

**Birth Order, Sibling Sex Status
and Sport Participation**

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ABSTRACT

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AND SPORT PARTICIPATION

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This study investigated the effect birth order and sibling sex status has on intercollegiate sport participation. Questionnaires were given to female and male members of formal intercollegiate sport teams, and a sample of the student population, in order to determine their birth order position, and other information elicited as well.

Results showed that birth order is not an important determinant for intercollegiate sport participation. Nor is it a determining factor for high grade point average. In the final analysis, no association has been shown to exist between birth order and measures of human performance incorporated within this study.

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CONTENTS

LIST OF TABLESvii

I. INTRODUCTION 1

 Rationale and Research Question
 The Research Question
 Research Purpose

II. REVIEW OF THE LITERATURE 4

 General Theoretical Orientations 4

 Physiological Theory
 Psychological Theory
 Social Psychological Theory
 Sociological Theory
 Economic Theory

 Specific Theoretical Applications 17

 Socialization and Sex Roles
 Predicted Involvement in Sport Among Females

III. MODELING THEORIES 24

 Sibling Similarity Hypothesis
 Sibling Opposite Theory
 Conformity Hypothesis

IV. SOCIALIZATION INTO SPORT. 31

 The Family
 The School
 The Peer Group
 The Mass Media

V. SYNTHESIS 36

 Hypothesis
 Method of Data Analysis

VI. METHODOLOGY 41
 Sampling Procedure
 Operational Definitions
 Statistical Analysis

VII. RESULTS AND ANALYSIS 45
 Hypothesis Number 1
 Hypothesis Number 2
 Hypothesis Number 3

VIII. SUMMARY AND CONCLUSION. 52

REFERENCES 60

APPENDIX 64

LIST OF TABLES

1. Percentage of First Born Males and Other Males
From Different Birth Order Positions, and
Athletic Participation 46
2. Percentage of First Born Males and Other Males
From Different Birth Order Positions,
and High Grade Point Average 47
3. Percentage of MM2 and Other Males, and Athletic
Participation. 49
4. Percentage of MF2 and Other Females, and Athletic
Participation. 51

CHAPTER I

INTRODUCTION

Socializing into sport involves learning a sport role in much the same manner as learning non-sport roles. The specific opportunity to learn sport behaviour is present to the child at birth and continues into and throughout adulthood. A child's growing up period usually involves parents and other siblings. The ordinal position in ones family, the relationship with siblings and parents alike, and the reinforcement received, influence the propensity for an activity, the activity selection, and the amount of activity participation. Although a number of theories have been developed to explain sport participation, little work has been done in the area of birth order and sibling sex status. It is this factor which serves as the focus of attention for the research reported here.

Parents frequently regard first born children as being somehow different or special. The novelty, the uncertainty, and the excitement of the first birth is unlikely to be repeated as other children are born. It is, therefore, easy to see why first born children are given special status. This special status may not be completely the result of sentiment, however. More objective research has suggested

that first born children are indeed special, often being superior on a number of human performance measurements (Altus, 1966, Adams, 1972), including intelligence (Zajonc, 1975), education attainment, and college attendance (Burton, 1968, Schachter, 1963). The theoretical interpretations of these findings suggest that this list might be extended as more areas are investigated. One such area is that of sport.

Much of the research on sport focusses its attention primarily on male participation. Most sport has traditionally been associated as belonging to the male domain and access to sport for women has frequently been defined as out of the ordinary to the point of being discouraged (Coakley, 1978). Women have been either intentionally or unintentionally excluded from consideration in most sport activities taking place outside the home. Many authors and different theories have been used to account for this unequal participation, while little work has been done in the area of sibling sex status.

Rationale and Research Question

In view of previous research findings relating birth order to other dimensions of human performance, surprisingly little data has been collected in the area of birth order,

sibling sex status and sport participation. This fact is evident for both sexes, with specific emphasis lacking in the area of female participation, either on an individual or team sport basis. Petrie (1976), studied the relationship between ordinal position, family size and athletic elitism for males. Sport participation research may do well to focus attention on the variables of birth order and sibling sex status and their potential influence in the selection and amount of activity participation. More specifically, how does birth order and sibling sex status influence sport participation at the intercollegiate level?

Research Purpose

The purpose of this research project is to determine the relationship between birth order, sibling sex status and intercollegiate sport participation among males and females.

In this research study, a comparative analysis of male and female athletes with non-athletes will be made. This analysis will emphasize team sports because of the local conditions at Concordia University.

CHAPTER II

REVIEW OF THE LITERATURE

Numerous explanations have been used in the effort to explain the superiority of one sibling over other siblings in a number of different areas. In this research, five groups of theories are identified and discussed, physiological, psychological, social psychological, sociological, and, economic.

General Theoretical Orientations

Physiological Theory

It is fairly well established that younger and older mothers show a higher incidence of still births, mortality, mental deficiency and malformations in their offspring (Broverman and Klaiber, 1970). This research suggested that the age of the mother at the time of pregnancy may have some effect with regard to birth abnormalities for first or later born children.

Bayer and Folger (1967) pointed out that physiological theories have been used to account for findings regarding intelligence of offspring and general health of the infant at childbirth. It is suggested that a younger mother's first pregnancy may provide the fetus with a richer uterine environment which results in greater health for the first born child (Ibid). The "better" unused uterus would presumably have best chances of maximizing all human characteristics. With the birth of subsequent children, the used uterus would progressively lead to less than maximal development, due to muscle fatigue, stretching, inadequate uterine blood supply, adhesion and scarring. However, verification of this position would require a combination of social research and investigation into pathological gynaecology (Petrie, 1976).

Sport is physically demanding, and, as a result, generally requires a physically healthy body in order to actively participate. First born male children with younger mothers would have a physiological advantage over any later born siblings provided the female was not abnormally young at the time of initial pregnancy.

Psychological Theory

Taylor (1945) postulated that only children are not

adult oriented so much as being self-centered. From a psychological perspective, the only child is likely to be wrapped up in itself and more likely to see the society at large as either revolving around itself as the center of attention, or leaving the individual alone to fend for itself. In either case, there is no necessity on the child's part to share its parents with a sibling. This, often sub-conscious, gratuitous acquisition of parental support may lead to a future of greater need of affection retention and reinforcement through achievement. This analysis may be interpreted as Freudian, since these expressed or unintended expectations on the part of the parents may be considered by the child to be the internal voices of the parents. The child, then, is both consciously and unconsciously occupied on an ongoing basis in dealing with the internal voices of the parents, ie. superego versus ego versus id. The major emphasis is placed upon the parent-child relationship, fostering dependency, security and a drive in the child to fulfill expressed or unintended expectations on the part of the parents. There also exists within the child a desire for adult imitation in quest for mastery.

In any case, security is developed and the need for achievement based upon the dependent relationship formed between child and parents may ultimately be expressed in a number of different areas including sport. Therefore, male

children without siblings may be more motivated to play sports and subsequently play more sports. Logically, it follows that male children without siblings develop better skills as the result of this greater participation, and are therefore more likely to be overrepresented ultimately in intercollegiate sports.

Alfred Alder's (1928) "dethronement theory" is most crucial for developing theoretical explanations for this study since it appears to be conflict oriented within the context of the parent-child relationship. Dethronement may be defined as the specific time period when the first born child, previously the center of attention, is threatened by the potential or real loss of affection when subsequent children are born. After this period of dethronement, the child fights to regain its place of preeminence and importance in the eyes of the parents. Dethronement initiates antagonism and competitiveness in the first born, resulting in high goal and achievement objectives in order to replace the apparent loss of emotional supremacy and support. In order to avoid loss of parental affection, the first born child endeavors to find possible situations in which this could occur. One of the most easily accessible means for parental reinforcement and affection is through successful achievement in a valued area of involvement, be it academic, creative or athletic (Sutton-Smith and Rosenberg, 1970). Subsequently, first born males in their

endeavor to regain parental affection are more highly motivated than other siblings to achieve, and, within the context of this study are therefore expected to be overrepresented in intercollegiate sports.

First born females also experience dethronement. However, in their case, they strive to regain the apparent loss of parental affection in activities that differ from the male counterpart. At an early age, the first born female is socialized to play the role of mother with dolls, doll houses and non aggressive activities. Upon the arrival of a younger sibling, parental reinforcement and affection may be achieved through successful cooperation with parents in learning child rearing behaviour patterns and other pursuits more in line with the stereotypic sex role of woman. Sport activities would presumably not be selected by the first born female for active involvement. As a result, first born females would not be expected to be overrepresented in elite levels of sports.

Social Psychological Theory

Stanley Hall's (1972) "only child uniqueness" theory suggests that children without siblings are different from all those with siblings. He argues that there exists an adult orientation which distinguishes this child without a

sibling from others. In other words the child is directed towards adult attitudes and concerns and has no sibling peers as influencing factors (Ibid). Guilford and Worcester (1930), found that children without siblings develop higher I.Q.'s, conversation abilities and other characteristic traits which are highly valued by adults. These attributes are acquired as a result of the time spent interacting with parents. At the same time, parents, specifically fathers, tend to value sports either in the role of a spectator or participant. As a result, the child without siblings (male or female) has the opportunity to learn sports as a part of the socialization experience. As sports are generally characterized as belonging to the male domain, male children are most likely to model the behaviour, activity selection and attitudes from the father. Male children without siblings play sports and develop competency in that area as part of this adult orientation process. As a result of the "only child uniqueness" theory, one would expect that male children, including first born male children who are also children without siblings until subsequent siblings are born, to be overrepresented in sports.

Unlike the firstborn, the child without siblings is not affected by younger siblings. The child without siblings, unlike the firstborn, is relatively high on aggression and low on anxiety (Sears, 1950), and is both more dependent and more achieving (Sutton-Smith and Rosenberg, 1970). Cushna's

data (1970) showed that mothers favored boys without siblings to a much greater extent than girls without siblings, while girls without siblings had a special relationship with the father. At face value, the close relationship of children without siblings to their parents introduces the risk of too strong an identification with the opposite sex parent. However, using the modal sequence as a guide for sex role expectations, and despite this strong attachment to parents, the female child without siblings would typically rehearse the roles of mother, housekeeper, and attractive socialite. The male child without siblings who was strongly favoured by his mother would typically use the "affective-humanistic repertoire" during the first 5 years, the athletic aggressive repertoire from his peers during the next 10 years, and the entrepreneurial-managerial repertoire from his teachers thereafter (Sutton-Smith and Rosenberg, 1970).

Sociological Theory

Schachter (1959), linked Roberts' (1938) notion of parental protection and indulgence with Sears' (1950) claim regarding parental anxiety in his study of affiliation. With her first born, Schachter suggested,

"A mother is undoubtedly more ill at ease and more worried than she is with her later born children.

She probably responds to more signals, responds more quickly, stays longer and generally does a more effective all around job of reducing anxiety with a first child than later children" (1959, p.43).

It is plausible to suggest that through anxiety reduction, the first born male child's character development is positively affected. Positive characteristics usually include confidence and the ability to be secure in pressure situations. Anxiety, on the other hand, often implies a more negative connotation. Due to the competitive nature of sport, with its uncertainty and inconsistency of player participation, players must remain confident and secure in their ability to perform under pressure. First born male children would have a natural advantage over other siblings in this regard. More confidence due to their lower anxiety level, suggests that first born male children could be expected to be overrepresented in elite levels of sports.

However, there do appear to be some discrepancies. Hilton (1967) suggested that a mother may spend longer but also be less efficient in feeding the first born, thus leading to a more anxious child. Hilton demonstrated that first born children were shown to be significantly more dependent than later born siblings. This may be due in part to higher anxiety on the part of the first born child. The data indicated further that mothers of first born children were seen as significantly more involved than mothers of later borns. These findings appeared to be consistent with

Schachter (1959). However, Hilton also showed that mothers of first born children were seen as more likely to interfere with the activity of the child and the same mothers were seen as being more extreme in their effects toward the child. It appears as if the mother of the first born and only child rejects her child by withdrawing love when the child fails, making the expectancy for demonstration of love when the child succeeds all the more important to the child (Hilton, 1967). First born children are in fact interfered with more, reacted to more extremely and treated more inconsistently, which may create more dependency in the child (Hilton, 1967). This information demonstrates that some discrepancies exist regarding the anxiety and dependency levels of first born children.

Research reported by Lasko (1954) clarified the dilemma. In her study, Lasko (1954) used 6 variables to describe the picture of the parent's emotional relationship with the child. Essentially there is more parent-child friction between the mother and first born through her being more emotional in her behaviour toward the child. The data demonstrated that parent behaviour towards first born children is on the average, less warm emotionally and more restrictive and coercive. Although these differences are more apparent in the pre-school years than later, the child nonetheless is more likely to be anxious and more dependent than other siblings due to this type of parent-child

relationship. Secondly, parental behaviour toward the second born child does not tend to change systematically as the child grows older. However, systematic changes do occur in the treatment of first born children. This change mainly occurs in the direction of reduced parent-child interaction with the arrival of other siblings, leading to a more anxious and dependent first born child.

In sum, Lasko (1954), suggested in the first case, that although this attention is during the pre-dethronement period of the first born, the child receives much less affection, support and acceptance from the parents with progressive years. Whether the child receives abundant but inconsistent and anxious attention from the parents in the early years, or is victimized in the second case, with each subsequent sibling in terms of attention reduction in latter years, it is speculated that this child is highly motivated to gain the parental support through achievement in activities outside the home. In either case, and despite the theoretical inconsistencies surrounding the potential anxiety level within the first born child due to the changing interaction in the parent-child relationship, it appears reasonable to suggest that the first born male child is more motivated than other siblings to play sports, and as well, plays sports more frequently than other siblings occupying a different ordinal position. As a result, the first born male is more likely to acquire a higher level of

skill due to greater participation, and thus is predicted to be overrepresented in elite levels of sports.

Economic Theory

When considering who plays intercollegiate sports, it is obvious that only those who are educationally talented enjoy that opportunity. Theories of family economics are used to account primarily for birth order differences in achievement, leading to college attendance.

One such theory was provided by Adams (1972) who suggested that oldest children reach college age first and are free from the competition for scarce education funds from within the family. By extension, first born children have greater access to available money and are likely to be overrepresented among university students.

It is of no surprise to note that sporting equipment is usually essential to play sports, and money is required to purchase this equipment. Sports are traditionally associated with the male sex role and first borns are one of the most conventional in their interpretation of sex roles. It is reasonable to suggest that first born males, everything being equal, would select sports as an activity for general participation. Due to their ordinal position, first born males are afforded greater opportunity to acquire money for sports equipment and therefore are more likely to be involved in sporting events. Holding this premise to be true, the speculation is that first born male children will

be more proficient in sports behaviour through greater participation and this participation would exemplify itself in elite levels of sport. However, as suggested below, an alternative theory may be implemented in the endeavor to account for different expectations.

Clark, (1966) suggested that younger children have economic advantages, benefiting from both the improving parental financial position over time and from the older sibling's ability to help the family economically. Upon analysis, however, this seems unlikely through consideration of a number of variables. These considerations include, (1) additional family members need basic requirements in order to subsist which encompasses further financial support, (2) the cost of living expenses in many cases is greater than the annual increase in salary and/or take home pay, and, (3) the general uncertainty of the economy tends to dispute the assumption of greater opportunity of university attendance for younger siblings based upon improving financial position of the family over time.

It is unlikely that later born children will benefit from the financial assistance of older siblings. Any probability of support is strongly age and birth spacing dependent as well as being linked with a family's economic need to justify such adolescent contributions.

The impact of economic considerations upon birth order varies by social class. Elder (1962) argued that in high socio-economic status families, the oldest receive more parental encouragement and a greater likelihood of achievement, while in low socio-economic status families, it is the youngest child who benefits most from ordinal position. Bayer (1967) supported Elder's position but added that if relatively unlimited resources are available, later borns, as well as first borns will benefit. In this section, the economic factors believed to be relevant to a statistical overrepresentation of first born male children in sports, includes the freedom from competition for limited education funds which in turn provides greater access to available money for necessary sport equipment enabling greater sport involvement on the part of first born male children.

Specific Theoretical Applications

Socialization and Sex Roles

The effects of ordinal position on sibling sex status vary with age and with the nature of the variable being considered. These effects are not solely due to infant patterns of reinforcement, but also continue to be supported

by later socialization procedures by adults (Sampson, 1962).

Schachter (1959), believed that social learning amongst first born children included high surrogate training and strong identification with the parents. Conscious conformity, affiliation, dependency, volunteering, internalization which lead to academic success, and a readiness to take parent-surrogate roles in the form of teaching, also characterized this individual. Sutton-Smith and Rosenberg (1963), and Moss and Kayan (1961), maintained that sports and recreational activities involving physical skill are positively associated with the male sex role and negatively associated with the female sex role. In this case, first born males, with either a male or female younger sibling, may be more skilled in the area of sports for no other reason than the opportunity to teach these skills to younger siblings.

In the endeavor to achieve clarity and succinctness, Figure 1 illustrates the symbols commonly used when indicating sibling statuses.

Figure 1

SYMBOLS INDICATING SIBLING STATUSES

An Only Male	M
An Only Female	F
<hr/>	
Boy with younger brother	M1M
Boy with younger sister	M1F
Boy with older brother	MM2
Boy with older sister	FM2
<hr/>	
Girl with younger brother	F1M
Girl with younger sister	F1F
Girl with older brother	MF2
Girl with older sister	FF2

Source. Sutton-Smith and Rosenberg, 1970, p.16.

Predicted Involvement in Sport Among Females

Every society differentially socializes on the criteria of gender. The social participation and competence levels for females and males are constantly being compared in the effort to clarify sex roles. Sex role expectations are to a certain extent based on anatomy, physiology and such biological differences as physical strength and endurance, but sex roles are only partially determined by these biological factors. Societal expectations influence not only obvious statuses and roles but particular behaviours, interests, and popular images as well. The recent overlapping of role performance according to sex is due in part to urbanization, advanced technology, changing birth rates, contemporary feminism, prolonged higher education, the growth and influence of mass media, a general rise in the standard of living and the influence of both parents and siblings on behaviour patterns of socialization and activity selection for both women and men (Elkin and Handel, 1972).

This overlapping of sex roles is evident in the sport world as girls are afforded the opportunity to play with boys in the so called masculine sports (eg. football, hockey), although legal direction is sometimes needed. One of the most accessible ways in which the overlapping of sex roles may occur is amongst siblings.

In the case of a second born female with an elder male sibling (MF2), their predicted overrepresentation in sport gains support from several authors. Gormly (1968), Sutton-Smith and Rosenberg (1970), suggested that the influence of a sibling is an important variable for sport participation, since siblings close in age interact in play groups throughout the socialization years. Boys with younger sisters showed fewer athletic interests while girls with older brothers showed the reverse to be true (Ibid). Research regarding the affect of the sex of one sibling upon the behaviour of the other does appear to have one element in common. Females appear to be more affected by males than vice versa, although, this may be due in part to choice on the side of the female or to force or power on the part of the male. Portz (1972), stated that girls with an older brother were overrepresented in sports, which is consistent with the findings that girls with older brothers showed greater athletic interests than the reverse. It is evident from the discussion above that the overlapping of sex roles and sibling status influence the choice and amount of activity selection.

In her research, Koch (1956) demonstrated that there is a parallel between the child's choice of playmates and those the child has as siblings. Those with opposite sex siblings show a higher preference for play with opposite sex playmates. It is plausible to suggest that children show

more of these opposite sex characteristics in their own behaviour. Evidence for this hypothesis was supported when Koch demonstrated that boys with an older sister (FM2), are more often rated as sissy than boys with an older brother. The girl with an older brother (MF2) was found to be more often rated as a tomboy than the girl with an older sister (1956). Second born females (MF2) may socialize within male play groups more than with females, leading to the opportunity to learn and develop those interests and skills more generally associated with the male sex role. One of the interests that males generally occupy is sport. The MF2 children are more likely to learn sport behaviours, and become more skilled in the area of sports, than other females.

Sibling status appears to be a powerful influence in determining sex role expectations. Kammeyer (1966) noted that sibling attitudes toward female roles indicated that girls with an older brother had the most masculine conception of female traits. In conjunction with Kammeyer, Sutton-Smith and Rosenberg (1970), also found that both females and males with older brothers were significantly more involved in sports and games of physical skill. Females with older brothers were overrepresented among participating athletes in the masculine stereotyped sport of track and field. This is in no small part the result of the paramount influence of sibling status in determining sex

role expectations. One of the many role expectations associated with the male sex is the activity of sport. Therefore, sport, a male typed behaviour, is a skill the younger sibling (MF2 in our example) is expected to acquire. One may predict that MF2 children participate more in sports than their female counterparts who have an older sister as a sibling.

Ordinal position and sibling sex status unquestionably affect sibling characteristics. However, age spacing is a variable which appears to warrant control. Koch (1956) showed that the 2-4 year age spacing seems to heighten all other differences. When the age gap was only 0-2 years the siblings were more alike. However, when siblings are 4-6 years apart, they have much less effect upon each other. For the purposes of this study, those second born children who have an older sibling 6 years older or greater are treated as first born since it appears that following such an age spacing the effect of sibling influence is greatly reduced.

CHAPTER III

MODELING THEORIES

"Sibling influence" theory is a one explanation which must be combined with one of the parent-derived theories, such as dethronement, in order to explain the differences between first and later born children (Sutton-Smith and Rosenberg, 1970). Sex and the amount of influence of one's sibling have considerable influence upon ones own personality regardless of parental influence. The sibling-sibling interaction is responsible for many of the established sibling behaviours and personality differences (Ibid). Much of the continuing influence which shapes personality is derived not from parents, but from siblings acting as role models for, or in competition with, each other (Ibid).

Younger children may affirmatively (Sibling Similarity Hypothesis) or negatively (Sibling Opposites Hypothesis) model the behaviour of the first born sibling. Sibling similarity theory infers that the younger child will follow similar behaviour patterns and activity selections of the older sibling. On the other hand, if this sibling opposites

theory is true, the younger child will reject the behaviour patterns of the elder sibling.

Sibling Similarity Hypothesis

Proponents of the sibling similarity hypothesis include Sutton-Smith and Rosenberg (1970) who suggested that second born children model much of their behaviour on the first born child regardless of the sex of either child. This role modeling theory of conformity suggests that a younger child with an older sibling learns sex role behaviours from the older model.

When considering the anticipated active participation of first born males in sport and the subsequent opportunity for second born children to copy this behaviour, it follows that there is more likelihood for both younger sisters' and brothers' sport involvement. Holding the modeling theory to be true, females and males with an older male sibling (MF2 and MM2) would model the behaviour of the older male sibling. This theory is also consistent for females and males with an older sister since they model the behaviour of the older female sibling. Sport is generally characterized as being a masculine behaviour. Consequently, MF2 and MM2 children, as opposed to FF2 and FM2 children, would learn more sports related behaviour.

Sibling Opposite Theory

If first born males develop a high level of competitiveness and achievement as a result of successful resistance to dethronement, they are subsequently expected to regain their perceived loss of parental support through sport participation if achievement is present. Second born males might normally be interested and involved in an achievement oriented activity such as sport. Holding the Sibling Opposite Theory to be true, we would expect MM2 children to reject the highly competitive and achievement oriented activities associated with the older brother. They could reject sport and instead choose to be involved in academics, music or other activities that are different from the older brother. Using this model, MM2 children are more likely to play less sport than the older brother.

Conformity Hypothesis

The sibling opposite theory, as supported by Sampson (1962), and Kammeyer (1966), suggested that first born children, regardless of sex of sibling, are more conforming to their respective sex roles than second born children. In his study, Sampson (1962) found that first born females exhibited a greater resistance to influence than later born females while first born males exhibited less resistance to influence than later born males. These findings are taken

to be consistent with a set of assumptions indicating that first born females are more significantly involved in independence training than first born males. This early independence training produces a greater need for achievement and leads to greater resistance to influence for the first born female. However, for the first born male, it leads to greater affiliation and dependency, as well as greater conformity in an influence situation.

Sampson's position appears to be supported by Kammeyer (1966). Kammeyer examined two variables, (1) State University orientation towards feminine role behaviour, and, (2) beliefs about female personality traits. He received a 90 per cent response rate from 232 unmarried, randomly selected university women who participated. In general, the findings supported the proposition that first born children are "conservators of the traditional culture" (Kammeyer, 1966, p.508). It follows that second born females and males, with a male and female elder sibling respectively, are more likely to deviate toward an opposite sex role. The results indicated that first born and only children females are found to have more traditional beliefs about female personality traits and tend to experience more harmony with their mothers' orientations toward the female sex role than later born females (Kammeyer, 1966).

In conjunction with Kammeyer, Schulz (1969), through a

series of interviews with 108 persons of varying ages and marital status, focussed on phases of the black ghetto socialization. He suggested that there is an intended socializing attitude on the part of mothers and their first born daughters to care for younger siblings, and become competent in shopping and cooking. Socialization of the first born female child is clearly based on the traditional female sex role: nurturant, dependent, and inactive physically.

First born females were found to be more likely to choose marriage over graduation from college and were more likely to describe themselves as religious (Ibid). Although first born females reached college age first, they appeared to take less advantage of the career opportunities presented to them through education. Instead, they appeared to leave college early, (in comparison with other siblings), often to get married. Speculation suggests that first born females attending university are less goal oriented with reference to course and program selection and, because of this general propensity for transient behaviour, to be less involved in university and extra curricular activities. One may predict that either only female children or first born females are not overrepresented in sports in comparison with second born females with opposite sex elders.

In further support of the expected overrepresentation

of second born females with opposite sex elders in sport, Altrus (1966) found more MF2 children went to college than FF2, and were overrepresented as physical education majors. It is conceivable that physical education may be a source for recruitment for sports or enable continued involvement. In such cases more MF2 than FF2 woman are expected to play sports due to their greater propensity for physical activity. Through such greater participation in physical activities, it is logical to suggest that a greater opportunity exists for MF2's participation in sports.

To further substantiate the prediction that MF2 children are expected to be overrepresented in intercollegiate sports, Leventhal (1965), argued that MF2 children showed more interest than MM2 children in such masculine typed activities as camping, hiking, waterskiing, and equestrian events and horse riding. These same MF2 children also demonstrate more physical strength in the area of motor fitness, ie. push ups, and greater swimming ability.

When MF2 children are related to other female dyads, they are considered tomboyish, quarrelsome, tenacious, revengeful, selfish, competitive, confident, popular, enthusiastic and possessing leadership qualities (Koch, 1956). It is possible to infer that many of these qualities may be considered valuable with regard to one's performance

in the sports world, as well as in society at large. Sport teams usually consist of individuals who possess many of these personal characteristics and thus, MF2 children when compared to females with older sisters are expected to be more involved in intercollegiate sports.

CHAPTER IV

SOCIALIZATION INTO SPORT

Every child learns certain modes of behaviour, or a specific sex role from a number of different sources, including family, parents, school, peer groups, siblings, mass media and other community agencies of socialization. Every society expects children to learn various levels of competence with specific emphasis on highly valued social activities. One of these activities is sport.

The Family

The family is the first socializing agency with which the child has contact and is probably the most important of all. The child, depending upon the family, may become impressed or interested with a number of different topics, such as education and sport. The family acts as a filter which consciously selects and screens cultural elements which may be made available to the child. This filtering process is accomplished in two ways, (1) by means of activities, ie. going places together as a family as participants or spectators in sports, the movies, etc., and,

(2) through evaluation of the activities and the people who do and do not participate in them (Elkin and Handel, 1972).

The child often gets a first taste of sport by means of the family as the socializing agent and is afforded the opportunity to decide whether or not to participate. In this situation, many children are already socially supported by the family and this decision is the first step to sport participation.

The School

The school provides the child with an orientation which places emphasis on compliance with rules and regulations, authority, and school laws.

On the assumption that socialization is situationally dependent the school provides numerous situations to learn behaviours through curricular and extracurricular activities. Sport teams have the same authority structures and, for a variety of reasons, are strongly supported for their potential for positive socialization within the school.

The Peer Group

Any child is likely to belong to more than one peer

group with some overlapping memberships. Prior to this period in the child's life, the child has often been in a position of inferiority and subordination either to parents, relatives and or older siblings. Through learning different roles connected specifically to particular activities which are enjoyed by the peer group, the individual receives attention, approval or leadership opportunities.

The opportunity to imitate a role model is accentuated by the opportunity children have to play as part of a natural socializing stage in their lives. This role model is usually a couple of years older and may be a friend, a brother, a sister, or someone the child enjoys playing with. Under certain social circumstances, the older boy who can skate faster or catch a ball more reliably becomes a role model for the younger child. The younger child sees the older child as a model of what she or he might soon become, while the older child becomes aware of this role modeling image.

Furthermore, while socializing with peers, the child has the opportunity to develop close relations of choice and subsequently the child may choose an athlete as a role model. This opportunity to choose a role model also presents itself across sex lines, facilitating those of one sex to copy or avoid the behaviour of another sex. In peer groups, younger children have a greater opportunity to copy

the behaviour and activity selection of older children since older children are the showcase. Behaviours reinforced within the peer group can become the overall focus of the style of that group. Consequently, the group can become part of an identifiable subculture within the school, specializing in athletics, academics, music or deviance, etc.

The Mass Media

The media acts as a socializing agent offering the illusion of a face to face relationship with the sport performer. Mass media, like peer groups, may also define the cultural heroes of the time. Specifically, T.V. provides an image of what the child might like to become in such situations and relationships until the child actually encounters these activities. In other words, mass media produces the sport's hero. This is accomplished through idolization and glamourization of the apparent free and easy lifestyle of the athlete, the apparent large amount of money gained for doing something one enjoys, and promoting the image of being a type of person "who has it all together". The people in mass media value sport, and children are socialized into such valued activities. Sport provides this opportunity to all children in peer groups. In sum, those children who either have athletes as role models at home, or have the same or different models presented to them through

other agents of socialization, would tend to choose to emulate those role models they personally value and which are positively reinforced.

CHAPTER V

SYNTHESIS

When considering the significance of birth order and sibling status upon individual development much of the cumulative research is found in Sutton-Smith and Rosenberg's book (1970) "The Sibling".

They dealt specifically with only children, first borns with female and male siblings, and second born children with female and male siblings. The only child was characterized as being both more dependent and more achieving than other early borns. Unlike the first born, the only child was not affected by a younger sibling and subsequently was characterized as being relatively high on aggression and low on anxiety (Sears, 1950). It was suggested that the factor of high self esteem in combination with high achievement need and aggressiveness, accounted for the apparent superiority of the early born in human performance characteristics (Sutton-Smith and Rosenberg, 1970).

First born males showed high levels of masculinity with age, with specific reference to occupational preference.

They were characterized as being high on anxiety, affiliation needs, conformity, and adjustment problems prior to age 10 (Ibid. p.146). After the age of 10, however, there was a striking reversal of scores, with the MLM becoming above average in emotional independence and competitiveness, being low on quarrelsomeness, and reducing to average levels on anxiety (Ibid. p.146).

Both second born males and females were significantly influenced in terms of development with reference to the impact of male and female siblings. When the older sibling was male, the second born child developed a pattern that was low on dependency, affiliation and conformity, while exhibiting high masculinity and lower levels of anxiety (Ibid). This child was the most athletic on the recreational inventory, and was most likely to engage in dangerous sports. Second borns with female older siblings exhibited more feminine responsiveness than was typical and a higher level of dependency and submissiveness (Sutton-Smith and Rosenberg, 1970, p. 147). These second born male children were characterized as being withdrawn and depressive rather than outgoing and enthusiastic (Ibid). They were rated as low on gregariousness and friendliness, and were seen as quarrelsome, exhibitionistic, selfish, and uncooperative with their peers (Ibid). They tended to be rated as sissy, non-tenacious, not ambitious or insistent upon their rights (Ibid).

Second born females with an elder male sibling (MF2) showed significantly more interest in athletic recreation than the all-female dyads, combining the characteristics of being most masculine, at ages, 6, 11, and 19, least feminine, and least anxious (Ibid. p.150). Kammeyer (1966) found this sibling's attitude toward female roles to be the most masculine conception of female traits, while tending to deny that women were more emotional, less aggressive, less capable of leadership, and more sympathetic. As previously stated, Koch (1956), found these girls, when related to other girls, were to be quarrelsome, tenacious, revengeful, selfish, competitive, confident, and enthusiastic.

First born females with a younger sister (FLF) were characterized to take the caretaker role and were generally rated as sensitive, feminine, independent, having a good relationship with younger sister, and often considered the "favorite" according to the father (Ibid. p.146)

First born females with a younger brother (FLM) exhibited positive traits such as being curious, original, enthusiastic, cheerful, ambitious, and tenacious at age 6 (Ibid. p.151, 152). Negative characteristics such as jealousy, competitiveness, exhibitiveness, aggression, quarreling, and being talkative were also part of their nature (Ibid. p.152). Besides her rivalry for the younger sibling's place with the mother, this child appeared to be

directly challenged by his male vigorousness (Ibid. p.152). Her response was to identify more strongly with the mothers and teachers in her environment, while continuing to be most dependent, submissive, most anxious, most competitive and highly feminine (Ibid. p.152).

Remaining in the three children family, the middle born child, appeared to do more poorly in achievement, was less popular, more aggressive, and more role diffuse (Ibid).

The last born appeared to be most like the only child. This child had the positive characteristic of the first born, achievement and popularity, but not their negative trait, anxiety (Ibid. p.154).

In summary, one expects that among males, first born children, and only children will be overrepresented in intercollegiate sports since they are considered to be highly motivated to achieve and are considered one of the most conforming to their own sex role. Second born males, with a male elder sibling are also expected to be overrepresented in sports but to a lesser degree than first born male children because of their likelihood of positively or negatively modeling the behaviour patterns and activity selection of their older brother. This copying behaviour is theoretically known as the Sibling Similarity Hypothesis, while rejection behaviour would be consistent with sibling

opposites idea. Second born female children with a male elder sibling are also expected to be overrepresented in intercollegiate sports because they too have the opportunity to model their older brother. Sex role overlapping, and sibling similarity theory, in which a second born female child learns the activities and behaviour patterns of her older male sibling, and incorporates these activities in her life style, provide the major theoretical explanations for their expected participation in intercollegiate sports.

Hypotheses

1. First born males, including only children, are overrepresented in intercollegiate sports.

2. Second born males, with a male elder sibling, are overrepresented in intercollegiate sports, but, to a lesser degree than first born male children.

3. Second born females with a male elder sibling are overrepresented in intercollegiate sports.

CHAPTER VI

METHODOLOGY

Sampling Procedure

The names of 124 full-time students who were members of intercollegiate sports teams were obtained from Concordia University, Loyola Campus in February, 1981. This data was received with the cooperation of each team's head coach. There are nine sport teams in total, five women's teams and four men's teams. The women's teams included, (1) field hockey, (2) hockey, (3) soccer, (4) volleyball, and, (5) basketball. The four men's teams consisted of, (1) hockey, (2) soccer, (3) basketball, and, (4) football.

Although skiing was classified as an intercollegiate sport by the athletic department, it had a somewhat informal structure. This problem made it impossible to obtain the data needed for inclusion of the team in the study. In addition, 7 male athletes from assorted teams, as well as one female athlete failed to respond to the questionnaire.

From a population of ninety six hundred full-time day students 100 were sampled in this study for the specific purpose of comparison. A cluster sample by academic course was used in an endeavor to generalize to the larger student population. Initially, the total student population was divided into 3 large groups of students by course. Undergraduate students generally enrolled in either one of three course levels, ie. 200-level for first year students, 300-level for second year students, and 400-level for third year or potential graduating students. Second year students were selected for this study. These second year students were considered most likely to be a direct comparison with the athletes and, as a result, were used as the sample for the data collection (see Appendix).

The next procedure was to randomly select those second year students and/or those students enrolled in 300-level courses. As of October 1, 1980, Concordia University offered a total of 878 300-level courses. These courses were offered in the departments within Arts, Commerce, Fine Arts, Science, Engineering, Computer Science, Administration and Education. Registration data by degree, prepared by Student Data Systems, indicated that there were 9600 full-time students registered for the fall term in 1980 at Concordia University. To insure a representative sample, a proportionate number of students, were randomly selected by faculty and course. The method of random sampling was to

use a table of random numbers.

A form letter (see Appendix) was mailed to each selected professor and coach asking professors and coaches for cooperation in this study. The classroom approach provided a number of economical and pragmatic advantages such as, accessibility, overall convenience, and expediency, by affording the opportunity for mass participation.

In an endeavour to control for bias, a male and female assistant alternatively distributed the questionnaires. Potential respondents were requested to answer all questions, and were given a commitment that complete anonymity would be provided.

A questionnaire survey was employed for data collection (see Appendix). The questionnaire underwent two series of revisions and a period of pre-testing in order to maximize the validity and to aid the elimination of ambiguity. The pre-testing group consisted of a convenience sample of twenty Concordia University students of the Sir George Williams Campus of Concordia University. These students were chosen because it was known that they were not participating in the study, but were still representative of the university population. Based upon the suggestions of these students appropriate revisions were made. Two revisions of the original questionnaire were made.

Operational definitions

1. Birth order was used (in the context of this study) interchangeably with ordinal position in the family.

2. An intercollegiate athlete is an individual who participated as a member of a formal intercollegiate sports team for Concordia University in 1980-81 academic year.

3. Non-participant or non-athlete refers to an individual who did not participate in formal intercollegiate sports.

4. A child without siblings and a first born child are classified together (in the context of this study) as first born children.

Statistical Analysis

The data were analyzed using the SPSS program for on-line use employing the Concordia University, a Cyber computer system. The criteria for acceptance of statistical significance using Chi Square test was the .05 level of probability.

CHAPTER VII

RESULTS AND ANALYSIS

The analysis of the data is sub-divided into three areas, each dealing with a separate hypothesis of the study.

Hypothesis Number One

The prediction that first born male children, (only children included), are overrepresented in intercollegiate sports was not supported by the data. This prediction was based upon the theory that first born children are highly motivated to achieve, are competitive, aggressive, and self confident. In addition, first born males are considered to be one of the most conforming to their own sex role and subsequently would be more likely to participate in masculine conceived activities. Sport is an activity that is generally associated with male behaviour. Sport by way of competition provided the first born male child with the opportunity for achievement as a member of a formal intercollegiate sports team. A positive association was therefore expected between first born male children and sport participation.

Table 1

Percentage of First Born Males and Other Males
From Different Birth Order Positions,
and Athletic Participation (N=181) *

		FIRST BORN MALES	OTHER MALES
ATHLETE	1.	49.3 (35)	44.5 (49)
NON ATHLETE	2.	50.7 (36)	55.5 (61)
		100.0 (71)	100.0 (110)

Chi Sq. = 0.22, df=1, Not significant at $p < .05$.

* First born males include 5 only male children.

No association was shown to exist between first born male children, (only children included), and athletic participation (Table 1). The percentage of first born male athletes was 49.3. A 4.8 per cent difference between first born male athlete participation and other born male athlete participation showed no association. The association between first born male children and athletic participation was not statistically significant at the $p < .05$ level (Chi sq. = 0.22, df= 1).

In view of these negative findings with respect to birth order and intercollegiate sport participation, it was

decided to determine whether first born males were involved differentially in another area of achievement, namely academic attainment. A significant positive correlation was expected between first born male children and high G.P.A. (ie. a grade point average of 70% or more) but this was not shown to exist in the data (Table 2):

Table 2

Percentage of First Born Males and Other Males
From Different Birth Order Positions,
and Grade Point Average (N=176)

GRADE POINT AVERAGE		FIRST BORN MALES	OTHER MALES
OVER 70 %	1.	42.4 (28)	53.6 (59)
UNDER 70 %	2.	57.6 (38)	46.4 (51)
		100.0 (66)	100.0 (110)

Chi Sq. = 1.65, df=1, Not significant at $p < .05$.

The data did not support the alternative hypothesis predicting a significant positive association between first born male children and high G.P.A. Table 2 indicated an 11.2 per cent difference between the high G.P.A. of first

born male children (42.4.) and the high G.P.A. of other male children (53.6). This comparison between first born male children and high G.P.A. revealed a negative, non statistically significant association at the $p < .05$ level (chi sq. = 1.65, df = 1).

The finding that no association was shown to exist between first born male children and high G.P.A. constituted a minor surprise in this study. Although first born male status was not associated with high G.P.A., it was to an extent consistent with the data on athletic participation and birth order (Table 1). In both cases, it was hypothesized that first born male children were highly motivated to achieve, with intercollegiate sport participation and academic attainment providing measures of such achievement. In both cases, no association was shown to exist between first born males and these two measures of human performance in the context of this study.

Hypothesis Number 2

The prediction that second born male children with a male elder sibling (MM2) are overrepresented in intercollegiate sports was not supported by the data. The major theoretical substantiation for this prediction was found in the modeling theories of the Sibling Similarity and Sibling Opposite Hypotheses. The premise depended upon the

active participation in sports by first born male children. This situation provided the opportunity for the second born male to learn and copy the behaviour and activity selection of the first born male child. These individuals (MM2) were expected to develop a propensity for sport through socialization, in early years, and were therefore more likely to play intercollegiate sports.

Table 3

Percentage of Second Born Males With a Male Elder Sibling and Other Males, and Athletic Participation. (N=181)

		SECOND BORN MALES	OTHER MALES
ATHLETE	1.	44.7 (17)	46.9 (67)
NON ATHLETE	2.	55.3 (21)	53.1 (76)
		100.0 (38)	100.0 (143)

Chi Sq. = 0.002, df = 1, Not significant at $p < .05$.

No association was shown to exist between MM2 individuals and athletic participation (Table 3). The percentage of MM2 cases among the athletes was 44.7 while 46.9 per cent of the remaining males were from a different

ordinal position, and/or had a female as an older sibling. This difference of 2.2 per cent was not statistically significant at the $p < .05$ level (chi sq. = 0.002, df = 1).

Hypothesis Number 3

The prediction that second born female children with a male sibling elder (MF2) are overrepresented in intercollegiate sports was not supported by the data. The theoretical substantiation for MF2 individuals was similar to that for MM2 cases and predicted an overrepresentation in intercollegiate sports. Sport presented an opportunity and subsequent capacity to model the behaviour, personality characteristics, and activity selection of her older male sibling. Because of the anticipated significant amount of athletic involvement of first born males, the younger sister (M1F) was provided with the opportunity for modeling. Furthermore, opposite sex siblings have shown a higher preference for play with opposite sex playmates (Koch, 1956). In sum, the Sibling Similarity Hypothesis and the presumed opportunity for learning male characteristics, activities, and behavioural patterns through socialization with playmates, provided the major theoretical support for the prediction that MF2 cases would be overrepresented in intercollegiate sports.

Table 4

Percentage of Second Born Females With a
Male Elder Sibling, and Other Females,
and Sport Participation (N=136)

		SECOND BORN FEMALES	OTHER FEMALES
ATHLETE	1.	21.4 (6)	31.5 (34)
NON ATHLETE	2.	78.6 (22)	68.5 (74)
		100.0 (28)	100.0 (108)

Chi Sq. = 0.65, df = 1, Not significant at $p < .05$.

No association was shown to exist between MF2 individuals and athletic participation (Table 4). The percentage of MF2 cases among athletes was 21.4, while 31.5 per cent of the remaining female athletes were from a different ordinal position or had a female as an older sibling. This 10.1 per cent difference was not statistically significant at the $p < .05$ level (chi sq. = 0.65, df = 1).

CHAPTER VIII

SUMMARY AND CONCLUSION

This study investigated birth order and sibling sex status as determinants of intercollegiate sport participation. The first hypothesis was tested by comparative analysis of first born male athletes with other male athletes from different ordinal positions in order to determine whether first born males were overrepresented in intercollegiate sports. This methodological procedure was used for hypothesis number 2 and hypothesis number 3.

It was found that no association existed between birth order and sport participation at the intercollegiate level. More specifically; first born male athletes were not overrepresented in intercollegiate sports. In the endeavor to be theoretically consistent, an alternative hypothesis was tested by comparative analysis of males from various ordinal positions and academic attainment (high G.P.A.). These data showed that first born males were not overrepresented in high G.P.A. groups.

Despite these findings, there was some face validity behind the hypothesis predicting that first born males would be overrepresented in measures of human performance. The body of research on first born males has indicated a

positive association with academic attainment and intelligence. Theoretically, this study was consistent in anticipating the association between first born males and athletic eminence. However, the anticipated high levels of competitiveness, aggressive self confidence, and achievement motivation of the first born male did not appear to manifest themselves in association with either intercollegiate sport participation, or high G.P.A.

No significant differences could be determined using birth order as an independent variable, and elite sport participation as the dependent variable in this study. The question that emerged concerned the validity of any link between birth order, sibling sex status, and elite sport involvement. Methodological problems in this study may have contributed to the negative results. These problems included the sampling procedure which proved to be problematic. Neither the total student population enrolled at Concordia University, Loyola Campus, nor the total number of students enrolled in 300 level courses at Loyola Campus was ascertained. In both cases, this lack of statistical information weakened measurement validity, and lead to questions as to whether a representative sample was secured. In the effort to improve measurement validity and reduce sampling error, a random sample of the total student population might have been more fruitful.

Several other explanations could account for the results shown. Older siblings may often serve as substitutes for parents in many families. This may be especially true in Quebec where families are traditionally larger. In the larger family, the first born male may be called upon to aid in the child rearing, or family economic development. Life plans could be interfered with and he could be forced to get a job immediately upon high school graduation to help support the family. The amount of time required for work would not afford the first born male the time to actively pursue sports or academics. This factor could reduce the potential for first born males to attend university as intercollegiate scholar athletes. Furthermore, because of the political situation, eminent first borns and only children may choose to leave Quebec, and complete university work (in conjunction with athletics) elsewhere.

Previous research has indicated that a significant positive association exists between first born males and athletic elitism (Petrie, 1976). These athletes were granted financial assistance at American Universities on the basis of their elite athletic status. In view of this research and in conjunction with the present data on birth order and sport participation, several considerations are suggested for the results of this study.

These considerations include the following: The education experience is different for American and Canadian athletes. American Universities offer athletic scholarships and financial assistance for athletes which often opens up educational opportunities for many individuals who might otherwise never have the opportunity to attend college. Participation in highly competitive programs, may demand such commitment of the role of the athlete that the individual would have a difficult time living up to the expectations of the role of the student. The priority for the majority of American athletes and coaches is eligibility for athletes not education. If eligibility ceases so does financial assistance, often forcing the individual to leave school. However, American Universities have developed several strategies to combat this problem.

These strategies include the following. Academic coordinators (a coaching staff member) provide tutorial assistance for players facing eligibility problems, organize mandatory study periods, keep abreast of the academic progress of athletes, and advise athletes on which courses to take and which ones to avoid. In this manner, American Universities may attract athletes possessing weak academic credentials from a variety of family income levels. As a result, non eminent scholars may be able to attend university as athletes. The individual from a low income family who fails to maintain eligibility, loses financial

assistance. In the case of the individual from a middle or upper income family, his or her failure to maintain eligibility might be considered more a reflection on that individual's personal self esteem, than the lack of opportunity to continue their education. In both cases, this situation is not viewed favourably by either the athlete or the athletic department. As a result, the athletic department would endeavor to maintain an athlete's eligibility in any manner deemed appropriate. These factors could potentially attract highly motivated, skilled, and aggressive individuals who may neither have the grades nor the financial resources to attend university, and/or attract other individuals who identify with big time college sport and want the opportunity to earn their own way through university. In the majority of American Universities, the role of the student-athlete may be characterized as athlete first, and student second.

Unlike their American counterparts, Canadian University athletes are students first and athletes second. Canadian University Athletic departments do not formally offer athletic scholarships of financial assistance to athletes. The athletic department has virtually no involvement in the guidance and support of the athlete's academic career. Admission requirements to Canadian Universities are based on academic merit and ability to pay tuition. No provisions are available for admittance based upon athletic merit. In

the final analysis, Canadian University athletes rely exclusively on themselves to maintain academic eligibility. Intercollegiate sport participation in Canada is separate and distinct from education unlike intercollegiate sport participation in the United States.

These differences between Canadian and American University Athletes and their education experiences may partially explain the differences between this study and United States based studies. Future research might provide more conclusive results regarding birth order and sport participation by comparative analysis of Canadian and American University Athletes, and non-athletes.

It may be further suggested that the particular team sport orientation at Concordia University may have led to findings inconsistent with those obtained previously from American Universities with diversified athletic programs. Concordia University offered 5 female team sports, and 4 male team sports for intercollegiate sport participation. A greater athletic program incorporating more team sports, and individual sports such as, track and field, swimming and diving, racquet sports, and gymnastics may reduce the empirical-theoretical discrepancy. The addition of individual sport athletes to the athletic group (linked here perhaps as non-athletes) may have clarified the results in the expected direction.

Despite the finding that no significant association was shown to exist between birth order and intercollegiate sport participation, both first born male athletes and non-athletes in this study were far above population expectations. Compared to the population at large, there is an apparent connection between birth order and intercollegiate sport participation, and, birth order and university attendance.

For future study, it is recommended that several universities from each province across Canada might be tapped for large scale analysis. Such a sample might provide more conclusive findings.

This research design was consistent with the majority of previous birth order research which had focussed attention on first borns, and on the parent-first born relationship. Future research might do well to focus more attention on the parent-later born relationship, and the significance that relationship plays in connection with sibling differences. However, a note of caution is needed. The high rate of divorce, the increasing numbers of broken families, and the frequency of step siblings are likely to make future research confusing and complex.

The data analysis did not include methodological controls of social class, ethnicity, and economics. Further

birth order research with greater methodological controls and a greater emphasis on individual sport participation are needed to resolve analytical and theoretical inconsistencies.

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APPENDIX

Figure 2

January 12, 1981.

Dear Professor,

I am a graduate student in Sociology of Sport, working under the direction of Dr. Brian Petrie. The lack of data in the area of "Birth Order and Sport Participation" has prompted me to research the relatively untouched field as my M. A. thesis.

Selected members of intercollegiate athletic teams, as well as a cluster sample of the student population are being asked to participate as members of the study group. I would like to distribute a short questionnaire to your class which only requires twenty minutes of the student's class time. I assure you that the information received will be treated as confidential.

Your cooperation is not only appreciated, it is the necessary ingredient for the success of the project. I will be contacting you in the near future. Thank you for your help.

Sincerely,

phone number: 484-7764

Wayne F. Major

Figure 3

November 12, 1980

Dear Coach,

I am a graduate student in Sociology working under the direction of Dr. Brian Petrie. The lack of data in the area of "Birth Order and Athletic Participation" has prompted me to research this relatively untouched field as my M.A. thesis.

Selected members of the intercollegiate athletic teams, as well as a cluster sample of the student population are being asked to participate as members of the study group. I would like to distribute a short questionnaire to your athletes which requires twenty minutes of the athlete's time. I assure you that the information received will be treated as confidential.

Your cooperation is not only appreciated, it is the necessary ingredient for the success of this project. I will be contacting you in the near future. Thank you for your help.

Sincerely,

phone number: 484-7764

Wayne F. Major

QUESTIONNAIRE ON STUDENT BIRTH ORDER AND
SPORT PARTICIPATION

DIRECTIONS:

All of the questions can be answered by circling a number, or writing in a reply. All information received will be treated as confidential.

The numbers at the right side of the page in brackets refer to computer card column numbers and may be ignored.

SOCIAL BACKGROUND QUESTIONS:

1. WHAT IS YOUR SEX? /___/___/___/1 (1-4)

Female _____ 1
Male _____ 2 (5)

2. WHAT IS YOUR AGE? (6-7)

/___/___/

3. WHAT IS THE AGE-SEX STRUCTURE OF YOUR FAMILY?

I am an	number of	present	number of	present	
only child	sister(s)	age(s)	brother(s)	age(s)	
Yes _____ 1	0	/___/___/	0	/___/___/	(8-13)
	1	/___/___/	1	/___/___/	(14-19)
	2	/___/___/	2	/___/___/	(20-25)
	3	/___/___/	3	/___/___/	(26-31)
	4	/___/___/	4	/___/___/	(32-37)
	5	/___/___/	5	/___/___/	(38-43)
	6	/___/___/	6	/___/___/	(44-49)
	7	/___/___/	7	/___/___/	(50-55)

4. ARE YOU A FULL OR PART - TIME STUDENT?

Full time _____ 1
Part time _____ 2 (56)

5. DURING ADOLESCENCE, WHO WAS MOST SUPPORTIVE OF YOUR CHOICE TO GO TO UNIVERSITY ? (CHOOSE ONE)

Female Friend or relative	_____	1	
Sister(s)	_____	2	
Mother	_____	3	
Father	_____	4	(57)
Brother(s)	_____	5	
Male Friend or relative	_____	6	
Other Persons: PLEASE SPECIFY	_____	7	(58)

6. WHAT WAS YOUR ACADEMIC AVERAGE IN YOUR LAST UNIVERSITY TERM?

80---100% or A	_____	1	
70----79% or B	_____	2	
60-----69% or C	_____	3	
50 ---59% or D	_____	4	
Below 50% or F	_____	5	
This is my first term	_____	6	(59)

7. WHAT TYPE OF OCCUPATION DO YOU INTEND TO APPLY FOR AFTER GRADUATION?

Please specify : _____ : (60-61)

: _____ : (62-63)

8. WHAT WAS THE HIGHEST EDUCATIONAL ATTAINMENT OF THE MAJOR PROVIDER OF YOUR FAMILY UPON YOUR UNIVERSITY ENROLLEMENT?

Grade 8 or less	_____	1	
Some secondary	_____	2	
Secondary completed	_____	3	
Post secondary	_____	4	
Some University	_____	5	
University completed	_____	6	
Some Post Graduate	_____	7	
Post Graduate completed	_____	8	(64)

9. WHAT WAS THE APPROXIMATE YEARLY INCOME OF YOUR FAMILY UPON YOUR UNIVERSITY ENROLLMENT?

Less than \$3,000	_____	1	
\$3,001 to \$7,000	_____	2	
\$7,001 to \$10,000	_____	3	
\$10,001 to \$15,000	_____	4	
\$15,001 to \$20,000	_____	5	
\$20,001 to \$25,000	_____	6	
\$25,001 and plus	_____	7	(65)

10. WHAT WAS THE OCCUPATION OF THE MAJOR PROVIDER OF YOUR FAMILY WHEN YOU FIRST ENTERED UNIVERSITY? /___/___/ (66-67)

: _____ : _____ : /___/___/ (68-69)

11. ARE YOU A MEMBER OF A CONCORDIA UNIVERSITY INTERCOLLEGIATE ATHLETIC TEAM?

Yes _____ 1 (70)
No _____ 2

IF YES, PLEASE SPECIFY TEAM BELOW. /___/ (71)

: _____ : _____ : _____ : (72)

IF NO, PLEASE GO TO QUESTION NUMBER 17. THANK YOU.

13. WHAT AGE WERE YOU WHEN YOU FIRST STARTED TO PLAY ORGANIZED SPORTS? /___/___/___/2 (1-4)

DID NOT PLAY _____ 1
DID PLAY _____ 2 (5)

PLEASE SPECIFY AGE /___/___/ (6-7)

14. WERE YOU A MEMBER OF A HIGH SCHOOL INTERSCHOLASTIC ATHLETIC TEAM?

No _____ 1
Yes (PLEASE SPECIFY BELOW) _____ 2 (8)

: _____ : _____ : /___/___/ (9-10)

: _____ : _____ : /___/___/ (11-12)
/___/___/ (13-14)
/___/___/ (15-16)

15. HOW WAS YOUR INTEREST IN PLAYING ORGANIZED SPORTS FIRST AROUSED ? CHOOSE THE MOST IMPORTANT.

- Did not participate _____ 1 (17)
- School _____ 2
- T.V. _____ 3
- By talking with friends _____ 4
- By attending a sporting event _____ 5
- By reading about sport _____ 6
- Through other media _____ 7
- Other (PLEASE SPECIFY BELOW) _____ 8

: _____ : /__/_/ (18-19)

16. DURING ADOLESCENCE, WHO WAS MOST SUPPORTIVE IN ENCOURAGING YOUR ATHLETIC CAREER? CHOOSE ONE.

- I did not have an athletic career _____ 1
 - Sister(s) _____ 2 (20)
 - Mother _____ 3
 - Father _____ 4
 - Brother(s) _____ 5
 - Mass Media Sport Heroine or Hero _____ 6
 - Coach _____ 7
 - Friend or Relative _____ 8
 - Other person _____ 9
- PLEASE SPECIFY : _____ : /__/_/ (21-22)

17. ARE YOU NOW, OR HAVE YOU BEEN A MEMBER OF A UNIVERSITY INTRAMURAL ATHLETIC TEAM(S)?

- No _____ 1
- Yes _____ 2 (23)

PLEASE SPECIFY TEAM(S) : _____ : /__/_/ (24-25)

: _____ : /__/_/ (26-27)

18. DURING ADOLESCENCE, HOW ACTIVE WAS YOUR MOTHER IN SPORTS AND OUTDOOR PHYSICAL RECREATION?

- Never _____ 1
- Once a Month _____ 2
- Twice a Month _____ 3
- Once a Week _____ 4
- 2 to 3 times Weekly _____ 5
- Daily _____ 6 (28)

19. DURING ADOLESCENCE, HOW ACTIVE WAS YOUR FATHER IN SPORTS AND OUTDOOR PHYSICAL RECREATION?

- Never _____ 1
- Once a Month _____ 2
- Twice a Month _____ 3
- Once a Week _____ 4
- 2 to 3 times Weekly _____ 5
- Daily _____ 6

(29)

20. HOW ACTIVE WAS YOUR ELDEST SISTER IN SPORTS WHEN YOU WERE GROWING UP?

- Never _____ 1
- Once a Month _____ 2
- Twice a Month _____ 3
- Once a Week _____ 4
- 2 to 3 times Weekly _____ 5
- Daily _____ 6

(30)

21. HOW ACTIVE WAS YOUR ELDEST BROTHER IN SPORTS WHEN YOU WERE GROWING UP?

- Never _____ 1
- Once a Month _____ 2
- Twice a Month _____ 3
- Once a Week _____ 4
- 2 to 3 times Weekly _____ 5
- Daily _____ 6

(31)