

ADULT SPORT PARTICIPATION
PREFERENCE OF ELEMENTARY
SCHOOL STUDENTS

A Thesis Presented
to
The Graduate Faculty
University of Wisconsin-LaCrosse

In Partial Fulfillment
of the Requirements for the
Master of Science Degree

by
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ABSTRACT

CARR, Nancy L. Adult sport participation preference of elementary school students. M.S. in Adult Fitness/Cardiac Rehabilitation, 1988, 71 p. (Dr. W. Van Atta).

This study was designed to determine if sex, age, and family sport participation had any influence on elementary school students' (N=222, age 6-10) choices of type and number of sports to participate in upon reaching adulthood. A twenty-seven item questionnaire was used to determine age, sex, desire to participate in a given sport, as well as the number of sports chosen. [Questionnaire responses were evaluated by determining frequency and percentage of yes versus no answers to each sport.] A X^2 test was used to determine statistical significance between sex, age, age by sex variables for selected sports choices ($p < .05$). A two-way ANOVA and a Scheffe Post Hoc test were used to analyze sex and age differences in the number of sports chosen ($p < .05$). It was concluded that sex, age, and age by sex variables had a significant relationship to selected sports choices. Sex showed a significant difference in the number of sports chosen. Males chose significantly more sports than females. Age showed a significant difference in that six year olds selected significantly more sports for participation than the eight year olds. No significant differences were seen in age by sex groupings and number of sports chosen.

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CHAPTER I

INTRODUCTION

The importance of sex differences in elementary school play has been relatively neglected in studying child development and physical education. The play activities in which children participate, along with those in which they prefer to participate, are important aspects to be considered by elementary school physical educators, and others concerned with the play of children. Perhaps educators as well as social researchers, have ignored the subject of children and play because they feel that sex differences in the preferred activities of children are obvious, unimportant, or "natural". Perhaps no one paused to reflect upon the consequences of children's play activities, as well as their preferences for those activities, because of the tendency to view play as trivial. Yet, it is during play that we have an opportunity to observe the development of exact sex role skills of children. Differences in play behaviors quite often may be determined by sex roles children have obtained from their environment.

There is evidence to indicate that the sex role stereotypic socialization process begins early and becomes more intense with age (Tyron, 1980, Williams, Bennett, & Best, 1975). Classroom research has shown that, left to their own devices, children will make stereotyped decisions at an early age about what they play with, and how they play. These children are reflecting society's attitude reflected in their teachers' expectations (Cooper 1986).

Statement of the Problem

The problem addressed by this study was to determine what differences, if any, exist among male and female elementary school students in preference for adult sports they wish to participate in when they become adults.

Subproblems:

1) Do males ages six through ten differ from females ages six through ten in preference for adult sports?

2) Does the presence or absence of adult males or females in the home affect preference for adult sports?

Need for the Study

If knowledge and incorporation of sex roles and their stereotypes increases to about the second grade level (Anderson, Lorenz, and Pease, 1986, Tyron, 1980, Williams et al., 1975), and then levels out until the individual has a self-accepted sex role established, it seems strange that very little research has been done to establish if there is a difference in preferences for certain sports. Perhaps if exposure to a wide range of non-stereotyped sports could be provided for elementary students, a great disservice to males and females could be avoided by allowing expression of physical activity through non-sex-stereotypic activities. For example, activities that would allow males to express physical activity through dance, or to allow females to participate in displays of aggression and competition through games of football or soccer, could increase the range of activities from which children could

make choices. It is misguided and naive to assume children only show physical and emotional characteristics associated with their sex. Being born into one sex should not, and does not automatically either predetermine or restrict participation in, or preference for, any given activity or sport (Rosen, O'Brien, & Evans, 1986).

There are many reports from secondary schools that adolescent girls were very unenthusiastic about their physical education curriculum when compared to boys (Leaman, 1986). If this is occurring, perhaps the individual needs of males and females need to be considered not only at adolescence, but at childhood where stereotypes and role models can be of the utmost influence. Primary teachers need to achieve a balance of game activities, reinforce the equal value of boys' and girls' achievements, and facilitate a development in a social environment which encourages co-operation between sexes, not antagonism (Cooper, 1986).

Greendorfer & Lewko (1978) identified that parents were the most significant socializing agent on both boys and girls. They further determined that fathers had a significant influence on the sports choices of their children.

If sex roles are established as early as eight years of age or second grade, and fathers are considered the significant influence on sport choice in children, it could possibly be assumed that adult sport choices may be established well before adulthood, and strongly influenced by the presence or absence of an adult male in the home. Although the literature has not shown this, the greater visibility of women's sports programs since the 1970s may have contributed to the increased significance of female sports role models. Therefore, the

purpose of this study was to investigate whether there are differences between male and female elementary school students in participation preference for adult sports, and whether male and female adults living in the home influenced those choices.

Statement of the Null Hypotheses

The null hypothesis adopted in this study indicated that there would be no difference in the sport participation preference of males and females. In addition, the following null hypotheses were tested:

1) There is no difference between individual children ages six through ten for male and female sport preference for adult sports at adulthood.

2) There is no difference between the number of sports preferences, and the preference between a particular sport at adulthood.

Assumptions

1) The subjects responded accurately to the Sports Participation Preference Survey.

2) The three face Likert-scale is a valid measure of positive, neutral, or negative response.

3) Parents/Guardians responded correctly on the informed consent concerning individuals living in the home, and their sports participation.

4) Teachers accurately administered the survey according to instructions.

5) All siblings between six and ten years of age participated in the survey.

Delimitations

1) This study was delimited to 93 males and 103 females between the ages of six and ten in each of grades one through four at Clay Lamberton and Washington Elementary Schools in Berlin, Wisconsin.

2) All data were collected between January 11th and January 15th, 1988.

Limitations

1) Because of the difficulty in separating members of a single class, subjects were volunteers instead of a random sample.

2) Motivation could be a problem, since no grade was applied to the test.

Definition of Terms

Elementary Physical Education Consultant-Individual having a working knowledge of elementary physical education, and a good understanding of elementary school age children.

Adult Sport-item appearing in a sport dictionary participated in by adults (Menke, 1977).

First Grader-a child enrolled in a first grade class, who is not in any special education service offering.

Second Grader-a child enrolled in a second grade class, who is not in any special education service offering.

Third Grader-a child enrolled in a third grade class, who is not in any special education service offering.

Fourth Grader-a child enrolled in a fourth grade class, who is not in any special education service offering.

Sport Participation Preference-sport the individual would like to play as an adult.

Sport Participation Preference Survey(SPPS)-a survey of sport choices to determine sports the child would like to participate in as an adult.

Regular Sport Participation-Playing an organized sport in season on more than an occasional basis.

CHAPTER II
REVIEW OF LITERATURE

Introduction

The purpose of this study was to investigate differences among male and female elementary students, and their preference for participation in sports when they reach adulthood, and whether the presence or absence of adult males or females in the home and their own sports participation influences those choices.

Talbot (1986) defined gender as, "the socially constructed, normative conception of male/female status"(p.120). This definition can be the central focus for understanding boys and girls, and their sports participation. Definitions of masculinity and femininity depend upon the definition of gender. It is defined as "the stereotyped sets of expected attributes and qualities associated with social definitions of gender" (Talbot, 1986, p.120). What are male sports and what are female sports? What does it mean to be masculine in sport or feminine in sport? Is it right for boys to play girls' sports, and girls to play boys' sports? How do all of the answers to these questions influence boys' and girls' participation preference for sport? In order to answer the above questions, it is important to recognize the social construction and representation of gender as fundamental to sport.

Schutz, Smoll, Carne, and Mosher (1985) tested and used a Likert-scale of five faces to measure the psychosocial factors influencing

children's intentions to exercise. They also established that a three face scale of a smile to equal a yes answer, a straight face for a neutral answer, and a frown to equal a negative answer, with a I do not understand category would work. This testing appeared valid for use with elementary students to determine factors influencing children and sport participation and preference.

Critcher (1986) stated that sport is effectively defined as an activity of young, white, middle-class males. Substantial incursions into the definition of sport have been made by other groups, but the conditions of entry always seem to be laid down by this dominant group. Female participation in sport is taken to be a contradiction of conventional feminine identity.

Extrinsic-Intrinsic Factors

Researchers have tested the self-actualization (fulfillment) of males and females who were athletes, and those that were not. Male and female athletes had high self-actualization scores along with non-athlete females, when compared to non-athlete males (Schindler & Waters, 1986). Perhaps this may be explained by the fact that males tend to have what is called a more extrinsic attitude toward play with its competition for prestige, favors, and ego-gratification (Kane, 1982). This effect of external events and experiences could be due partly by expectations of society put on males to be athletic as well as successful and career oriented (Schindler & Water, 1986). Females, however, are praised not only for athletic ability, success and career orientation, but are also praised for characteristics such as

gentleness, sensitivity, and warmth. Thus, females receive conflicting messages from society. This conflict may cause them to be more inner-directed rather than letting outside forces determine their self-actualization (Schindler & Waters, 1986). Intrinsic satisfaction, which most females express, is this inner directed form of play dictated by a human need to interact with the environment in order to achieve an optimal level of stimulation and interest (Snyder, 1983).

A study by Anderson, et al. (1986) contributes further evidence that these intrinsic-extrinsic differences do not shift until about third grade. Up until this time both males and females have an intrinsic motivation for sports participation. After third grade, it appears to separate, with males being largely motivated extrinsically and females being motivated intrinsically. The study further expressed that children who come to place a high value upon extrinsic rewards may experience a decrease in intrinsic satisfaction from sport participation. Highly intrinsically motivated children may experience a loss in self-determination and thus change their orientation or just drop out. If females are largely intrinsically motivated, any or some difference between male and female participation in sport and even preference for sports may possibly be explained.

Sex-role orientation

Sex-role orientation was found to have a significant influence on what is called professionalization of attitude toward play or sport. Professionalism is another means of describing extrinsic motivation, or emphasizing skill acquisition and victory as the reasons for sport

participation. Women who perceived themselves as having a masculine orientation, were more likely to endorse a "male" or professional attitude toward sport. In contrast, only a small number of women with a feminine orientation were "professionalized" in their attitudes toward play. These findings indicate, that those who held "male" attitudes, or a masculine sex-role orientation tended to carry these attitudes over in the play and sport world by endorsing skill/victory as the most important factors in game playing (Kane, 1982).

The work of Jackson and Marsh (1986) showed that female and male athletes scored higher than female and male non-athletes on masculinity indices. The female athletes scored equally as high in femininity as non-athletes. The fact that it was mainly the positive aspects of masculinity that separated the athletes from the non-athletes may be because it is positive masculine characteristics, such as confidence, competitiveness, strength, and firmness, that are more applicable to the sporting situation, or socially perceived "non-feminine" activities. There also appeared to be a difference in role conflicts for females who participated versus those who did not, in that those females who participated regularly felt more at ease participating than those who did not participate on a regular basis.

Sanguinetti, Lee, and Nelson (1985) found male expectations of success to be highest for masculine-typed football and neutral-typed swimming, whereas female expectations were highest for feminine-typed ballet.

Sutton-Smith, Rosenberg, and Morgan (1977) determined that games and sports are positively associated with the male sex role, but

negatively associated with the female sex role. Younger female children in third grade showed a wider range of preference compared to a narrower range by sixth grade. Younger males decreased their preference for "females" items as determined by previous preference studies, by sixth grade.

Csizma, Wittig, and Schurr (1988) compared the work of Matteo in 1984, and that of Metheny in 1965, to present masculinity-femininity ratings of selected sports. They found consistency for those sports considered to be extremely masculine or feminine. It appears that perceptions of the masculinity of femininity of sports are influenced by the gender of who is actually participating in those sports, as well as the physical activities involved in the sports. Csizma reports that Metheny in 1965 used three categories of sports for identifying their perceived appropriateness for female participation. She used "not appropriate", "may be appropriate", and "wholly appropriate" answers (p. 51). Sports involving subduing an opponent by bodily contact, applying force to heavy objects, projecting the body into or through space over long distances, and face-to-face cooperative competition in which some bodily contact may occur included boxing, weight lifting, longer foot races, and all team sports were considered "not appropriate". "Wholly appropriate" sports involved projecting the body in aesthetically pleasing patterns, using manufactured devices such as to facilitate bodily movement, applying force through a light implement, overcoming resistance of a light object, and competing where a physical barrier is present. Sports in this category are figure skating skiing, golf, tennis, volleyball, bowling, and swimming. "May be appropriate" sports

involved moderate distances, weight objects, and a display of strength in controlling bodily movement. Examples of this are shorter running races, and gymnastics.

Out of all of this came a validated list of sports categorized as masculine, feminine, or neutral.

Several researchers have tried to identify sports according to their sex type, or their acceptability for female participation but few sports appear consistently typed (Kingsley, Brown & Seibert 1977, Snyder & Spreitzer 1978). Swimming, tennis, and gymnastics have consistently been judged more acceptable than basketball for female participation (Csizma, Wittig, and Schurr 1988).

As stated previously, there is evidence that the sex-role stereotypic socialization process begins early, and becomes more intense with age. This increase occurs until about third grade when sex-roles seem to be entrenched (Tyron, 1980). Changes if any at adolescence and adulthood may be caused by different socializing factors than changes during childhood (Greendorfer, 1977). A study by Williams et al. (1975) polled boys and girls in kindergarten and second grade concerning the use of female items, male items, and neutral items. These determinations were made by a previous preference-use questionnaire of children of the same age. Children appeared to have clearly defined beliefs about who would like to use certain pieces of equipment, and these beliefs coincided with stereotypic sex-role behaviors in society at large. How do these sex roles become established?

Education

Jahandarie (1986) established that schooling was the major cause of a developmental shift from a perceptually-based to a conceptually-based categorization preference. This is interpreted as saying the more schooling the child has, the more that child is socialized to conventional social roles and ideas.

Cooper (1986) felt that the teachers of infants appear to be much more sensitive to the issues of influence of society and teacher expectations, and create in their physical education lessons learning situations where children are not segregated by sex, or by the skills and attitudes they are expected to acquire. However, by the time children reach ages seven to eleven, many schools segregate boys and girls for games and offer them different and separate opportunities. Elementary schools seem to have inherited a games curriculum based on institutionalized sport forms developed for adults, with their stereotypic sex-roles. Cooper also felt primary teachers need to achieve a balance of game activities, reinforcement of the equal value of boys' and girls' achievements, and enable this development to take place in a social situation which encourages cooperation between the sexes.

It has been found that any decision to separate five to ten year old boys and girls in physical education lessons, based upon physical or physiological differences is ill-founded. There are no structural or functional differences that differentially affect motor development in children of this age, to any marked degree (Connell, 1986).

Scranton (1986) determined that the dominant assumption of girls' physical education teachers is that girls are less physically capable (strength and stamina) than boys, and in general, exhibit specific "feminine" characteristics (poise, grace, flexibility, and finesse). While there is considerable debate as to whether these differences are rooted in biology or culture, Scranton felt the emphasis remains on the acceptance of physical differences in ability capacity, and the desire to reproduce these differences through the teaching of physical education. She feels the challenge for physical education is to move toward denying ideologies of femininity and masculinity. For equal opportunity to exist, issues relating to physical attributes and sexuality must be given the same consideration as issues relating to equal access for participation. Unless curriculum and teaching strategies are changed, equal participation will continue to be a problem with children who wish to participate in sex-role inappropriate sports.

Classroom research has shown that, left to their own devices, children seem to make stereotyped decisions about what they play with and how they play at a very early age. These children are probably reflecting social and parental attitude, and often a teacher's expectations (Cooper, 1986).

Choosing Sports

Lever (1976) determined that elementary school children spend approximately twenty-four percent of their free time in non-play. Twenty-four percent of their time is spent on what is called vicarious

pasttimes (including television), and fifty-two percent is spent in real play. She found that boys play outdoors more than girls; boys more often played in large groups that were more heterogenous in age; girls more often played predominantly boys' games than boys played in girls' games. The research also determined that boys play about sixty-five percent competitive games while girls only played about thirty-five percent. An interesting fact was observed: girls that played boys' games had to do so as a serious participant and suffered being labelled a "tomboy", while boys could play girls' games as long as they were not serious, and were annoying to the girls. Boys tend to adopt games characterized by high levels of skill and strategy, while girls choose games with a high degree of social interaction (Corbin & Nix, 1979, Duquin, 1977, Lever, 1976).

It seems that societal expectations are that a girl may participate in boys' sports until the age of seven, but then she must grow out of it or be labelled a "tomboy". Whereas, the boy must never seriously participate in girls' sports, or possibly be labelled mentally ill, or homosexual (Lever, 1976). Why then does Talbot's (1986) work indicate that girls' game and sport preferences are widening while boys' are staying the same? Perhaps the male role is already wider, and the female role has been widening to catch up.

Socioeconomic status appears to play a very significant part in sport preference and participation. Hasbrook (1986) and Greendorfer (1978) suggested that the lower the socioeconomic status the more likely girls are to participate in team sports, while the higher the status, the more likely the girl will participate in dual or individual sports.

Loy (1969) noted this same phenomenon for males.

Social influences can be many on children as noted previously, but no influence seems as strong as that of the parents. Snyder & Spreitzer (1976) determined the sport socialization began in childhood and continued into adolescence, and that encouragement from significant others was of great importance. Greendorfer & Lewko (1978) determined that the guardians or parents were the significant socializing agent for both boys and girls. When comparing the two parents, they determined that the father had the only significant influence on both males and females. This directly contradicts earlier work that showed female sport participants tended to choose their same-sex parent, rather than their cross-sex parent, as their sport significant other, and chose traditional sex-linked sport orientations. Cross-sex choices would lead to non-traditional sports choice (Snyder & Spritzer, 1973). Perhaps this can be explained by Greendorfer's findings (1977) that determined that parents respond differently to the female than to the male child regarding sport participation. Parents if they responded to the child concerning sport participation tended to respond in sex-stereotypic fashion. As previously stated though, the father was determined to be the only significant influence on sport participation in both male and female children (Greendorfer & Lewko, 1978). Gregson, and Colley (1986), showed a positive correlation between sport participation in adolescent females, and parental sport participation. The absence of any significant correlation between male adolescent sport participation and parental participation, indicates that parental influence is not a relevant factor to their sports participation at

adolescence. This corresponds well to the fact that Greendorfer (1979) found that female intercollegiate athletes often come from homes where at least one parent is an active sport participant. Does this happen at the pre-adolescence level also? Where does the influence begin? Perhaps the second grade sex-role shift is a good place to look.

It is important to observe and appreciate the importance of all the mentioned concepts, because they form the basis for relating possible male and female differences in sport and game participation and preference as largely socially learned and reinforced, and therefore, not biological and unchangeable. Parental influence is largely responsible for this socialization, and the presence of a male father figure seems to be the most influential, although parental participation in general seems important also. If children learn their sex-roles early, and are strongly influenced by a father figure, or parental participation, then their conceptions of what adult sports they will be playing at adulthood could be very accurate when compared to those they actually play when they do reach adulthood. These choices could be influenced by whether or not an adult male (father figure) is present in the home, or one or both parents actively participate in sports. This could occur not only in general sports participation, but in specific sports selections.

CHAPTER III

METHODS

Preliminary Procedures

Administrative consultation and approval for the research were necessary before any part of the project could be done. Initial permission for the research was obtained from Mr. Raymond Kinsiger, Superintendent of the Berlin Public Schools, Berlin, Wisconsin by letter, and his contact with the Berlin school board (Appendix A). Once permission was obtained to work with students in the Berlin Public Schools, the cooperation of Mr. Robert Sillanpaa, elementary school principal, and that of instructors in grades one through four were obtained through group meetings at Clay Lamberton and Washington Elementary Schools.

Prior to undertaking data collection, the aid of elementary physical education consultants was used to help develop the Sports Participation Preference Survey (SPPS), and to make sure the items on it were understandable to students in grades one through four.

Selection of Subjects

A total of 223 grade one through four students, ages six through ten, at Clay Lamberton and Washington Elementary Schools served as the subjects for the study. The sample included 93 males and 103 females who were enrolled in school during the 1987-88 school year. With the assistance of the teachers of grades one through four, a list of participants was established with class rosters.

All possible subjects in the above classes were given a parental consent form with an information sheet for their parents (Appendix A). The information sheet contained a description of the purpose of the study, and information on what the study would include. The consent forms also contained a survey for household members asking what individuals lived in the home with the child, their age, sex, and sports they were regularly involved in. Regular sports participation was defined as playing an organized sport in season on a regular basis.

Two days were allowed for return of the consent forms and surveys. If a child's consent form was not received within the two day period, another form was sent out by the teacher and asked to be returned in three days. If after five days the consent form was still not received, then the child was not allowed to take the SPPS (See Appendix B). Upon receipt of the consent forms, all class members with parental consent were given the survey orally by their teacher, and asked to indicate their written responses.

Sport Participation Preference Survey (SPPS)

The SPPS was designed specifically for use with elementary school students. The survey had been established as a result of a consultation with an elementary physical education consultant to create appropriate sport choices and to eliminate any comprehension difficulties. The survey was made up of a list of twenty-seven sports that were recommended by the consultant as being available and comprehensible to grade one through four students in the Berlin, Wisconsin area. The original list of sports was selected from the literature and submitted to the consultant. The consultant was asked to

indicate any sports that would be known by students in grades one through four. The twenty-seven sports considered comprehensible were included on the SPPS. A random assignment of order was created by drawing so that no order or bias on the list was established.

Using a three point Likert-scale of face pictures, subjects selected a positive-yes answer (smiling face), a neutral-do not know answer (straight face), and a negative-no answer (frowning face). Students were instructed as to the meaning of each face by their teacher, and then were read each sport aloud and permitted time to make a choice before the next sport was read. Leaving the faces blank for a specific sport meant that the student did not know the the sport. Any students with questions concerning meaning were instructed to leave the answer blank. The SPPS is contained in Appendix B.

The SPPS was administered to subjects as a group during their regular physical education classes. Both written and verbal directions were given to the teachers administering the test, and the subjects to help them understand the purpose and procedure for the survey.

Items on the questionnaire were catagorized three for a smiling face, two for a frowning face, one for a straight face, and zero for a blank question. The fixed-alternative answers were then statistically analyzed.

Household members' relationship to the child, sex, age, and sport choices and/or participation were also statistically analyzed.

Data Analysis

A Chi-square analysis was used to determine the differences in participation preference between males and females at each age for

each sport, the number of sports chosen, and a comparison of number of sports chosen in relation to wanting to play a specific sport.

Whether or not adult males or females were in the home, and if their sports choices or participation had any influence childrens preferences could not be examined. A two-way analysis of variance was used to determine age, ses, and age/sex differences in number of sports chosen. A Scheffe's Post Hoc test was used to determine exact differences between age groups after the two-way anova. The level of significance for this study was established at the .05 level.

CHAPTER IV

RESULTS

Purpose

The purpose of this study was to analyze the adult sports choices of elementary students and to examine any age, sex, and family influence differences. A sample of 320 grade one through grade four (ages six through ten) children in public elementary education were surveyed in class in January of 1988 to determine in what sports they wished to participate in when they reached adulthood. Parental sports participation information was also obtained via questionnaire on the informed consent. Two hundred twenty-two questionnaires were completed correctly by parent(s) and child for a return of 68 per cent. One hundred thirty females and ninety-two males completed the questionnaires. This chapter will present the questionnaire responses, along with an analysis of sports choices children wish to participate in as adults and discussion of those results.

Subject Background and Information

Demographic Information

Age. The general demographic information for the subjects in this study is presented in Table 1. The ages of the subjects covered a range of four years, with the youngest subject having an age of six and the oldest subject having an age of ten. The mean age for all students was 7.9 years. There were fairly even groups except for the ten-year-old group that was about one half the other groups. This is consistent with

Table 1
Demographic Data: Elementary School Children

Group	Frequency	%
Sex		
Male	92	41.4
Female	130	58.6
Age & Sex		
Six year olds	40	18.0
Male	17	7.6
Female	23	10.4
Seven year olds	53	23.9
Male	21	9.5
Female	32	14.4
Eight year olds	50	22.5
Male	21	9.5
Female	29	13.1
Nine year olds	50	22.5
Male	19	8.5
Female	31	14.0
Ten year olds	29	13.1
Male	14	6.3
Female	15	6.7
Grade		
First	60	27.0
Second	56	25.0
Third	47	21.0
Fourth	60	27.0

the fact that about 50 per cent of ten year olds in January would be in fifth grade and beyond the range of this study.

Sex. There was approximately 17% more females than males in this study.

Grade. There was a fairly even distribution by grade for grades one, two, and four. Grade three was smaller due to the failure of one class instructor to return the questionnaires.

Family Participation. There were 191 total families in the study. A large percentage of the family make-up was two biological parents (71.2%), with the next biggest group single mother families (16.3%).

Individual Sports Participation Preference Information

Questionnaire answers were separated into two groups and analyzed as such. One group was made up of yes answers, and the other group was made up of no, do not know, or do not understand answers which were considered non-yes answers. Table 2 shows the frequency and percentage of yes answers all inclusive of age, and broken down by age group, sex, and sex and age group. Sports popularity ranged from swimming as the most popular to boxing as the least popular. Table 3 shows sport popularity by rank rather than percentage for the total population, each sex, and each age and sex group. The larger female subject number appeared to influence the total frequencies and percentages for many sports, so that those sports that were popular with females were quite often the most popular with the entire group.

Table 2

Sport Popularity: Frequency and Percentage of Yes Answers
Total and Age Group

Sport	Total		Age		6		7		8		9		10	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Swim	182	82	36	90	45	85	36	72	45	90	20	69		
M	64	69	14	82	13	62	12	57	15	79	10	71		
F	118	91	22	96	32	100	24	83	30	97	10	67		
Rollerskate	165	74	34	85	37	70	30	60	40	80	24	83		
M	47	51	12	70	7	33	8	38	11	58	9	64		
F	118	91	22	96	30	94	22	76	29	93	15	100		
Fish	144	65	32	80	33	62	32	64	29	58	18	62		
M	79	86	16	94	15	71	19	90	16	84	13	93		
F	65	50	16	69	18	56	13	45	13	42	5	33		
Bike	140	63	25	62	34	64	30	60	34	68	17	59		
M	52	56	9	53	13	62	9	43	10	53	11	78		
F	88	68	16	69	21	66	21	72	24	77	6	40		
Ice Skate	131	59	28	70	33	62	24	48	33	66	13	45		
M	33	36	9	53	8	38	5	24	6	31	5	36		
F	98	75	19	83	25	78	19	65	27	87	8	53		
Gymnastics	131	59	28	70	33	62	29	58	32	64	9	31		
M	35	38	9	53	13	62	7	33	6	31	0	0		
F	96	74	19	83	20	62	22	76	26	84	9	60		
Volleyball	124	56	22	55	25	47	25	50	38	76	14	48		
M	39	42	8	47	8	38	6	28	13	68	4	28		
F	85	65	14	61	17	53	19	65	25	81	10	67		
Bowling	123	55	25	62	29	55	27	54	27	54	15	52		
M	61	66	13	76	11	52	12	57	14	74	11	78		
F	62	48	12	52	18	56	15	52	13	42	4	27		
Running	118	53	27	67	33	62	21	42	26	52	11	38		
M	40	43	9	53	14	67	4	19	7	37	6	43		
F	78	60	18	78	19	59	17	59	19	61	5	33		
Hunting	118	53	27	67	25	47	18	36	28	56	20	69		
M	77	84	16	94	15	71	15	71	18	95	13	93		
F	41	31	11	48	10	31	3	10	10	32	7	47		
Baseball	118	53	27	67	27	51	23	46	29	58	12	41		
M	76	83	15	88	18	86	16	76	16	84	11	78		
F	42	32	12	52	9	28	7	24	13	42	1	7		
Downhill Ski	114	51	25	62	31	58	21	42	26	52	11	38		
M	52	56	14	82	10	48	10	48	11	58	7	50		
F	62	48	11	48	21	66	11	38	15	48	4	27		
X-Country Ski	110	50	21	52	25	47	21	42	28	56	15	52		
M	54	59	12	70	10	48	11	52	12	63	9	64		
F	56	43	9	39	15	47	10	34	16	52	6	40		

Table 2
Sport Popularity (Cont.)

Basketball	101	46	21	52	21	40	19	38	26	52	14	48
M	63	68	15	88	13	62	12	57	14	74	9	64
F	38	29	6	26	8	25	7	24	12	39	5	33
Soccer	93	42	13	32	16	30	22	44	28	56	14	48
M	52	56	8	47	12	57	12	57	12	63	8	57
F	41	31	5	22	4	12	10	34	16	52	6	40
Golf	92	41	22	55	23	43	16	32	20	40	11	38
M	50	54	12	70	11	52	8	38	11	58	8	57
F	42	32	10	43	12	37	8	27	9	29	3	20
Football	91	41	21	52	24	45	16	32	18	36	12	41
M	71	77	14	82	17	81	13	68	13	68	12	86
F	20	15	7	30	7	22	1	3	5	16	0	0
Aerobics	90	41	19	47	22	41	19	38	21	42	9	31
M	14	15	6	35	5	24	0	0	2	10	1	7
F	76	58	13	56	17	53	19	65	19	61	8	53
Tennis	89	40	22	55	20	38	17	34	20	40	10	34
M	30	33	8	47	8	38	5	24	5	26	4	28
F	59	45	14	61	12	37	12	41	15	48	6	40
Weightlift	86	39	22	55	19	36	16	32	17	34	12	41
M	66	72	15	88	16	76	12	57	12	63	11	78
F	20	15	7	30	3	9	4	14	5	16	1	7
Softball	76	34	16	40	16	30	14	28	20	40	10	34
M	40	43	6	35	11	52	9	43	6	31	8	57
F	36	28	10	43	5	16	5	17	14	45	2	13
Wrestling	70	32	16	40	17	32	14	28	13	26	10	34
M	60	65	12	70	15	71	13	62	10	53	10	71
F	10	7	4	17	2	6	1	3	3	10	0	0
Hockey	67	30	13	32	19	36	12	24	13	26	10	34
M	45	49	9	53	10	48	8	38	9	47	9	64
F	22	17	4	17	9	28	4	14	4	13	1	7
Ballet	64	29	17	42	19	36	7	14	13	26	8	28
M	2	2	0	0	1	5	0	0	1	5	0	0
F	62	48	17	74	18	56	7	24	12	39	8	53
Square Dance	51	23	8	2	15	28	11	22	13	26	4	14
M	4	4	3	18	1	5	0	0	0	0	0	0
F	47	36	5	22	14	44	11	38	13	42	4	27
Archery	46	21	10	25	13	24	7	14	9	18	7	24
M	35	38	6	35	9	43	5	24	8	42	7	50
F	11	8	4	17	4	12	2	7	1	3	0	0
Boxing	32	14	13	32	6	22	2	4	4	8	7	24
M	26	28	9	53	5	24	2	9	3	16	7	50
F	6	5	4	17	1	3	0	0	1	3	0	0
	N=222		n=40		n=53		n=50		n=50		n=29	

Table 3

Sport Popularity: Ranking Comparison-Total, Age, and Age/Sex

Sport	<u>Total</u>			6			7			<u>Age</u> 8			9			10		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Swimming	1	6	1	1	6	1	1	8	1	1	6	1	1	4	1	2	8	2
Rollerskating	2	15	1	2	10	1	2	23	2	3	15	2	2	12	2	1	10	1
Fishing	3	1	9	3	1	7	4	4	8	2	1	10	7	2	14	4	1	13
Bicycling	4	11	5	9	14	7	3	8	4	3	13	4	4	15	6	5	4	9
Ice Skating	5	22	3	4	14	3	4	20	3	8	20	5	5	20	3	11	21	5
Gymnastics	6	20	4	4	14	3	4	8	6	5	18	2	6	20	4	22	25	4
Volleyball	7	19	6	12	22	9	11	20	11	7	19	5	3	7	5	8	22	2
Bowling	8	8	10	9	9	12	9	13	8	6	6	9	12	5	14	6	4	16
Running	9	17	7	6	14	5	4	7	7	11	23	8	13	19	7	15	20	13
Hunting	10	2	18	6	1	14	11	4	17	16	3	23	9	1	20	2	1	8
Baseball	11	3	16	6	3	12	10	1	18	9	2	17	7	2	14	12	4	21
Downhill Ski	12	11	10	9	6	14	8	16	4	11	12	12	13	12	11	15	17	16
X-Country Ski	13	10	14	16	10	18	11	16	13	11	11	14	9	9	9	6	10	9
Basketball	14	7	20	16	3	21	17	8	20	14	6	17	13	5	18	8	10	13
Soccer	15	11	18	23	20	22	23	12	23	10	6	14	9	9	9	8	14	9
Golf	16	14	16	12	10	16	15	13	15	18	15	16	17	12	21	15	14	19
Football	17	4	23	16	6	19	14	2	21	18	3	25	20	7	22	12	3	24
Aerobics	18	25	8	19	23	11	16	24	11	14	25	5	16	25	7	22	24	5
Tennis	19	23	13	12	20	9	18	20	15	17	20	11	17	23	11	18	22	9
Weightlift	20	5	23	12	3	19	19	3	25	18	6	21	21	9	22	12	4	21
Softball	21	17	21	21	23	16	23	13	22	21	13	20	17	20	13	18	14	20
Wrestling	22	9	26	21	10	24	22	4	26	21	5	25	22	15	25	18	8	24
Hockey	23	16	22	23	14	24	19	16	18	23	15	21	22	17	24	18	10	21
Ballet	24	27	10	20	27	6	19	26	8	25	25	17	22	26	18	24	25	5
Square Dance	25	26	15	27	26	22	25	26	14	24	25	12	22	27	14	27	25	16
Archery	26	20	25	26	23	24	26	19	23	25	20	24	26	18	26	25	17	24
Boxing	27	24	27	23	14	24	27	24	27	27	24	26	27	24	26	25	17	24
N	222	92	130	40	17	23	53	21	32	50	21	29	50	19	31	29	14	15

T=Total, M=Male, F=Female

Those sports that had significant Chi Square scores for sex differences in preference were considered male or female depending on the significance, or neutral if no significance appeared.

Comparison with two previous studies by Matteo (1984) in Crizo (1988) as well as the Chi Square scores are shown in Table 4. Out of the twenty-seven sports on the questionnaire twenty-four showed significant sex differences ($p < .05$) and were then categorized as masculine and feminine and compared to the two previous studies. Bicycling, downhill skiing, and tennis had non-significant X^2 scores and were categorized as neutral. These three sports were considered neutral in the previous studies also. Bowling, cross-country skiing, golf, softball, and archery were considered in this study to be masculine, but on the previous two studies were considered neutral. Swimming, rollerskating, volleyball, square dance, and running were considered feminine in this study but neutral in the previous studies.

Age, and age and sex frequencies and percentages were previously seen in Table 2. Age, and certain sex age groups appeared to have some significant differences as shown by Chi Square scores. Table 5 shows the sports swimming, rollerskating, gymnastics, volleyball, running, hunting, and ballet had significant X^2 scores for age differences and when those appear six year olds appeared pretty even with all groups, while seven year olds did not prefer rollerskating and hunting as much as other groups. Eight year olds showed the greatest differences in swimming, rollerskating, volleyball, running, hunting, and ballet. Nine year olds appeared even with the other groups except for volleyball which

Table 4

Chi Square Scores for Sport Masculinity/Femininity Categorization
and Comparison with Matteo and Csizma Studies

Sport	Matteo	Csizma	Present Study	% Yes Answers		X ² *
				F	M	
Fishing	M	M	M	50	86	28.86
Bowling	N	N	M	48	66	6.82
Hunting	M	M	M	32	84	56.78
Baseball	M	M	M	32	83	52.74
X-Country Ski	N	N	M	43	59	4.65
Basketball	M	M	M	29	68	31.90
Soccer	M	M	M	32	57	12.81
Golf	N	N	M	32	54	9.89
Football	M	M	M	15	77	82.50
Weightlift	M	M	M	15	72	69.74
Softball	N	N	M	28	44	5.26
Wrestling	M	M	M	8	65	79.93
Hockey	M	M	M	17	49	24.67
Archery	N	N	M	8	38	26.93
Boxing	M	M	M	5	28	22.54
Swimming	N	N	F	91	70	14.99
Rollerskate	N	N	F	91	51	42.40
Ice Skate	F	F	F	75	36	33.16
Gymnastics	F	F	F	74	38	27.09
Volleyball	N	N	F	65	42	10.64
Aerobics	F	F	F	59	15	40.02
Ballet	F	F	F	48	2	52.21
Square Dance	N	N	F	36	4	29.03
Running	N	N	F	60	44	5.26
Bicycling	N	N	N	62	37	
Downhill Ski	N	N	N	54	36	
Tennis	N	N	N	66	34	

* p<.05 df=1

Table 5

Chi Square Scores and Percent Yes Answers For Age
and Adult Sport Choice

Sport	X ² *	Age % Yes Answers				
		6	7	8	9	10
Swimming	10.92	90	85	72	90	69
Rollerskating	10.26	85	70	60	80	83
Gymnastics	12.15	70	62	58	64	31
Volleyball	11.23	55	53	50	76	48
Running	10.29	68	62	42	51	38
Hunting	13.05	68	47	36	56	69
Ballet	10.49	43	36	14	26	28

*p<.05 df=4

Table 6

Chi Square Scores and Percent Yes Answers For Age and Sex
and Adult Sport Choice

Sport	X ² *	Age and Sex % Yes Answers									
		6		7		8		9		10	
		M	F	M	F	M	F	M	F	M	F
Square Dance	12.15	75	11	25	30	0	23	0	28	0	9
Softball	11.01	15	28	28	14	23	14	15	39	20	5

*p<.05 df=4

they preferred more than others. Ten year olds appeared to not prefer to participate in swimming, gymnastics, volleyball and running as much as the other age groups. Table 6 shows that square dance and softball had significant X^2 scores for age and sex and where those differences appeared. Eight, nine, and ten year old males, as well as six year old females preferred to participate in square dancing. Seven, eight, and ten year old females as well as six year old males did not prefer to participate in softball.

Number of Sports Participation Choices

An analysis of the number of sports chosen from the 27 on the questionnaires by each individual to participate in upon reaching adulthood was done to observe any sex, age, and age/sex differences. Table 7 shows the means and standard deviations for the number of sports chosen for all individuals and for each age, sex, and age/sex group. The mean number of sports individuals wanted to participate in was 12.46 ± 5.39 . Males ($x = 13.77 \pm 5.78$) tended to choose more sports than females ($x = 11.53 \pm 4.91$).

Six year olds chose more sports ($x = 14.75 \pm 5.26$) than any other age group, and six year old males chose more ($x = 16.41 \pm 4.64$) than any other age/sex group.

A two-way analysis of variance examining the number of sports played by age and sex showed significant differences between males and females, and with age. F values are shown in Table 8. There was no interaction between age and sex and number of sports chosen.

Table 7
Number of Sports Chosen

Group	N	Mean	SD
Total	222	12.46	5.39
Males	92	13.77	5.78
Females	130	11.53	4.91
6 Year Old Children	40	14.75	5.26
7 Year Old Children	53	12.45	6.50
8 Year Old Children	50	10.58	4.51
9 Year Old Children	50	13.00	4.25
10 Year Old Children	29	11.62	5.58
6 Year Old Males	17	16.41	4.64
7 Year Old Males	21	13.76	7.94
8 Year Old Males	21	11.19	4.38
9 Year Old Males	19	13.74	4.64
10 Year Old Males	14	14.50	5.50
6 Year Old Females	23	13.52	5.45
7 Year Old Females	32	11.59	5.22
8 Year Old Females	29	10.14	4.63
9 Year Old Females	31	12.55	3.99
10 Year Old Females	15	8.93	4.25

Table 8

Two-Way Analysis of Variance: Number of Sports Played by Age and Sex

Source	df	SS	MS	F
Age	4	432.317	108.079	4.089*
Sex	1	281.373	281.373	10.645*
Interaction				
Age x Sex	4	114.400	28.600	1.082
Error	212	5603.866	26.433	
Total	221	6421.135	29.055	

A Scheffe's test was performed to determine the ages where the significant differences occurred. The Scheffe's test (Table 9) determined that there was a significant difference (3.836) between age six and age eight in the number of sports chosen by students to participate in as adults.

Table 9

Results of Scheffe's Post Hoc Test

Means	Age 8	Age 10	Age 7	Age 9	Age 6
	10.5800	11.6207	12.4528	13.0000	14.7500
Age 8-10.5800					*
Age 10-11.6207					
Age 7-12.4528					
Age 9-13.0000					
Age 6-14.7500					

*p<.05

A Chi Square analysis was used to determine the relationship between the number of sports chosen by individuals to participate in, and whether or not they wanted to participate in each of the twenty-seven individual sports. Table 10 shows the mean number of sports individuals who wanted to participate in a sport, or who did not want to participate in a sport, as well as the standard deviations and X^2 scores. There were significant differences between all sports except running, square dance and ballet.

Family Sport Participation

Attached to the informed consent sent to parents was a survey asking about sport participation of family members, and the relationship of family members to the child participating in the sport participation preference survey. Table 11 shows parental, step-parental, or mother-adult male sport participation as well as the demographics of family structure. The majority of families had a two biological parent structure (71.2%) with the next largest group being a single mother family (16.3%). Most individuals in the families participated in some type of activity which seems to go along with an increase in adult active participation seen in the United States today.

Table 10

Chi Square Comparisons, Ranges, Means, and Standard Deviations
For Number of Sports Played Versus Wanting to Play Each Sport^a

Sport	Range	Mean	SD	χ^2_*
Soccer				56.42
Yes	5-27	14.96	5.16	
No	0-21	10.66	4.82	
Boxing				72.56
Yes	2-27	18.22	5.64	
No	0-25	11.49	4.71	
Softball				64.73
Yes	7-27	15.93	4.76	
No	0-24	10.65	4.79	
Running				-----
Yes	3-27	14.20	5.45	
No	0-20	10.49	4.60	
X-Country Ski				75.82
Yes	5-27	15.43	4.75	
No	0-21	9.55	4.29	
Aerobics				42.04
Yes	6-27	13.51	5.15	
No	0-22	11.74	5.45	
Square Dance				-----
Yes	7-25	14.45	5.24	
No	0-20	11.87	5.31	
Baseball				82.50
Yes	4-27	15.20	4.74	
No	0-22	9.36	4.31	
Gymnastics				44.26
Yes	3-27	13.66	5.35	
No	0-21	10.74	4.99	
Bowling				53.34
Yes	3-27	14.49	5.31	
No	0-22	9.94	4.35	
Bicycling				42.20
Yes	3-27	14.06	5.34	
No	0-21	9.72	4.29	
Volleyball				42.82
Yes	2-27	14.12	5.31	
No	0-23	10.36	4.74	
Ballet				-----
Yes	3-27	13.66	4.86	
No	0-25	11.98	5.53	

Table 10
Comparisons (Cont.)

Weightlifting				68.74
Yes	5-27	15.92	5.00	
No	0-24	10.27	4.40	
Tennis				63.80
Yes	7-27	15.73	4.95	
No	0-22	10.27	4.50	
Archery				87.35
Yes	6-27	17.76	5.00	
No	0-23	11.07	4.58	
Downhill Ski				86.58
Yes	6-27	15.47	4.80	
No	0-19	9.28	3.98	
Swimming				62.12
Yes	3-27	13.54	5.06	
No	0-16	7.53	3.92	
Basketball				71.69
Yes	4-27	15.46	5.12	
No	0-21	9.96	4.22	
Rollerskate				40.33
Yes	2-27	13.35	5.27	
No	0-21	9.88	4.93	
Wrestling				69.57
Yes	4-27	16.29	5.04	
No	0-24	10.70	4.59	
Ice Skating				44.08
Yes	4-27	14.07	5.14	
No	0-24	10.14	4.89	
Hockey				96.94
Yes	4-27	17.27	4.85	
No	0-20	10.38	4.15	
Golf				80.50
Yes	6-27	15.83	5.02	
No	0-21	10.08	4.27	
Football				68.46
Yes	1-27	15.49	5.49	
No	0-24	10.35	4.20	
Hunting				62.35
Yes	2-27	14.84	5.28	
No	0-21	9.76	4.11	
Fishing				72.23
Yes	4-27	14.44	3.95	
No	0-20	8.80	5.02	

^aYes vs No/Do not know/Do not understand
*p<.05 df=26

Table 11
Parental Sports Participation and Family Structure

Type	B P	M P	F P	N	Total	Total %
Mother & Father	126	5	4	1	136	71.2
Father Only	0	7	0	0	7	3.7
Mother Only	0	0	31	0	31	16.3
Father & Stepmother	1	0	0	0	1	0.5
Stepfather & Mother	12	0	0	2	14	7.3
Mother & Adult Male	2	0	0	0	2	1.0
Total	141	12	35	3	191	100.0

BP=Both Play, MP=Male Plays, FP=Female Plays, N=Neither Play

Table 12 shows the type of family participation choices by the elementary children. The majority of children who chose any specific number of sports from zero to twenty-seven had two biological parents who both participated in sports.

It was determined the any further analysis to look at family sport participation and children's sports participation preference would not be continued because of the unequal group size. With 71.2% of the families being made up of two biological parents, it would be difficult to establish any difference between the absence or prescence of an adult male of female and a two parent family and the sports participation preference of elementary children.

Table 12

Family Structure and Sport Participation Related to
Number of Sports Chosen by Children

Number of Sports Chosen		M & F				M	F	M & SF		F & SM	M & A
	N	B	M	F	N	P	P	B	N	B	B
0	1	1	0	0	0	0	0	0	0	0	0
1	1	1	0	0	0	0	0	0	0	0	0
2	3	3	0	0	0	0	0	0	0	0	0
3	4	3	0	0	0	1	0	0	0	0	0
4	6	5	0	0	0	1	0	0	0	0	0
5	4	3	0	0	0	1	0	0	0	0	0
6	9	5	0	0	0	2	0	2	0	0	0
7	8	6	0	0	0	1	0	0	0	0	1
8	19	13	0	0	0	5	0	0	1	0	0
9	12	7	0	0	1	3	0	1	0	0	0
10	21	10	2	1	1	5	0	1	1	0	0
11	16	7	1	2	0	3	0	2	0	1	0
12	11	6	1	0	0	1	1	2	0	0	0
13	14	9	0	0	0	3	2	0	0	0	0
14	23	20	0	0	0	3	0	0	0	0	0
15	8	6	1	0	0	0	0	0	0	0	0
16	16	9	0	1	0	1	1	4	0	0	0
17	9	5	0	0	0	3	0	1	0	0	0
18	4	4	0	0	0	0	0	0	0	0	0
19	7	7	0	0	0	0	0	0	0	0	0
20	8	5	0	1	0	2	0	0	0	0	0
21	6	5	0	0	0	1	0	0	0	0	0
22	3	0	0	0	0	0	2	0	0	0	1
23	2	1	1	0	0	0	0	0	0	0	0
24	4	4	0	0	0	0	0	0	0	0	0
25	4	3	0	0	0	0	1	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0
27	1	1	0	0	0	0	0	0	0	0	0
Total	223	159	6	5	2	37	7	13	2	1	2

M=Mother, F=Father, SF=Step-father, SM=Step-mother, B=Both play, P=Plays, N= Neither Plays

Discussion

It can be seen that sports appear to have gender to them, and that these "gender tags" are attached to even relatively young elementary students' classifications of sports as "masculine" or "feminine". Talbot's (1986) definition of gender as, "the socially constructed, normative conception of male/female status" (p.120) appears to have taken hold here in the significant sex differences seen between males and females on twenty-four of the twenty-seven sports on the survey administered.

Those sports considered "female" or "male" on previous studies appeared "female" or "male" in the present survey. Gender identification in sports is present in this data and in accordance with Matteo and Csizma (1988), Sanguinetti, Lee, and Nelson (1985), Lever (1976), Kingsley, Brown, and Seibert (1977), and Snyder and Spreitzer (1978), that males tend to choose the certain sports that are "male sports" and females tend to choose certain sports that are the "female sports". However, this particular survey showed even more definition with significant sex differences for several sports that previously were considered neutral. Several previously neutral sports appeared masculine (archery, softball, golf, cross-country skiing, and bowling) or feminine (square dance, running, volleyball, rollerskating, and swimming) on the present survey. Social group activities in this area where the survey was taken may account for these changes. Volleyball is a female sport at the high school level, as is golf a male sport. Softball, archery, and bowling are largely organized for adult males in this area. As for

square dance, it appears that any term associated with dance, such as ballet and aerobic dance were very positive for female participation and negative for male participation. Perhaps square dance, which usually requires male and female partners, got caught up with the other "dance" words. Running, rollerskating, and swimming may quite possibly just be activities that female groups such as the Girl Scouts, etc. participate heavily in in this area. Possibly, boys in this area just do not like to run as much as girls, or girls cross-country ski as much as boys. Considering that many other factors such as socioeconomic group and family education factors were not considered in this survey, perhaps these may play a part in equipment or facility availability.

Determining that clearly defined beliefs of sex roles in sport participation as early as age six is in accordance with the work of Williams, Bennett, and Best (1975), who showed that children appear to choose sports that coincide with stereotypic choices of society. Any slight differences, as shown in this study may be a reflection of slight community differences. Greendorfer and Lewko (1978), Greendorfer (1977, 1979), Snyder and Spreitzer (1973), and Gregson and Colley (1986), all account for social and family influences on childrens' sport participation. This study did not reflect this directly, but perhaps indirectly these influences may have become apparent in the differences of sports choices between this study, and previous studies.

Sport choices appeared age influenced from differences seen between six and eight year olds. This paralleled the work of Sutton-Smith, Rosenberg, and Morgan (1977), Tyron (1980), Anderson, et. al. (1986), and Jahandarie (1986) that showed a shift in sport participation after

eight years of age. Even though a clear shift was not seen, a significant age difference between six and eight year olds is some support for this. Perhaps six year olds have not defined as many specific sports, and just tend to choose more.

The two sports in the survey influenced by both age and sex (softball and square dance) show big changes in preference between ages six and eight. Up until age eight males will choose square dance, but after that they did not choose it at all. Smaller variations occurred with softball, but the age/sex differences appeared at age eight. Studying larger groups may emphasize this shift to a greater extent.

Males appear to significantly choose more sports in which to participate in than females. This coincides with the work of Snyder (1983), Kane (1982), and Schindler and Water (1986), who found that males tend to identify with sport more than females and thus participate more. Social expectations are such that males are to participate in competition in order to gain prestige, and ego-gratification (Kane, 1982), while females are encouraged to display gentleness, sensitivity, and warmth (Schindler and Waters, 1986).

It is interesting to note that, at the age of six, the sex role development of these elementary children is so well established toward their desire to participate in adult sports. These children parallel the adolescent behavior shown previously (Jackson and Marsh 1986, and Critcher 1986), that female participation in sport is a contradiction of traditional feminine identity, and male non-participation is a contradiction of traditional male identity. These identities appear apparent in that boys tend to choose "boys'" games that involve subduing

an opponent by bodily contact, applying force to heavy objects projecting into or through space, and face-to-face cooperative competition in which some bodily contact may occur (boxing, weight lifting, all team sports), or involve games (football, basketball, baseball, etc.) that are characterized by high levels of skill and strategy, ego-gratification, and extrinsic satisfaction. On the other hand girls tend to choose "girls'" games that have a high degree of social interaction, grace, gentleness, sensitivity, warmth, and intrinsic satisfaction, or project the body in aesthetically pleasing patterns, using manufactured devices such as roller skates, or gymnastic equipment to facilitate body movement, applying force through a light implement, overcoming resistance of a light object, and competing where a physical barrier is present (dance, aerobics, swimming, skating, etc.). This parallels the previous work of Corbin and Nix (1979), Duquin (1977), Lever (1976), and Csizma (1988).

Schooling can be a very big influence on children and their establishment of sex role identities in sport participation. The information that Cooper (1986), Scranton (1986), Connell (1986), and Jahandarie (1986) give in their work establish that school is a very significant socializing factor. Perhaps offering a variety of activities with an emphasis on equal opportunity to participate in both "male" and "female" activities may help encourage children to participate or not participate in a sport because they want to or not, not because they are supposed to, or not supposed to.

Family influence is noted to be the biggest socializing factor influencing children, with fathers having more influence than mothers

(Greendorfer & Lewko, 1978). Parental participation was very evident in the data, and very possibly had an effect on children participating. Further study is necessary to determine the exact effects of family influence on children and their sport involvement, as well as the influence of the adult male or female. Larger sample sizes taking into account socioeconomic group and education of the parents may help develop understanding about these factors.

Summary

The purpose of this chapter was to discuss the results of a twenty-seven item questionnaire which was completed by 222 (68%) of the sample population of elementary students between the ages of six and ten for this study. The analysis indicated a strong relationship between sports participation preference of certain sports upon reaching adulthood and the following factors:

1. Sex
2. Age
3. Age/Sex
4. Number of Sports Chosen

In addition, there appeared a strong relationship between the number of sports chosen to participate upon reaching adulthood and the following factors:

1. Sex
2. Age
3. Several Types of Sports Chosen

No significant relationship was noted between age/sex and the number of sports chosen, as well as several individual sports and sex,

age, and age/sex. There also was no relationship between some sports and the number of sports chosen.

No further analysis beyond the demographics obtained on family sport participation and its influence on childrens' adult sport choices was considered.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

The purpose of this study was to analyze the adult sports choices of elementary students, examine any age, sex, and family influence differences, and determine if these differences were significant. The data which were gathered through this study indicated there were significant sex and age differences in choosing to play a specific sport and in the number of sports chosen from a list of twenty-seven sports. The information in this study disproves the null hypotheses concerning age and sex differences and indicates that they should therefore be rejected.

The data on family influence were looked at for demographics but statistical analysis was deemed not useful because of the large population of two parent families when compared to single parent families. The null hypothesis concerning family influence on childrens' sport choices should therefore be retained.

The conclusions drawn from this study must be carefully considered when an attempt is made to apply masculine or feminine categorization to specific sports. The population of subjects in this study came from many different socioeconomic groups, but on the average the area is a middle class area. Most families in this study had two biological parents which could be a great socioeconomic influence. This could influence the results of this study itself, since no survey was made of socioeconomic group, race, or ethnic group.

Age is an important factor involved in this study, since the majority of the previous studies were of adolescents, or college age individuals. Elementary students of ages six to ten may have very different concepts of what is "masculine" or "feminine", and what each individual sport constitutes, as compared with individuals of different ages.

There were 130 females and ninety-two males in this study which may have tended to bias the total frequencies of choice and rankings of individual sports toward the female choices.

In support of the conclusions to be drawn, however, data presented in Chapter IV indicated many similarities to that of the Matteo and Csizma (1988) studies in showing sports as being considered masculine, feminine, or neutral. The data also paralleled the data of Anderson, Lorenz, and Pease (1986), that sport choices may be different after eight years of age.

Conclusions and Implications

Keeping in mind the aforementioned considerations and limitations of this study, a number of conclusions can be presented. Sex, as well as present age can be a determining factor in the type of sport chosen, as well as the number of sports chosen.

Both age and sex have shown a significant relationship to both the type of sport chosen, and the number of sports chosen. Specifically, the study indicated that males tend to choose sports previously shown to be "male sports", and females tend to choose sports previously shown to be "female sports". Males also tend to choose more total sports in which to participate than do females.

There appeared to be a shift from six year old number of sports

chosen to eight year old number, with six year olds wanting to play more sports. Several sports have a clear relationship between age and the desire to participate.

Since no information was attainable concerning family participation and influence on the children, it can only be noted that most family members in this study did participate in some type of sport activity.

Perhaps this study can help in the knowledge that sex roles in sport involvement are firmly established in elementary age children. (Since this development is affected by a variety of factors from socioeconomic, education, family, and peer influence, or any others that have yet to be determined.)

Recommendations

It is recommended that future studies include the following characteristics:

1. A larger population to be able to obtain enough single parent families.
2. Determination of education level of parents.
3. Determination of family socioeconomic group.
4. Determination of teacher and peer influence.
5. Determination of parental high school and college sport involvement.
6. Determination of which sports are played, to compare as gender role models.
7. Determination of whether or not policy implications in schools influence childrens' sports preferences.

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APPENDICES

APPENDIX A

December 23, 1987
BERLIN, WISCONSIN 54923

SCHOOLS ---

BERLIN HIGH SCHOOL	361-
CLAY LAMBERTON MIDDLE SCHOOL	361-
CLAY LAMBERTON ELEMENTARY SCHOOL	361-
POY SIPPI SCHOOL	987-
WASHINGTON SCHOOL	361-

CT OFFICES

NTENDENT

nziger
Huron St.
1-2004

TO: Parents

SS OFFICE

Huron St.
1-2004

FROM: R. E. Kinziger, Supt.

CHOOL

Ganka, Prin.
Huron St.
1-2000

Subject: Student Survey

AMBERTON

tt, Prin.
Marquette
1-2441

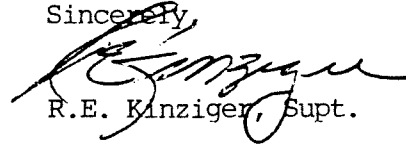
Miss Nancy Carr former biology teacher at the Berlin High School is presently working on her Masters Degree at the University of Wisconsin LaCrosse. She has asked that she be allowed to have students participate in the survey and has been given approval for completing the project.

UPERVISOR

Sillanpaa
Marquette
1-2442

Your cooperation would be greatly appreciated.

Sincerely,



R.E. Kinziger, Supt.

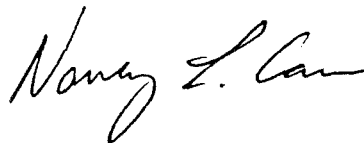
Parent/Guardian,

I am a graduate student at the University of Wisconsin-LaCrosse completing my Master's Degree in Adult Fitness/Cardiac Rehabilitation. At the present time I am working on my thesis paper which is concerned with the gender differences in sport participation preference of elementary school students, and how they change with age, and relate to family members at home, and their sport choices. In order to provide the types of programs that can meet the needs and wants of students, it will be helpful to understand more fully what students want to participate in when they grow up and reach adulthood.

My study involves your child answering a survey of sports choices, conducted during a physical education period at school, and your filling out the survey attached on individuals living in your home and their sports participation.

Your willingness for your child's participation and involvement in my study will add to the information necessary to complete my project. In order to determine the relationship of individuals living at home, and their sports participation relationship to children's sport participation preference at adulthood, I need to know the individuals living in your child's home. All information provided by you and your child will remain confidential. Names are only used for data collection and are not included in the final results.

Thank you for your time. It is greatly appreciated.



Nancy L. Carr
Uw-LaCrosse
Graduate Student.

"Informed Consent"

I understand that the purpose of this study is to learn more about sex differences in sport participation preference of elementary school children, and how they change with age.

I confirm that my child's participation as a subject is entirely voluntary. No coercion or any kind has been used to obtain my cooperation.

I have been informed of the procedures that will be used in the study, and understand what will be required of my child as a subject.

I understand that my child's responses, as well as my own, written or oral, will remain completely confidential.

I wish to give my consent for _____,
child's name

to serve as a subject in this study.

Signed _____
Parent/Guardian

Please return this form and the following survey to your child's teacher by Wednesday January 6. Your prompt response is appreciated.

"Informed Consent"

I understand that the purpose of this study is to learn more about sex differences in sport participation preference of elementary school children, and how they change with age.

I confirm that my child's participation as a subject is entirely voluntary. No coercion or any kind has been used to obtain my cooperation.

I have been informed of the procedures that will be used in the study, and understand what will be required of my child as a subject.

I understand that my child's responses, as well as my own, written or oral, will remain completely confidential.

I wish to give my consent for _____,
child's name
to serve as a subject in this study.

Signed _____
Parent/Guardian

Please return this form and the following survey to your child's teacher by Wednesday January 6. Your prompt response is appreciated.

Please fill out completely the following survey concerning all individuals living in your home with your child. Please include yourself. Sports played regularly, are considered those played on a regular basis when in season. It is important to have this information in order to determine factors affecting elementary childrens' sports participation preferences. Thank you for effort.

Relationship to
Child

Age

Sports Played
Regularly

APPENDIX B

NAME _____

AGE _____

BOY _____ GIRL _____

SPORTS PARTICIPATION PREFERENCE SURVEY

I want to know what sports you would like to play when you grow up
No face is the right answer or the wrong answer.



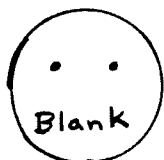
=yes, I want to play this sport



=no, I do not want to play this sport



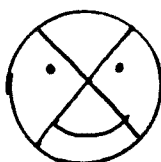
=I do not know if I want to play this sport





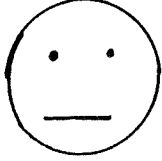


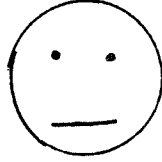


















=I do not know what it is



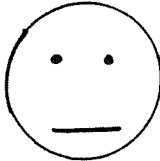


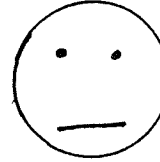

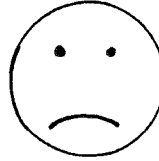
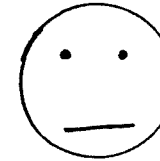


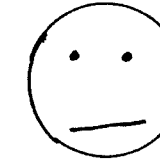




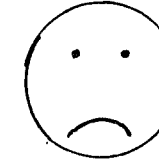
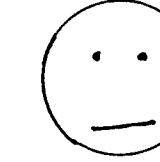






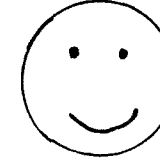


Instructions



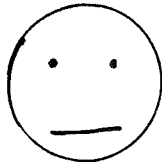
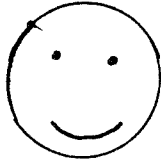



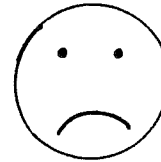
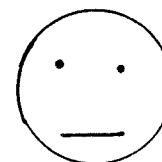


















Put an (X) through the face you pick.

Example-

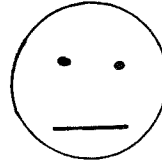
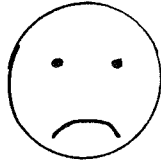
Your teacher will help you if you do not know how to do this.

1) Soccer			
2) Boxing			
3) Softball			
4) Running			
5) Cross-country Skiing			
6) Aerobics			
7) Square Dance			
8) Baseball			

- | | | | |
|---------------------|---|---|--|
| 9) Gymnastics |  |  |  |
| 10) Bowling |  |  |  |
| 11) Bicycling |  |  |  |
| 12) Volleyball |  |  |  |
| 13) Ballet |  |  |  |
| 14) Weightlifting |  |  |  |
| 15) Tennis |  |  |  |
| 16) Archery |  |  |  |
| 17) Downhill skiing |  |  |  |

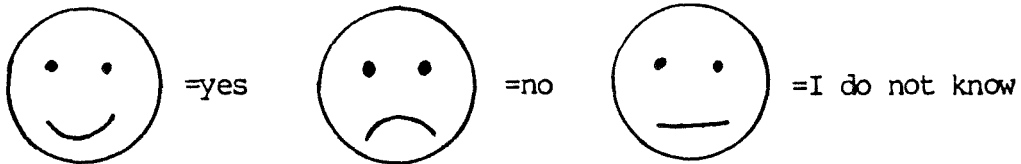
- | | | | |
|-------------------|---|---|--|
| 18) Swimming |  |  |  |
| 19) Basketball |  |  |  |
| 20) Rollerskating |  |  |  |
| 21) Wrestling |  |  |  |
| 22) Ice skating |  |  |  |
| 23) Hockey |  |  |  |
| 24) Golf |  |  |  |
| 25) Football |  |  |  |
| 26) Hunting |  |  |  |

2/) Fishing



TEACHER INSTRUCTIONS

Teachers: Please instruct students on the board or overhead projector what each face means.

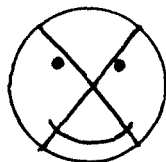


Remind students of the following:

- 1) Nothing is right or wrong.
- 2) This is a survey to see what sports you want to play when you grow up.
- 3) Do not go on to the next sport until told to.
- 4) Do not look at your neighbor's paper(emphasize #1 again).
- 5) Make an (X) through the face.
- 6) If you do not understand the sport leave it blank.

Example—Which sport do you want to play when you grow up?

Bowling



The student wants to bowl.

Please read each sport out loud so that all students can hear the pronunciations. Allow thirty seconds between sports. If students ask a question about the sport because they do not know what it is, they should be instructed to leave that sport blank. Collect papers, and do not discuss any results you may see with your students. I will send you completed results.

APPENDIX C

		S		X		S		G		V		W		D		B		R		I		S		S												
		O		C		Q		Y		O		E		H		A		O		C		S		S		S										
		R		A		A		N		L		I		S		S		L		E		W		F		T										
		N		E		R		B		C		B		A		S		E		R		R		H		T										
		I		R		E		A		I		I		I		I		K		S		S		O		T										
		N		O		A		S		I		L		A		M		A		A		T		O		T										
		N		D		E		T		I		L		B		B		I		T		H		U		T										
		G		C		S		T		N		L		I		T		N		T		G		N		T										
		G		C		S		S		G		L		I		N		L		G		Y		L		H										
		G		C		S		S		G		L		I		N		L		G		Y		L		H										
6	2	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	0	0	0						
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7	1	1	1	2	2	3	1	1	2	3	0	1	1	1	2	3	1	0	1	1	1	2	3	1	3	1	3	3	3	0	0	0	0			
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7	1	1	3	3	3	3	3	1	2	3	2	3	3	3	2	3	3	1	3	3	3	2	3	3	3	3	3	3	3	0	0	0	0			
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6	1	1	3	2	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	0	0	0			
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7	2	2	2	2	2	3	0	2	2	2	3	3	3	2	2	3	0	2	3	2	3	2	3	2	1	2	2	2	2	2	1	0	0	0	0	
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	A	S	G	S	B	S	O	F	U	R	X	S	Q	G	B	V	W	E	D	H	S	B	R	I	C	F	H	S	S	
	G	A	R	A	O	O	T	N	N	K	I	A	A	A	M	O	A	I	T	R	S	I	A	S	S	R	O	H	M	T
	E	D	C	C	X	O	B	I	I	I	I	R	R	R	N	C	L	L	L	C	K	M	K	R	K	O	F	I	F	T
	X	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
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8	1	3	3	2	3	1	3	2	2	3	1	3	3	1	2	3	2	0	3	2	1	3	3	2	2	3				
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8	2	3	1	2	1	2	2	1	2	1	1	1	1	2	3	2	2	1	0	2	3	3	1	2	2	1				

	S	Q	U	X	A	R	B	M	G	V	W	I	D	H	S	B	R	L	I	C	E	F	H	F	S	S								
G	O	O	T	N	K	O	D	E	S	W	C	Y	A	F	E	C	K	M	T	A	S	A	H	T	N	S	A	O	P	P				
R	C	X	B	N	I	B	A	B	T	L	L	B	L	T	N	H	I	M	B	T	T	T	O	G	B	T	H	T	T	F	M			
A	S	A	C	I	A	I	I	I	N	A	I	I	I	A	L	I	N	E	I	I	A	I	I	I	K	O	A	I	I	H	H	A	O	
G	E	D	E	N	L	N	N	C	C	L	C	N	N	L	E	N	I	R	N	N	L	N	N	N	E	L	L	N	N	E	E	T	T	
E	X	E	R	G	L	G	G	S	E	L	S	G	G	L	T	G	S	Y	G	G	L	G	G	G	Y	F	L	G	G	R	R	H	H	
9	2	4	3	2	1	3	3	1	3	2	3	2	3	3	2	3	3	2	3	2	3	2	2	2	2	2	2	2	2	0	...			
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9	2	4	3	2	1	3	3	1	2	3	3	2	2	3	3	2	3	2	3	2	1	3	2	3	3	3	2	2	3	3	1	0	0	...

Notes:

Sex is coded as follows: 1=Male, 2=Female

Sport interests are coded as follows: 1=Don't Know, 2=Don't want to play, 3=Want to play

Parental sport interests are coded as follows: 1=Play sport(s), 2=Play no sports