providence, Millville, Nibley, Mendon, College Ward, Hyde Park, Lewiston, Newton, and Petersboro, all of which are rural communities. The addresses of the families were obtained from the records of the Cache Valley Council and phone numbers were gathered from the telephone directory for follow-up measures concerning collection of a questionnaire.

Instrument

The questionnaire was mailed to each family to be completed by both the father and mother, a separate questionnaire was included for each parent. The father's questionnaire was designed to obtain demographic information dealing with marital status, the father's birth order, level of education, religious activity for himself, his spouse, and the sample Eagle. Information regarding the father's type of employment and family income during the sample years 1969 through 1971 was obtained as well as the father's highest Boy Scout Award, and the amount of encouragement he gave to his Eagle Scout son during his son's scouting years.

The mother's questionnaire asked for the same information as the father's regarding her marital status, birth order, level of education, religious activity for herself, her spouse, and the sample Eagle. The information requested concerning her employment was divided into three areas which included: was she employed, if so, was she employed full-time or part-time, and what type of work. The mother was also asked to provide information on the birth dates, birth order, and sex of all

children in the family. She was also asked to provide information regarding the highest Boy Scout Award received by her sons.

The mother's questionnaire also contained six questions to which both parents were asked to respond. These questions dealt with the activity level of the scout troop, the number of Eagle Awards received by members of their sons' troop during the three to four year span of their sons' participation, and how frequently troop members received the Eagle Award. Parents were asked to list post-Eagle achievements such as scholarships, graduation from high school, college or technical school, receiving advanced degrees, sport awards and achievements, religious service, promotions at work, membership in service clubs, and service organizations. They were also asked to rank seven items which dealt with the importance of achieving the Eagle Award. Both the father's and the mother's questionnaire contained a Parental Attitude and Academic Achievement scale developed by Drews and Teahan (1957) using 30 items taken from the Parent Attitude Survey devised by Shoben (1949). This scale measured parental attitudes in regard to possessiveness, dominance, and ignoring toward children and their relationship to academic achievement. A copy of the questionnaire is included in the appendix.

The first mailing of 125 questionnaires took place on December 7, 1979. Two cover letters were sent with the questionnaire, one from the Cache Valley Council and the other from the Department of Family and Human Development of the College of Family Life at Utah State University. The letters urged participation in the study and offered assistance if any was needed. Subjects were asked to return the

questionnaires within three days of the date received. One week after the first mailing, the subjects who had not returned their questionnaires were telephoned and asked to return their questionnaires as soon as possible. The reader should be aware that continual contact was kept with those subjects who did not return their questionnaires. When it was determined that a questionnaire had been lost in the out going mail process, a second questionnaire was sent to the subject via the postal service or hand delivered by the investigator.

Due to the increased amount of mail the postal service was handling during the Christmas Holiday season, some questionnaires that had been mailed by return postage were not received, which slowed down the gathering of the data. Also, the holiday season slowed down the returning of the questionnaries.

A total of 125 families were selected from council records for the study. Of that 125, two families had left the area, one had remarried and was unavailable, and two questionnaires were sent to the same address. The total number of families was then reduced to 121. One hundred ten families actually returned their questionnaires for a return rate of 91 percent. During the course of gathering the data it was determined that a return rate of 90 percent would be the cut off point for gathering the information. After achieving this goal the information was coded, key punched and analyzed.

Validity and Reliability

The information received via the questionnaire is asserted to have face validity since the questions dealt with already established facts, of family demographics such as birth order, sex and number of children, education level, occupation, religious attendance, and Boy Scout rank attained. Several questions asked for the parents' attitudes and distortion in this area is problematic since these attitudes were reported for items which occured during 1969-1971. The information regarding parent attitudes was obtained as mentioned before, by using the Parental Attitudes and Academic Achievement scale developed by Drews and Teahan (1957), which was a self-report mechanism which consisted of 30 items taken from the Parent Attitude Survey devised by Shoben (1949). The validity of the study should be enhanced by the use of this scale which has been used in previous studies.

Birth order and how it relates to the achievement of the Eagle Scout Award is the main independent variable that was measured. Since both birth order and the achievement of such an award are easily measured directly, the information obtained through the questionnaire should be accurate. The information obtained concerning family demographics is part of family history and does not pose difficulties in terms of validity of the study. To further enhance the reliability and validity of the study and to have the subjects' confidence in the professionalism of the study, a cover letter, as before mentioned, from the Cache Valley Council of the Boy Scouts of America stating their support and urging participation in the study was obtained and included with the questionnaires.

Analysis of Data

The data were coded and prepared for analysis using the SPSS program. Descriptive statistics were used as necessary to describe the sample and the various independent and dependent variables which were a part of the research design. Chi-square and the t-test were used to assess the hypotheses and the .05 level of rejection was employed in the decision making process of determining significance.

FINDINGS

The family demographic information provided by the parents provides a detailed description of the sample. This information is reported first with birth order information of the parents' and then a birth order profile of the sample. Biographical information of the parents is then presented. Due to the commonality of religion in the sample, religiosity is used as a control factor and is reported by a comparison of the fathers' and mothers' attendance at religious meetings. The degree of involvement with their sons in scouting activities and the parents' perceived evaluation of the strength of the scouting programs their sons were involved in are then reported. Data gathered dealing with the hypotheses formulated in the preceding chapter are then reported followed by other findings and a summary.

Occasionally because of missing information the analysis does not reflect the total sample of 110 families, the range of families represented is from 103 to 110.

Marital Status

One of the control factors used in the study was that of completed whole families. For this purpose marital status of the parents was obtained and results showed that 96 percent of the parents were married and living together and the remaining 4 percent consisted of widows and widowers.

Birth Order and Family Size

Parents were asked to provide information concerning birth order in their family of orientation and Table 1 provides a break down of the parent's birth order. Table 2 gives a birth order profile of the Eagle Scout sample and as can be seen, there was a range of 38 years of child bearing. The mean family size was 5 children with a mean of 3 boys and 2 girls which provided an investigation into large family systems. The overall sex composition of the sibships showed 73 families with more boys than girls, 17 families with more girls than boys, 19 families with an even number of each, and only one family with just one child.

Eighty percent of these families were completed whole families according to the definition decided upon by the investigator. This definition stated that these families' youngest male was no younger than 14 years of age, which would have given him the opportunity to receive the Eagle Scout Award or be close to receiving it.

Parents' Education Level

Information gathered for the education level of the parents indicates that only 4 percent of the fathers and 0.9 percent of the mothers did not graduate from high school. Those fathers who terminated their education with graduation from high school comprised 18 percent of the fathers and 35 percent of the mothers had no formal education beyond high school. Of those parents whose educational experience went beyond high school, 27 percent of the fathers and 30 percent of the

Table 1. Parents' birth order in family of orientation

Father	Frequency	%
1st	29	26.4
2nd	23	20.9
3rd	15	13.6
4th	12	10.9
5th	8	7.3
6th	6	5.5
7th	4	3.6
8th	6	5.5
9th	3	2.7
10th	1	0.9
11th	1	0.9
Mother	**Frequency**	**%**
1st	23	20.9
2nd	21	19.1
3rd	20	18.2
4th	16	14.5
5th	11	10.0
6th	8	7.3
7th	5	4.5
8th	1	0.9
9th	3	2.7
10th	1	0.9

Table 2. Birth Profile of all siblings in the sample

Birth Order	$\bar{X}$ Year of Birth	No. of Children Born	Years of Birth	Range
1st	1949.68	109	1935-1957	22 yrs.
2nd	1952.16	108	1938-1961	23 yrs.
3rd	1954.97	102	1940-1963	23 yrs.
4th	1957.77	88	1942-1967	31 yrs.
5th	1960	65	1950-1971	23 yrs.
6th	1962.77	40	1953-1979	26 yrs.
7th	1963.38	21	1955-1975	20 yrs.
8th	1963.27	11	1959-1975	16 yrs.
9th	1963.62	8	1960-1968	8 yrs.
10th	1965.16	6	1961-1970	9 yrs.
11th	1967	3	1965-1969	4 yrs.
12th	1969.33	3	1968-1971	3 yrs.
13th	1972	1	1972	0 yrs.
14th	1973	1	1973	0 yrs.

mothers had some college or technical school experience with 14 percent of the fathers and 29 percent of the mothers graduating from college. Those who received advanced degrees comprise 37 percent of the fathers and 5 percent of the mothers. The most frequently reported level of education for the fathers was that of advanced degree and more mothers reported having had some college or technical education than any other level.

Parents' Occupation

Using types of occupation derived by Blau and Duncan (1967) the occupations reported by the fathers and mothers were divided into nine and six different occupations respectively. Table 3 gives the division of the fathers' occupations and shows that 37 percent of the fathers had jobs of a professional status. Table 4 gives the number of mothers who were employed, as well as those unemployed, with a breakdown of those who were employed full time and part time and the type of job held by those who were employed either part time or full time.

Family Income

Table 5 gives the distribution of the annual family income for the sample years 1969-1971 as reported by the fathers. As is shown, the most frequently reported income interval was between $11,000 and $15,000 a year. When comparing the mean interval annual family income of this sample with the nation as a whole in 1970, the sample has a higher percentage in the $11,000-$15,000 range with 35 percent in that bracket, compared to about 27 percent of the nation in that range.

Table 3. Fathers' occupation

Occupation	Frequency	%
Craftsman	13	11.8
Professional	41	37.3
Proprietor	10	9.1
Labor	8	7.3
Sales	2	1.8
Managerial	6	5.5
Clerical	1	0.9
Farming	13	11.8
Civil Service	13	11.8
No Response	3	2.7

Religiosity

Religiosity, defined by the frequency of attendance at religious meetings, was used as a control factor for differences between families in the amount of support received by the scout from his family while he completed the requirements for the Eagle Scout Award. All but one family mentioned affiliation with the prevalent religion of the Cache Valley area, The Church of Jesus Christ of Latter-day Saints (Mormon). This control for religious activity was used because the Mormon Church is a major supporter of Boy Scout programs, and within each ward (congregation) there is a scout troop. It was determined that if parents went to church often (three or more times a month) they would be considered active in their religion and may have been more supportive of the scouting program than those parents who were not as religiously active.

Table 4. Mothers' employment status and type of employment

	Frequency	%
Total Mothers Employed	40	36.4
Total Mothers Not Employed	68	61.8
No Response	2	1.8
Mothers Employed Full Time	17	15.5
Type of Work		
Professional	9	53.0
Skilled Labor	1	5.9
Labor	3	17.7
Clerical	2	11.8
Sales	1	5.9
Managerial	1	5.9
Mothers Employed Part Time	22	20.0
Type of Work		
Professional	8	36.4
Skilled Labor	-	-
Labor	3	13.6
Clerical	4	18.2
Sales	6	27.3
Managerial	1	4.6

Table 5. Annual family income of sample, 1969-1971

Income	Frequency	%	$\overline{X}$
$5,000-$10,000	28	25.5	
$11,000-$15,000	38	34.5	$11,000-$15,000
$16,000-$20,000	17	15.5	
$21,000-$25,000	13	11.8	
$26,000-Above	7	6.4	
No Response	7	6.4	

Parents were asked to rate themselves, their spouses, and their Eagle Scout sons on religious attendance using a scale developed by Taylor (1975). Table 6 gives the results of their evaluation which shows an expression of high religious activity of these parents who also reported 98 percent of the sample Eagles attending religious meetings three or more times a month. Such a high expression of religious activity by all sample families negates any differences between these families concerning this variable.

Parents' Involvement With Sons In Scouting Activities

Using a four point Likert-type scale, both parents were asked to respond to questions dealing with their involvement with their sons in scouting activities. Table 7 gives an example of the questions and comparison of the parents' responses. Parents answered strongly disagree, which was given a score of 1, disagree (2), agree (3), and strongly agree (4). As can be seen in Table 7, the parents of the boys

Table 6. Parents' religiosity measured by church attendance

Father as seen by himself	Frequency	%
OFTEN (three or more times a month)	103	93.6
SOMETIMES (one or more times a month)	3	2.7
SELDOM (less than once a month)	2	1.8
NO RESPONSE	2	1.8
Father as seen by spouse	**Frequency**	**%**
OFTEN (three or more times a month)	100	90.9
SOMETIMES (one or more times a month)	3	2.7
SELDOM (less than once a month)	2	1.8
NO RESPONSE	5	4.5
Mother as seen by herself	**Frequency**	**%**
OFTEN (three or more times a month)	106	96.4
SOMETIMES (one or more times a month)	2	1.8
SELDOM (less than once a month)	1	0.9
NO RESPONSE	1	0.9
Mother as seen by spouse	**Frequency**	**%**
OFTEN (three or more times a month)	102	92.7
SOMETIMES (one or more times a month)	2	1.8
SELDOM (less than once a month)	1	0.9
NO RESPONSE	5	4.5

Table 7. Parents' involvement with sons during scouting activities

As a father/mother I	Fathers' $\bar{X}$	Mothers' $\bar{X}$
1. Frequently encouraged my son to earn merit badges.	3.49	3.66
2. Frequently encouraged my son to achieve the Eagle Award.	3.50	3.59
3. Frequently helped my son with requirements for merit badges.	3.31	3.45
4. Frequently attended Courts of Honor.	3.65	3.80
5. Frequently encouraged my son to obtain scouting equipment and helped him to obtain it.	3.38	3.61

t-Test for Differences Between Fathers' and Mothers' Responses

Question No.	t-Value	2-Tail Prob.
1.	-2.67	p=0.009
2.	-1.19	p=0.235
3.	-1.98	p=0.050
4.	-3.30	p=0.001
5.	-3.4¶	p=0.001

in this study were highly involved with their sons during their sons' scouting activities and the results of the t-test computed for these scores shows that the mothers were significantly more involved than the fathers in four of the five areas with neither parent more involved than the other in the fifth area.

The fathers were also asked to provide information concerning their own activity in scouting as a youth. Table 8 gives the results of this information, and as is shown almost all the fathers had had some experience in scouting programs which presumedly served as a resource for them as they helped and encouraged their sons.

Table 8. Fathers' scouting activity

Fathers' highest scout rank	Frequency
Eagle	9
Life	20
Star	17
1st Class	30
2nd Class	18
Tenderfoot	11
Other	3
No Response	2
Total	110

Scouting Programs

The parents were asked to answer three questions concerning the overall strength of the troops' programs to which their sons belonged.

The questions dealt with the general activity level of the troops, the frequency with which members of the troops received the Eagle Scout Award, and the number of Eagle Scout Awards received by members of their son's troop during the sample years 1969-1971. Table 9 shows the response to these questions, indicating that the parents felt the troops had active programs, however, the parents did not perceive the Eagle Scout Award was received very frequently. When asked how many scouts in their son's troop received the Eagle Scout Award per year during the sample years, the calculated mean was slightly over three. These results are found in Table 10.

Perceived Importance of the Eagle Award

Mothers and fathers as a team were asked to rank how important it was to achieve the Eagle Scout award. Parents were asked to rank 1 for high, down through 7 for low, for the following categories: scout troop, Scout Master, religious leader, peers, parents, scout himself, other family members. Their rankings show that parents perceived that the scout himself was the number one factor of importance, followed by parents, which was followed by the Scout Master, the troop programs, religious leaders, peers, and other family members. Table 11 shows the relative perceived importance of each of the categories as impinging on the importance of earning the Eagle Scout Award.

Hypothesis 1

The main independent variable tested in this study was that of birth order. A majority of the literature indicates that first borns

Table 9. Activity level of scout troops

During the sample years 1969-1971, the Scout Troop to which the sample Eagles belonged had a very active program.

	(1) Not True	(2) Sometimes True	(3) True	(4) Very True	No Response	Total	$\bar{X}$
Frequency	8	34	20	47	1	110	2.97

During the sample years 1969-1971, the Eagle Award was received frequently by members of the Scout Troop to which the sample Eagles belonged.

	(1) Not True	(2) Sometimes True	(3) True	(4) Very True	No Response	Total	$\bar{X}$
Frequency	21	43	15	29	2	110	2.48

Table 10. Number of Eagle Awards received yearly by troops during 1969-1971 as reported by parents

Number of Awards received by troops	1	2	3	4	5	6	7	8	9+	$\overline{X}$
Frequency as reported by parents	23	26	11	9	5	7	2	2	5	3.17
Percent of total N	26	29	12	10	6	8	2	2	6	N=90

achieve more than later borns, therefore the following hypothesis was tested:

> Boys in the first born position are more likely to attain the Eagle Scout Award than boys in later born positions.

To test this hypothesis a chi-square test was performed for the first 4 birth positions as 83 percent of the 110 sample Eagles were born in one of these birth positions. The remaining 17 percent were spread too thinly in other birth positions to be included in the test. Of the 91 sample Eagles in this analysis, 28 were in the first born position, 27 in the second, 22 in the third, and 14 in the fourth.

The chi-square test for these birth order positions showed no significant differences among the birth orders. Boys in either of these birth order positions were just as likely to attain the Eagle Award. The results of this chi-square test can be seen in Table 12. Chi-square tests comparing the first born position, and positions two and three also showed no significant differences in attainment of the Eagle Award.

Table 11. Perceived importance of attaining the Eagle Scout Rank as rated by parents

Influential Person	Frequencies								
	High						Low		
	1	2	3	4	5	6	7	No Response	$\bar{X}$
The Troop	10	12	9	24	18	23	8	6	4.24
Scout Master	22	14	36	18	11	1	2	6	2.93
Religious Leader	6	8	9	12	27	29	12	7	4.75
Peers	5	6	12	13	20	17	29	8	5.00
Parents	35	56	6	7	1	0	0	5	1.88
Scout	66	23	11	3	2	1	0	4	1.63
Other Family Members	6	5	16	14	9	17	36	7	5.03

Table 12. Analysis for Eagle attainment compared with birth order

Birth Order	1	2	3	4	Total
Sample Eagle Frequency	28	27	22	14	91
Other Eagle Frequency	17	19	19	22	77

Degrees of freedom = 3 Chi square = 4.94 ($p = .1$)

Significance at the .05 level was reached when a chi-square test was calculated between the first and fourth born positions, with the first born more likely to attain the Eagle Scout Award. Significance was approached with a chi-square value of 3.2 when the second and fourth born positions were compared with the second born more likely to attain the Eagle Scout Award than the fourth. These significant differences occured because of the difference in total number of those born in the fourth position compared to the first and second positions as is shown in Table 2. The results of the chi-square test conducted for the first four birth positions showed no support for the stated hypothesis and can be found in Table 12.

Hypothesis 2

Economic resources have been cited as providing more opportunity for achievement oriented experiences. The second hypothesis stated:

> Family income level is associated with attaining the Eagle Scout Award.

A chi-square test was conducted for family income and the number of Eagles attained within the family. Due to insufficient observations the income level of $26,000 and above was collapsed into the $21,000 to $25,000 level.

After this category was collapsed, the annual family incomes included in the chi-square test were those between $5,000 to $10,000, $11,000 to $15,000, $16,000 to $20,000, and $21,000 to $26,000 and above. So few families had five or six Eagles that these families were collapsed and included with those families who had four Eagles.

The results of the chi-square test showed no significance. Families of lower annual income levels were just as likely to have multiple Eagles within their families as families of higher annual income levels. Thus there was no support for the stated hypothesis.

Hypotheses 3, 4, 5

Three hypotheses were formulated from the literature which reported findings from studies that measured parental attitudes and academic achievement using the Drews and Teahan (1957) scale of Parental Attitudes. Hypothesis 3 stated:

> High scores on the Ignoring scale by the mothers are associated with attaining the Eagle Scout Award.

The scores were divided such that at least 25 percent were defined to be high and at least 25 percent low. A chi-square test of the mothers' ignoring scores and number of Eagles attained in a family gave no support for the hypothesis.

Hypothesis 4 stated:

> High scores on the Dominance scale by the mothers are associated with attaining the Eagle Scout Award.

The chi-square test for mothers' dominance and number of Eagles in a family gave no support to the hypothesis.

Low scores on the Possessive scale by the fathers are associated with attaining the Eagle Scout Award, was the relationship stated by the fifth hypothesis. A chi-square test for the fathers' possessive score and number of Eagles attained in a family showed no support for the hypothesis.

Chi-square tests run for each parents' scores from the three parental attitudes, and the number of Eagle Scout Awards attained in a family showed no significant values except the fathers' Ignoring scale which was significant at the .03 level. Table 13 illustrates the results of the chi-square test. When these data were collapsed, the significance was lost and Table 14 shows the results of the second test. Table 15 shows a comparison of the fathers' and mothers' Parental Attitude Scores, and illustrates that overall, fathers were somewhat more possessive and dominating than the mothers, with practically no difference between the parents on the Ignoring scale.

The absence of significant findings relating to the parental attitudes and attainment of the Eagle Award in families may be partially explained by the rather low alpha scores calculated for each scale for the fathers and mothers. Alpha levels for the fathers' Possessive, Dominance, and Ignoring scales showed scores of .30, .47, and .36 respectively. The mothers' scales of Possessiveness, Dominance, and Ignoring showed alpha levels of .32, .30, and .11 respectively.

Table 13. Analysis for the number of Eagles in a family compared with the Fathers' Ignoring score

Number of Eagles	1	2	3	4	5	6	Total
Low score frequency	11	16	9	0	3	0	39
High score frequency	15	5	5	2	0	1	28

Degrees of freedom = 5 Chi-square = 12.03 ($p = .03$)

Table 14. Analysis for the number of Eagles in a family compared with the Fathers' Ignoring score

Number of Eagles	1	2	3	4	Total
Low score frequency	11	16	9	3	39
High score frequency	15	5	5	3	28

Degrees of freedom = 3 Chi-square = 5.87 ($p = .1$)

Table 15. Comparison of Fathers' and Mothers' Parental Attitudes Scores

Scale	Fathers' Scores High	Low	$\bar{X}$	Mothers' Scores High	Low	$\bar{X}$
Possessive	35	10	23.77	34	12	22.89
Dominant	44	19	32.00	44	19	30.39
Ignoring	34	15	24.16	32	17	23.50

Other Findings

Chi-square tests were run using the SPSS cross-tabs formula on many combinations of variables. Those which dealt with the hypotheses under investigation have been reported. The following findings, while not dealing with the specific hypotheses, provide some interesting information.

Chi-square tests conducted using the variables of the parents' level of education and their parental attitude scores showed that there were more fathers with advanced degrees who scored low on the Possessive scale than at any of the other levels of education. Those fathers who scored high on the Possessive scale were evenly distributed among those fathers who had graduated from high school or had some college or technical school experience. This test was significant at the .02 level and Table 16 illustrates the results.

Table 16. Analysis for the Fathers' possessive score compared with the Fathers' level of education

Education	Score Frequencies Low	High
Less than high school	1	1
High school graduate	2	10
Some college or technical school	5	10
College graduate	7	3
Advanced degree	15	7
Total	30	31

Degrees of freedom = 4 Chi-square = 11.49 (p= .02)

A chi-square test of the fathers' Dominance scale score and level of education showed that more fathers with advanced degrees scored low than those of the other levels of education. Of those fathers who scored high on the Dominance scale, more were at the high school graduate level. The chi-square test showed significance at the .01 level and Table 17 illustrates the results.

Table 17. Analysis for the Fathers' dominance score compared with the Fathers' level of education

Education	Score Frequencies Low	High
Less than high school	1	2
High school graduate	2	10
Some college or technical school	5	7
College graduate	4	5
Advanced degree	17	5
Total	29	29

Degrees of freedom = 4 Chi-square = 12.65 (p = .01)

Table 18 shows the results of a chi-square test conducted for the Mothers' Possessive scores and the sex composition of the children in the family. Results show that the majority of the mothers whether they scored low or high on the Possessive scale had more boys than girls in their families. This was significant at the .05 level.

A chi-square test calculated for the number of Eagles in a family and the sex composition of the children shows some interesting results.

Table 18. Analysis for the Mothers' possessive score compared with the sex composition of the siblings

Sex Composition	Score Frequencies Low	High
More boys	27	17
More girls	4	7
Even mixture	2	8
Only child	1	0
Total	34	32

Degrees of freedom = 3 Chi-square = 7.63 (p = .05)

While not showing any significance it is clearly seen that families who have a higher proportion of boys have more Eagle Scout Awards attained than those families who have a higher proportion of girls, or an even mixture in the sex composition of the sibship. This phenomena holds true regardless of whether one, two, or three Eagle Awards were attained within the families. Table 19 reports the distribution of Eagles according to sex composition of the siblings.

Table 19. Analysis for the number of Eagles in a family compared with the sex composition of siblings

Sex Composition	Number of Eagles 1	2	3	Total
More boys	25	23	16	64
More girls	11	5	1	17
Even mixture	9	6	4	19

Degrees of freedom = 4 Chi-square = 4.53 (p = .33)

Chi-square tests run for the parents level of education and the birth order of the Eagle Scouts showed no significant relationship. Tables 20 and 21 review the results of these tests.

Table 20. Analysis for Eagle birth order compared with Fathers' level of education

Education	Eagle Birth Order 1	2	3	4	Total
Less than high school	0	1	1	1	3
High school graduate	5	5	6	2	18
Some college or technical school	8	10	3	1	22
College graduate	5	1	1	5	12
Advanced degree	10	10	11	5	36
Total	28	27	22	14	91

Degrees of freedom = 12 Chi-square = 17.08 (p = .1)*

Table 21. Analysis for Eagle birth order compared with Mothers' level of education

Education	Eagle Birth Order 1	2	3	4	Total
High school graduate	12	12	8	4	36
Some college or technical school	11	7	6	1	25
College graduate	5	8	6	8	27
Advanced degree	0	0	2	1	3
Total	28	27	22	14	91

Degrees of freedom = 9 Chi-square = 13.87 (p = .1)

Summary

The findings of this investigation were reported first by giving a demographic profile of the families involved. Five hypotheses which were formulated from the review of literature and results of statistical tests pertaining to these hypotheses were reported.

The hypotheses which were formulated are:

Hypothesis: 1

> Boys in the first born position are more likely to attain the Eagle Scout Award than boys in later born positions.

Hypothesis: 2

> Family income level is associated with attaining the Eagle Scout Award.

Hypothesis: 3

> High scores on the Ignoring scale by the mothers are associated with attaining the Eagle Scout Award.

Hypothesis: 4

> High scores on the Dominance scale by the mothers are associated with attaining the Eagle Scout Award.

Hypothesis: 5

> Low scores on the Possessive scale by the fathers are associated with attaining the Eagle Scout Award.

Tests run using the SPSS cross-tabulation formula for chi-square showed no support for any of the stated hypotheses. A t-test was also run to determine any significant difference between the level of the fathers' and mothers' involvement with their sons in their scouting activities. This test showed that the mothers were significantly more involved than the fathers in four of five areas as was shown in Table 7.

Other findings which did not deal directly with the formulated hypotheses were then reported and these included findings regarding relationships between the parents' level of education and their child rearing attitudes and the birth order of the Eagles, parental attitude scores and number of Eagles in a family, and number of Eagles in the family as this relates to sex composition of the sibship.

SUMMARY AND DISCUSSION

Purpose

Owing to the many studies and interest surrounding the influence of birth order on human development since Alfred Adler (1928) published his work, the purpose of this study was to investigate the birth order achievement hypothesis by examining birth order and its effect on attaining the Eagle Scout Award. Four secondary hypotheses were formulated dealing with economic support and parenting attitudes.

Procedure

One hundred twenty-five families who had sons achieve the Eagle rank were obtained from the Cache Valley Council of the Boy Scouts of America. Questionnaires were sent to each of the 121 families who were available for the study. One hundred ten families responded, resulting in a 91 percent return rate of the questionnaires. The questionnaire required both parents to complete a separate form with demographic information for the family and themselves. Questions dealing with parental support of their son during his scouting activities, and the strength of the troop program to which their son belonged were included in the questionnaire. A Parental Attitude Scale which was developed by Drews and Teahan (1957) was included for each parent.

Analysis

Data relating to the five formulated hypotheses were subjected to

a chi-square test of statistical significance. A t-test was also conducted to determine any significant differences between the fathers' and mothers' involvement with their sons in scouting activities.

Findings

Hypothesis 1 stated that boys in the first born position are more likely to attain the Eagle Scout Award than boys in later born positions. A chi-square test conducted for this relationship gave no support for the hypothesis. Boys in later born positions were just as likely as boys in the first born position to attain the Eagle Scout Award. When comparing first born with fourth born, significance at the .05 level was reached with first borns being more likely than fourth borns to attain the Eagle Scout Award.

With a chi-square value of 3.2, significance was approached in a comparison of second borns with fourth borns, with second borns being more likely to attain the Eagle Scout Award than fourth borns.

Hypothesis 2 stated that family income level is associated with attaining the Eagle Scout Award. The chi-square test for family income and number of Eagle Scout Awards attained within a family showed no support for Hypothesis 2. Families in the lower income levels were just as likely to have multiple Eagle Scout Awards as families from higher income levels. The reader should note that all families had to have at least one son with the Eagle Award to be eligible for inclusion in the study.

Hypothesis 3 stated that high scores on the Ignoring scale by the mothers are associated with attaining the Eagle Scout Award. A chi-

square test conducted for mothers' scores and number of Eagles within a family gave no support for the stated hypothesis.

Hypothesis 4 stated high scores on the Dominance scale by the mothers are associated with attaining the Eagle Scout Award. The chi-square test for mothers' dominance and number of Eagles showed no support for the hypothesis.

Hypothesis 5 stated that low scores on the Possessive scale by the fathers are associated with attaining the Eagle Scout Award. No support existed from a chi-square test for the variables of fathers' possessive scores and number of Eagles attained in a family.

Other findings not related specifically to the hypotheses were reported. These findings dealt with the variables of parents' level of education, parental attitude scores, sex composition of the siblings, and birth order of the sample Eagles. Results of a chi-square test of number of Eagles in a family and sex composition of the siblings were also reported.

Discussion

The analysis of the data collected for this investigation gave no support to the expected findings that boys in the first born position would be more likely to attain the Eagle Scout Award than boys in later born positions. The use of the Eagle Scout Award as an indicator of the relationship between birth order and achievement provides strength to this investigation because of the nature of the effort needed to attain the Award and the ease with which attainment of the Eagle Scout Award is measured. To obtain the Eagle Scout Award, the

boys in this study had to earn 24 merit badges, 11 that were required, and 13 electives. The requirements which needed to be completed in order to earn the merit badges varied with each badge, but each required the work to be done by the scout himself. Thus the attainment of the Eagle Scout Award reflects a major achievement by any one receiving the award.

Therefore if first borns achieve more than later borns one would expect that more first borns would achieve the Eagle Scout Award than later borns. The ease with which attainment of the Eagle Scout Award is measured, simply stated, the award is attained or it is not, adds support for its use as an indicator of achievement.

But what is the magic of birth order--how does it operate? Various explanations have been given, including the achievement motivation and uterine fatigue theories which have attempted to explain the birth order achievement hypothesis. In the first it is explained that because first borns begin their socialization process in an adult society and are rewarded for each new accomplishment they attain, and thus feel accepted in that adult society, they have a need for continued acceptance and thus continue to achieve so as to be accepted by their parents. The second theory explains first born prominence by stating that the first child develops within a healthier climate than later born positions. The uterus of the mother is strong and can support the child as it develops. Those children who follow do not according to this idea have as healthy a climate in which to develop and thus are deprived of some essential necessities for their development.

While a majority of the literature reports prominence of the first born child, data gathered in this investigation does not. The question to be asked of course is why? This investigator believes the answer to that question lies with the family systems from which the subjects of this study came.

As reported, the parents were extremely supportive of their sons in their scouting endeavors, as can be seen in Table 7, with the mothers more supportive than the fathers. Both parents however encouraged their sons a great deal to attain the Eagle Scout Award. The award was of great importance to the family systems from which these boys came. Using a four point Likert-type scale with four being a high level of importance, the parents were asked how important attaining the Eagle Scout Award was in their family value system and they recorded a mean level of importance of 3.48 thus adding another branch of support and perhaps some pressure from within the family to attain the award.

The family social experience of the boys in this sample may be one explanation for not finding an over representation of first borns attaining the Eagle Award. These parents report high support and a high level of importance to attaining the Eagle Award and boys growing up with the idea that it is important to attain the Eagle Award will undoubtedly receive some pressure, perhaps even bribes from parents who see the award as desirable for their family system, and pressure from older siblings who had already earned the award.

A characteristic which this sample has of large families also appeared to have influenced the outcome. The mean family size of

five children made up of three boys and two girls allows for some flexibility to examine the impact of siblings. While the study did not deal directly with sibling relations, the sex composition of the families was examined and shows support for statements made by Sutton-Smith and Rosenberg (1970). They reported that boys with brothers had more interests typical of their sex than did boys with sisters. Therefore the more boys in the family, the greater the support for masculine interests. Looking at Table 19 the same conclusion can be drawn. Those families who have more boys than girls have a higher number of Eagle Scout Awards attained. Whether they have one, two, or three Eagle Scout Awards in the family, those with a majority of boys receive the Eagle Scout Award more frequently than those families with an even distribution of males and females or those with more girls. Overall, these sample families had a mean of two Eagle Scout Awards each, which add more support through siblings attaining the award and perhaps helping one another with the requirements.

The family system then appears to be an important factor for this sample of boys in attaining the Eagle Scout Award. Not only were the parents highly supportive, but also the Parental Attitude Scores show that these parents as a whole were quite consistent in their attitudes of child rearing. Such consistency in parenting could only add to the strength in the personality development of a child, for as he grows the child would know what is expected of him.

Limitations

A basic limitation built into this study because of its design

is that the effects of birth order have been examined for boys only. Therefore any generalization of the effects of birth order on girls would be limited at best. A further limitation of this study lies in the fact that since scouting activities are largely outdoor activities, scouting may not be of interest to some boys.

The fact that the Mormon religion is in such prevalence in this sample is both one of the major strengths of this study and one of its weaknesses. The strength comes because all but one of the sample families mention affiliation with the Mormon Church. This provides a sample with basically the same values on family, religion, and life style, thus providing a homogenous group. On the other hand these similarities may confound any direct relationship between birth order and achievement since there is such a high degree of support both from the family and the religion, which may indicate a measurement of religious and family effects rather than effects of birth order.

This study has for its sample only those families who have had sons earn the Eagle Scout Award. Further study in this area should have a group of families who had no sons receive the award so as to be able to make comparisons of the family systems.

Suggestions for Further Research

As has been stated, birth order has been under investigation for many years. As investigators have sought to improve the methodology for these studies, control variables such as family size, sibling composition, and economic status of the family have been added. Other researchers have called for further refinement in birth order research.

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It is interesting to this investigator the high amount of support parents in this study gave to their children, and the consistency of their parenting attitudes. These areas should be examined in future studies as well as the amount of input one might receive from support systems outside the family. A comparison of boys who obtained the Eagle Award with those who were involved in scouting programs but did not attain the Eagle Award may provide insight into the failure to find any significant impact of birth order. When comparing boys who attained the Eagle Award with those boys who did not, the socio-economic status of the family should be examined to determine if the cost of scouting activities is a major factor in not obtaining the award.

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APPENDIX

CACHE VALLEY COUNCIL

Boy Scouts of America

199 Pioneer Avenue — Box 600
Logan, Utah 84321
(801) 752-4278

November 27, 1978

To whom it may concern:

We encourage you as parents of an Eagle Scout to give your cooperation to Mr. Kevin Moesser, a graduate student in the Department of Family and Human Development at U.S.U., in the study he is conducting.

We think this study will help us know how we can help more boys reach the rank of Eagle.

Thank you for your cooperation.

Sincerely,

Neil A. Butterfield

Neil A. Butterfield
Council Executive

NAB/lp

UTAH STATE UNIVERSITY · LOGAN, UTAH 84322
COLLEGE OF FAMILY LIFE

DEPARTMENT OF
FAMILY AND
HUMAN DEVELOPMENT
UMC 29

December 6, 1979

Dear Parents of Eagle Scout Son (Eagles Awarded in the 1969-71 years):

We are interested in families who produce Eagle Scout boys and activities which take place in such families. Kevin Moesser, a graduate student in the Department of Family and Human Development at Utah State University, is working on the thesis topic of who achieves the Eagle Award and why. We have worked closely with scout officials in the Cache Valley Council in regard to this project and believe that we can provide additional understanding about family behavior and makeup as this relates to achievement in the scouting program.

We congratulate you for having a son achieve the Eagle and now ask for your help on this project by completing the enclosed form about your family and view of scouting. It will only take about 10 minutes, and we believe you will find it interesting to complete. We have enclosed a stamped, self-addressed envelope for your convenience in returning the form. We really need your help and support. Please complete it now and send it on to us. All responses will be treated in a confidential manner; only the general principles from the study will be revealed. Please mail your form within the next three days.

Thank you very much, and we would be happy to share the findings of the study if you are interested. Please let us know if you would like a brief summary.

Sincerely,

Kevin Moesser

Kevin Moesser, Graduate Student
Department of Family and Human Development

Jay D. Schvaneveldt

Jay D. Schvaneveldt, Ph.D.
Head, Department of Family and Human Development
Major Professor

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enclosures

FATHER'S QUESTIONNAIRE

Please complete the following information about yourself.

A. Marital Status: ____Married ____Divorced ____Widower ____Other

B. Please circle the position of your birth in your parent's family.

1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th

C. Your last grade or degree completed

____ Less than high school
____ High School Graduate
____ Some college or tech. school
____ College or Technical Graduate
____ Advanced Degree

D. During the time that your Eagle Scout son(s) was/were involved in scouting, the religious activity of your family in terms of church attendance, would be best described as:

	husband	wife	oldest Eagle	2nd oldest Eagle	3rd oldest Eagle	4th oldest Eagle
OFTEN (3 or more times a month)						
SOMETIMES (1or more times a month)						
SELDOM (less than once a month)						

PLEASE INDICATE THE ATTENDANCE FOR ALL YOUR EAGLE SCOUT SONS

E. Are you employed? ____ Retired____

During your son(s) years of activity in scouting, what type of work did you do?_____

F. At the time your son(s) received the Eagle award, what was your family income? (1969 through 1971)

____$5,000 to $10,000

____$11,000 to $15,000

____$16,000 to $20,000

____$21,000 to $25,000

____$26,000 and above

G. What was the highest Boy Scout rank you received as a young man?

____Eagle ____Life ____Star ____1st Class ____2nd Class

____Tenderfoot ____Other

PLEASE TURN TO THE BACK OF THIS PAGE
AND RESPOND TO THE STATEMENTS.

H. We are interested in knowing how much involvement you as a father had with your son(s) in their scouting activities. Please complete the following statements by circling SA if you Strongly Agree, A if you Agree, D if you Disagree, or SD if you Strongly Disagree with the statement.

As a father I:	CIRCLE THE MOST CORRECT RESPONSE
1. frequently encouraged my son(s) to earn merit badges.	SA A D SD
2. frequently encouraged my son(s) to obtain the Eagle Scout award.	SA A D SD
3. frequently helped my son(s) with requirements for merit badges.	SA A D SD
4. frequently attended the Courts of Honor.	SA A D SD
5. frequently encouraged my son(s) to obtain scouting equipment and helped him/them to aquire it.	SA A D SD

****

PLEASE TURN TO THE NEXT PAGE AND RESPOND AS DIRECTED TO THE STATEMENTS.

Please read each of the statements below. Rate each statement as to whether you strongly agree, mildly agree, mildly disagree, or strongly disagree. If you cannot decide whether you agree or disagree with the statement, then rate it as uncertain. There are no right or wrong answers, so answer according to your own convictions. Draw a circle around the pair of letters that best expresses your feeling.

Strongly Agree -- SA Strongly Disagree -- SD Uncertain -- UN
Mildly Agree -- MA Mildly Disagree -- MD

1.	Independent and mature children are less lovable than those children who obviously want and need their parents.	SA	MA	UN	SD	MD
2.	Parents should sacrifice everything for their children.	SA	MD	SD	UN	MA
3.	A child should have strict discipline in order to develop a fine, strong character.	UN	SD	MD	SA	MA
4.	Children should not be punished for doing anything they have seen their parents do.	SD	UN	MA	MD	SA
5.	A child should be seen and not heard.	MD	SA	MA	UN	SD
6.	The most important consideration in planning the activities of the home should be the needs and interests of the child.	SD	UN	MA	SA	MD
7.	The weaning of the child from its emotional ties to the parents begins at birth.	UN	MA	SA	MD	SA
8.	Babies are more fun for parents than are older children.	MD	SA	MA	UN	SD
9.	Children should be allowed to make only minor decisions for themselves.	SD	UN	MA	SA	MD
10.	Strict discipline weakens a child's personality.	UN	SA	MA	MD	SD
11.	Children should be allowed to play with any youngsters they like.	MD	SD	UN	MA	SA
12.	Parents are generally too busy to answer all of a child's questions.	MA	UN	SD	MD	SA
13.	When they can't have their own way, children usually try to bargain or reason with their parents.	SD	UN	MA	SA	MD
14.	Quiet children are much nicer than little chatter-boxes.	SA	MA	UN	SD	MD
15.	A child should be allowed to enter any occupation he or she wishes.	UN	MD	SA	MA	SD
16.	In the long run it is better, after all, for a child to be kept fairly close to his mother's apron strings.	SD	UN	MA	SA	MD
17.	A child should always believe what his parents tell him.	SA	MA	UN	SD	MD
18.	It is sometimes necessary for the parent to break the child's will.	MD	SA	MA	UN	SD
19.	Children should not annoy their parents with their unimportant problems.	UN	SD	MD	SA	MA
20.	It is wicked for a child to disobey its parents.	SD	UN	MA	MD	SA
21.	Children should not interrupt adult conversation.	MD	SA	MA	SD	UN
22.	Children should have as much freedom as their parents themselves.	SA	MA	SD	UN	MD
23.	Children should not be required to take orders from their parents.	UN	MD	SA	MA	SD
24.	Children should be allowed to choose their own religious beliefs.	MA	SD	MD	SA	UN
25.	Parents are not entitled to the love of their children unless they earn it.	SD	UN	MA	MD	SD
26.	The best child is the one who shows lots of affection for his mother.	MD	SA	SD	MA	UN
27.	Children should be allowed to choose their own friends without restrictions.	SD	MA	MD	UN	SA
28.	Children should be allowed to manage their affairs with little supervision from adults.	UN	MD	SA	MA	SD
29.	Children should have the opportunity to express their opinions to their parents.	SA	MA	UN	SD	MD
30.	A child should stand on his own two feet as soon as possible.	SD	UN	MA	MD	SA

MOTHER'S QUESTIONNAIRE

A. For the children in your family, please indicate the date of birth, check whether they are male or female, and for the males check their highest scout achievement. Please start with the oldest child and go down to the youngest.

#	Birth date mo. day yr.	Male	Female	Received					Tender-foot
				Eagle	Life	Star	1st Class	2nd Class	
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									

Please complete the following information about yourself.

B. Marital Status: ____Married ____Divorced ____Widow ____Other

C. Please circle the position of your birth in your parent's family.

1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th

D. Your last grade or degree completed

____Less than high school
____High School Graduate
____Some college or tech. school
____College or Technical Graduate
____Advanced Degree

E. During the time that your Eagle Scout son(s) was/were involved in scouting, the religious activity of your family in terms of church attendance, would be best described as:

	husband	wife	oldest Eagle	2nd oldest Eagle	3rd oldest Eagle	4th oldest Eagle
OFTEN (3 or more times a month)						
SOMETIMES (1 or more times a month)						
SELDOM (less than once a month)						

PLEASE INDICATE THE ATTENDANCE FOR ALL YOUR EAGLE SCOUT SONS

PLEASE TURN TO THE BACK OF THIS PAGE AND RESPOND TO THE QUESTIONS.

F. Were you employed during your son(s)' scouting years? _____Yes _____No

_____Full-time _____Part-time

If yes, please briefly describe the type of work._____

G. We are interested in knowing how much involvement you as a mother had with your son(s) in his/their scouting activities. Please complete the following statements by circling SA if you Strongly Agree, A if you Agree, D if you Disagree, and SD if you Strongly Disagree with the statement.

As a mother I:	CIRCLE THE MOST CORRECT RESPONSE
1. frequently encouraged my son(s) to earn merit badges.	SA A D SD
2. frequently encouraged by son(s) to obtain the Eagle Scout award.	SA A D SD
3. frequently helped my son(s) with requirements for merit badges.	SA A D SD
4. frequently attended the Courts of Honor.	SA A D SD
5. frequently encouraged my son(s) to attend the Boy Scout camping trips.	SA A D SD
6. frequently encouraged my son(s) to obtain scouting equipment and helped him/them to aquire it.	SA A D SD

****

PLEASE ANSWER THE FOLLOWING SIX QUESTIONS WITH YOUR HUSBAND

H. During your son(s)' years of activity in the scouting program, the troop had a very active program to help the scouts earn awards.

_____Very True _____True _____Sometimes True _____Not True At All

I. During your son(s)' years of activity in the scouting program, the Eagle award was received frequently by the members of your son(s) troop.

_____Very True _____True _____Sometimes True _____Not True At All

J. During the time (3-4 year time span) that your son(s) was/were involved in scouting, please estimate the number of boys in your son(s) troop who received the Eagle award per year. _____

K. How important is the Eagle award to your family's value system?

_____Very Important _____Important _____Not Very Important

_____Unimportant

L. What other accomplishments has/have your Eagle scout son(s) achieved since the Eagle award? For example religious service, college graduate, advanced degrees, scholarships, promotions at work, service clubs and organizations, etc.

OLDEST EAGLE _____

2nd OLDEST EAGLE _____

3rd OLDEST EAGLE _____

4th OLDEST EAGLE _____

M. We are interested in how important it was to achieve the Eagle rank in scouting as seen by various family members, scout and religious leaders. Please rank number 1 for the most important, 2 for the next level of importance, and so on for the following seven (7) categories:

_____Troop Program

_____Scout Master

_____Religious Leader

_____Peers

_____Parents

_____The Scout

_____Other Family Members (Grandparents, Aunts, Uncles, etc.)

****

****

THE RESPONSES TO THE STATEMENTS ON THE BACK OF THIS PAGE SHOULD BE THE MOTHER'S OWN ATTITUDES.

Please read each of the statements below. Rate each statement as to whether you strongly agree, mildly agree, mildly disagree, or strongly disagree. If you cannot decide whether you agree or disagree with the statement, then rate it as uncertain. There are no right or wrong answers, so answer according to your own convictions. Draw a circle around the pair of letters that best expresses your feeling.

Strongly Agree -- SA Strongly Disagree -- SD Uncertain -- UN
Mildly Agree -- MA Mildly Disagree -- MD

1.	Independent and mature children are less lovable than those children who obviously want and need their parents.	SA	MA	UN	SD	MD
2.	Parents should sacrifice everything for their children.	SA	MD	SD	UN	MA
3.	A child should have strict discipline in order to develop a fine, strong character.	UN	SD	MD	SA	MA
4.	Children should not be punished for doing anything they have seen their parents do.	SD	UN	MA	MD	SA
5.	A child should be seen and not heard.	MD	SA	MA	UN	SD
6.	The most important consideration in planning the activities of the home should be the needs and interests of the child.	SD	UN	MA	SA	MD
7.	The weaning of the child from its emotional ties to the parents begins at birth.	UN	MA	SA	MD	SA
8.	Babies are more fun for parents than are older children.	MD	SA	MA	UN	SD
9.	Children should be allowed to make only minor decisions for themselves.	SD	UN	MA	SA	MD
10.	Strict discipline weakens a child's personality.	UN	SA	MA	MD	SD
11.	Children should be allowed to play with any youngsters they like.	MD	SD	UN	MA	SA
12.	Parents are generally too busy to answer all of a child's questions.	MA	UN	SD	MD	SA
13.	When they can't have their own way, children usually try to bargain or reason with their parents.	SD	UN	MA	SA	MD
14.	Quiet children are much nicer than little chatter-boxes.	SA	MA	UN	SD	MD
15.	A child should be allowed to enter any occupation he or she wishes.	UN	MD	SA	MA	SD
16.	In the long run it is better, after all, for a child to be kept fairly close to his mother's apron strings.	SD	UN	MA	SA	MD
17.	A child should always believe what his parents tell him.	SA	MA	UN	SD	MD
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19.	Children should not annoy their parents with their unimportant problems.	UN	SD	MD	SA	MA
20.	It is wicked for a child to disobey its parents.	SD	UN	MA	MD	SA
21.	Children should not interrupt adult conversation.	MD	SA	MA	SD	UN
22.	Children should have as much freedom as their parents themselves.	SA	MA	SD	UN	MD
23.	Children should not be required to take orders from their parents.	UN	MD	SA	MA	SD
24.	Children should be allowed to choose their own religious beliefs.	MA	SD	MD	SA	UN
25.	Parents are not entitled to the love of their children unless they earn it.	SD	UN	MA	MD	SD
26.	The best child is the one who shows lots of affection for his mother.	MD	SA	SD	MA	UN
27.	Children should be allowed to choose their own friends without restrictions.	SD	MA	MD	UN	SA
28.	Children should be allowed to manage their affairs with little supervision from adults.	UN	MD	SA	MA	SD
29.	Children should have the opportunity to express their opinions to their parents.	SA	MA	UN	SD	MD
30.	A child should stand on his own two feet as soon as possible.	SD	UN	MA	MD	SA

VITA

Kevin R. Moesser

Candidate for the Degree of

Master of Science

Thesis: Birth Order and its Effect on the Attainment of the Eagle Scout Status

Major Field: Family and Human Development

Biographical Information:

Personal Data: Born at Salt Lake City, Utah, February 18, 1952, son of Randy R. and M. Beryl Sheffield Moesser; married Catherine Ann Robinson August 26, 1977; one child--Joshua.

Education: Attended elementary school in Hunter, Utah; completed grades at Brockbank Jr. High; graduated in 1970 from Cyprus High School; received Bachelor of Science degree from Brigham Young University with a major in Child Development and Family Relationships and a minor in Spanish in 1977; completed requirements for Master of Science Degree in Family and Human Development at Utah State University in 1980.

Professional Experience: Research assistant for Dr. Jay D. Schvaneveldt from January to June 1978, preparing manuscript to be published. Appeared as a presenter in the Sixth Annual Up-date in Quality Parenting Series: How to Develop and Teach Nutritional Concepts in Children and Youth via the Home, the School, and the Community, 1980.