

The Influence of the Family in the Development of Talent in Sport

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The purpose of the present study was to describe patterns in the dynamics of families of talented athletes throughout their development in sport. Four families, including three families of elite rowers and one family of an elite tennis player were examined. The framework provided by Ericsson, Krampe, and Tesch-Römer (1993) to explain expert performance served as the theoretical basis for the study. Ericsson et al. suggested that the acquisition of expert performance involves operating within three types of constraints: motivational, effort, and resource. In-depth interviews were conducted with each athlete, parent, and sibling to explore how they have dealt with these three constraints. A total of 15 individual interviews were conducted. Results permitted the identification of three phases of participation from early childhood to late adolescence: the sampling years, the specializing years, and the investment years. The dynamics of the family in each of these phases of development is discussed.

The social context influencing children's participation in sport consists of the child, the coach, and the family environment (Scanlan & Lewthaithe, 1988). The objective of this study was to provide an in-depth account of the family conditions of young athletes' lives over the periods of time during which progress is made toward high levels of sport achievement.

Several authors have discussed the importance of parental influence on children's involvement and achievement in sport and other domains (e.g. Bloom, 1985; Brustad, 1993; Hellstedt, 1987, 1995; Woolger & Power, 1993). Hellstedt (1987) conceptualized parents' involvement in their children's participation in sport on a continuum from underinvolved, to moderate, to overinvolved. Hellstedt's moderate level of parental involvement describes parents that promote the best interest of their children, even if this means sacrificing personal interests. In a more recent paper, Hellstedt (1995) adapted an existing framework of family structure (Carter & McGoldrick, 1989) to propose a developmental model of athletes' families. The model suggests a series of stages of family changes in which certain

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tasks must be accomplished before the next stage can be successfully mastered. For instance, Hellstedt (1995) suggested that families with young children must emphasize fun and skill development and minimize competitive stress if they want to avoid delays or barriers in the family transition to the next stage of development. Although theoretical typologies of parental influence in sport such as the ones presented by Hellstedt (1987, 1995) are useful, they are not based on in-depth analyses of experiences or insights of various family members.

Power and Woolger (1994) demonstrated that parental support was positively correlated with children's enjoyment and enthusiasm in swimming. Similarly, Brustad (1993) showed that higher parental encouragement was associated with greater perceived physical competence for children. Other studies have shown that parents of committed athletes are usually willing and happy to attend their children's competition or tournaments and are often present at practice sessions (Csikszentmihalyi, Rathunde, & Whalen, 1993; Monsaas, 1985; Sloan, 1985). VanYperen (1995) reported that parental support acted as a buffer to alleviate performance stress and was not related to parents' marital status (married or divorced) or ethnic background. In sum, a large number of studies have reported the important supporting roles of parents in children's involvement in sport, however few authors have attempted to study the whole family dynamic and how this dynamic is affected by the children's participation in sport.

Another area of research on family influence has focused on the importance of parental modeling on their children's acquisition of positive values, attitudes, and behaviors toward sport and physical activity. Colley and colleagues (Colley, Eglinton, & Elliot, 1992; Gregson & Colley, 1986) found that parents served as role models for the sport participation of females but not males. Power and Woolger (1994) found that maternal modeling was related to both boys' and girls' (ages 8 to 14) enthusiasm for swimming, whereas paternal modeling was negatively associated with boys' enthusiasm for swimming. Although parental sport participation may influence their children's engagement in sport, parents can also demonstrate a variety of behaviors not directly related to sport that children can model and transfer to their sport involvement. Howe (1990) suggested that parents and family members who transmit values of achievements that depend upon learning and practice open up new opportunities for young people. In fact, several studies have shown that parents of committed individuals in various domains tend to espouse values related to the importance of achievement, hard work, success, and being active and persistent (Csikszentmihalyi et al., 1993; Monsaas, 1985; Sloboda & Howe, 1991; Sloan, 1985; Sosniak, 1985).

Eccles and Harold (1991) proposed that parental expectations influence the decision to engage in particular activities, the intensity of effort expended, and children's actual performance level. This hypothesis is supported by research which indicates that children's actual levels of participation in physical activity are related to parents' expectations and beliefs regarding their children's physical competence (Brustad, 1996; Dempsey, Kimiecik, & Horn, 1993; Kimiecik, Horn, & Shurin, 1996). Several studies have shown a positive relationship between parental expectations and their children's success and enjoyment of sport (e.g. McElroy & Kirkendall, 1980; Scanlan & Lewthwaite, 1985). On the other hand, several other studies have shown that parental expectations can become a source of pressure and stress that can interfere with their children's participation in sport (e.g. Brustad, 1988; Scanlan, Stein, & Ravizza, 1991; Weiss, Weise, & Klint, 1989).

Power and Woolger (1994) found a curvilinear relationship between parental expectations and their children's enthusiasm for swimming. High and low parental expectations were associated with less enthusiasm from children, while an intermediate level of expectation was associated with children's highest level of enthusiasm for swimming.

The literature on expertise also highlights the importance of the family environment in the acquisition of expert performance. Csikszentmihalyi et al. (1993) used questionnaires and various psychometric instruments to study over 200 talented teenagers and their parents. They introduced the concept of complex families to describe families who were found to be the best stimulus to their teens' talent development. Complex families were defined as being both integrated and differentiated. Integration referred to the stable condition among family members whereby the children felt a sense of support and consistency. Differentiation referred to the notion that members of the family were "encouraged to develop their individuality by seeking out new challenges and opportunities" (p.155). Csikszentmihalyi and colleagues' notion of a complex family is conceptually attractive for explaining the parents' role in children's talent development. On the other hand, Csikszentmihalyi and colleagues' study provides limited information regarding the specific types of parental behaviors that have the most favorable socialization effects on their children's participation in sport throughout their development.

Bloom and colleagues (1985) underscore the major influence of the family at the different stages of talent development in science, art, and athletics. They reported that in the early years of their children's involvement in an activity, parents tended to be supportive, allowing them freedom to decide whether to practice formally or not. This was followed by a period of dedication for the performers and the parents. Finally, the later years were characterized by the individual's full time commitment to improving performance and the parents' role was more restricted, consisting mainly of financial support. Thus, Bloom and colleagues' study provided a developmental perspective on the influence of family on talent development. However, sibling relationships and the influence of siblings on the dynamic of the family were issues not discussed in Bloom's et al. analysis of the family environment. Furthermore, interviews were conducted with performers who had already reached a mature level of performance. Because families have the most influence on talent development during childhood and early adolescence, interviews with younger performers may provide more in-depth information on the role of the family in the early stage of an athlete's involvement in sport.

Consistent with Bloom and colleagues developmental perspective, Carlson (1988, 1997) showed that elite tennis players in Sweden, on average, were involved in more than one sport before the age of 14. He indicates that early specialization and "professional-like training" in tennis did not favor the development of elite players; on the contrary, all-around sport engagement was more important before adolescence. Similarly, in the United States, Hill (1993) found that diversified youth sport participation was the norm among professional baseball players. Although studies investigating elite athletes have documented the notion of "delayed" specialization and the major influence of parents, these studies do not capture the individual and collective phenomenological experiences of family members. In general, investigations on home influence have not provided in-depth information on how families create a positive environment to initiate and maintain

lifelong sport participation. The current state of knowledge concerning home influence on talent development in sport has also dismissed the influence or impact of siblings on the family dynamic.

Ericsson, Krampe, and Tesch-Römer (1993) provided a framework examining the different variables related to the acquisition of expert performance. They demonstrated that expert performance in sport, the arts, and science is not solely the result of innate abilities but rather is the product of extensive deliberate practice. According to Ericsson et al., maximization of deliberate practice involves operating within three types of constraints: motivational, effort, and resource constraints. First, because engagement in deliberate practice is not inherently motivating, it requires involved commitment from the performers. Second, deliberate practice may be a strenuous activity that cannot be sustained for a long period of time without leading to mental or physical exhaustion, or both; thus, individuals must limit practice to optimize concentration and effort. Finally, deliberate practice requires resources such as access to coaches, training material, and training facilities. According to Ericsson (1996), the family environment is an important variable that will affect the development of talent in many domains, including sports.

On the basis of the existing literature on families and talent development, few suggestions can be provided as to how parents and siblings should support the performer in his/her pursuit of excellence and on the specific types of behaviors that a young performer may perceive as pressure or support. Investigations on home influence have provided only limited information on how families create, sustain, and discuss their own family realities when one of the members is committed to high level performance. Thus, there is a need to examine more in-depth the whole family environment of athletes. The purpose of the present research study is to assess the role of the family in the development of young athletes. More specifically, this study will provide responses to the following questions: (a) What roles do family members play in the initiation and development of a child's pursuit of excellence in sport? (b) At various stages of development, are there identifiable patterns of family dynamics that characterize successful athletes? The review of the research on home influence and talent development indicates a lack of literature concerning the dynamics involved between family members of successful athletes. The present state of knowledge of family influence on talent development in sport, along with the objectives of the present research project, indicate the need for an inductive research approach that will provide flexibility and freedom to explore the family dynamics of successful athletes.

Methods

Participants

Qualitative inquiry typically focuses in-depth on a relatively small sample selected purposefully (Patton, 1990). The selection of families of successful individuals was based upon the performers' backgrounds. Because families appear to have the most influence during the early stages of athletes' development in sport, junior national level athletes were chosen. Four families were originally identified and selected as being potentially rich cases that could illuminate the questions under study (Patton, 1990). Members of these families were contacted and subsequently accepted to be part of the study. Therefore, participants were 15 individuals from

four different families, including four athletes, four siblings, four mothers, and three fathers. One father and three siblings were not available at the time of data collection. Four families were studied jointly to obtain a better interpretation of similarities, dissimilarities, and redundancies between families (Stake, 1994). All athletes were 18 years of age at the time of the interview. Three members of the Canadian national junior rowing team (two females and one male) and one tennis player (male) competing at the Canadian national level participated in the study. All the participants came from middle-class and intact families. The four fathers had jobs in the professional field while the mothers were also occupied in the professional field as part-time ($n = 2$) or full-time ($n = 2$) employees. All parents had been involved in organized sport at the recreational level, and one father had competed as a professional athlete. To guarantee anonymity, a coding system was used to attribute quotations. A letter identified the participant as the athlete (A), the sibling (S), the father (F), or the mother (M). A number identified the family as the family of the tennis player (1), male rower (2), and female rowers (3 and 4). The athletes' ordinal position within the family were as follows: athlete of family 1 had an older sister; athlete of family 2 had a twin brother and an older brother; athlete of family 3 had two younger sisters; and athlete of family 4 had one older brother and one older sister.

Data Collection

Qualitative data collection was concurrent with the data analyses. This strategy helped to strengthen the quality of the data and the concepts that developed from the analysis (Strauss & Corbin, 1990). In-depth open-ended interviews were used to gather data from each family member with topics and issues specified in advance in an interview guide outline (Patton, 1990; Rubin & Rubin, 1995). Mainly, the interview guide consisted of exploring how family members have dealt with three types of constraints to talent development, that is, resources, effort, and motivation (Ericsson et al., 1993), and investigating how these constraints have affected the dynamics of the family. The interview guide for the athlete is reproduced in the Appendix herein.

A similar form, not included, was used with the parents and siblings. Each family member was interviewed individually, face-to-face. Within each family, one of the parents was interviewed first, followed by the athlete and a sibling; the remaining parent or sibling was interviewed last. All interviews for each family occurred within a fifteen-day period. They examined home influence from different sources within the same family. That is, parents, athlete, and siblings permitted a triangulation of data sources by comparing the perspectives of individuals from different viewpoints (Patton, 1990). The validation and credibility checks were an on-going process that consisted of continually questioning the interpretation of each family member during the interview (Kvale, 1989). Information derived from one family member was compared with information provided by other family members until a consistent picture was established.

Interviewing techniques were used to assure depth and authenticity of the participants' responses. To assure depth of responses, Rubin and Rubin's (1995) guidelines for in-depth interviews were followed. Essentially, Rubin and Rubin suggest the use of three types of qualitative questions: main questions, probe questions, and follow-up questions. First, the main questions, outlined in the interview guide (see Appendix), initiated and guided the conversation. Second, probe questions

served to deepen the interviewer's understanding of an issue and to enhance the richness of the data being obtained. Finally, follow-up questions were used to help pursue topics discovered in the interview process. Probe questions clarified and completed answers while follow-up questions explored new issues or new lines of inquiry that emerged from participants' responses (Rubin & Rubin, 1995). Various techniques (Seidman, 1991) were used to assure the authenticity of the participants' responses. The questions asked about the participants' actual behaviors were as precise as possible. Leading questions that influenced the direction of the responses were avoided. Rather than relying on participants' memories of specific events, open-ended questions that helped participants to reconstruct their past experiences were asked. The role of the interviewer with each participant was to listen actively and to move the conversation forward by building on what each person had to share. Throughout the interview process, the investigator ensured that the concepts elicited by family members were understood in a nonsuperficial way. Rapport was maintained during each interview through body signs of verbal tracking such as nodding and with words of thanks, support, and praise that helped make the participants feel that the information of the interview was valuable. While the investigator was neutral regarding the content of the interview, he was caring about the willingness of the participants to share their perceptions and experiences. This type of rapport with the participants helped to create a positive context within which they felt comfortable and motivated to express their views.

One investigator having extensive experience with qualitative research and interviewing techniques, conducted every interview face-to-face at the participants' homes or at the investigator's office. Informed consent was obtained from all participants. The interviews with the athletes and the parents lasted between one and two hours while the interviews with the siblings lasted between 30 and 60 minutes. All interviews were tape-recorded and a full verbatim transcription of each interview was done and introduced into the QSR. NUD.IST (1994) software for qualitative analysis.

Data Analyses

The objective of the analysis was to build an organizing system of categories that emerged from the unstructured data and represented family members' perceptions (Strauss & Corbin, 1990; Tesch, 1990). Each interview was transcribed verbatim and resulted in 210 pages of interview transcripts. Each interview transcript was read carefully by two investigators. Following this initial step, two main operations played important roles in the analysis of the interview transcripts. First, there was the detailed examination of the interview transcripts that involved dividing the text into meaningful pieces of information called "meaning units" (MU) (Tesch, 1990). Secondly, common features among MU were identified. This procedure, referred to as "creating categories," involved comparing MU and grouping them to organize them into distinct categories (Côté & Salmela, 1994; Côté, Salmela, Baria, & Russell, 1993; Tesch, 1990).

This approach to qualitative analysis is often referred to as the constant comparative method (Strauss & Corbin, 1990) or thematic analysis (Boyatzis, 1998). Thematic analysis is a process to encode qualitative information into manageable units of analysis labeled as "code" or MU. Then, the "encoding" requires a specific way of organizing the qualitative information into patterns or categories that describe the phenomenon under study (Boyatzis, 1998). Similarly, the constant

comparative method involves the process of constantly comparing and contrasting the data until saturation is reached, that is, when no more encompassing categories emerge and no new concepts can be developed from the data. In the present study, the two investigators reached a consensus on the number of MU derived from the text, on the labels given to each category, and on the inclusion of each meaning unit into a specific category. The electronic organization of the data using NUD.IST facilitated the interpretation of the results by keeping a systematic classification of each meaning unit and its source. For example, all the MU belonging to one category were assembled into one place so that the researcher could read in a continuous fashion about every family member's attitude toward each category. Moreover, the process of handling the data electronically, as opposed to manually, reduced the chance of error in the analysis and decreased the chance of losing the source of relevant pieces of information (Côté et al., 1993). Another measure taken to enhance the credibility of the data was to constantly compare the perspective of athletes, parents, and siblings. Essentially, information obtained from athletes was checked and validated with parents and siblings and vice versa. Thus, consistency in overall patterns of family environment was identified by all athletes, parents, and siblings, contributing to the credibility of the findings.

Results and Discussion

The 15 interview transcripts were analyzed on a line-by-line basis by two coders who agreed on dividing the text into a total of 424 MU. The 424 MU were then assembled into 13 dimensions. Dimensions were named according to the common features that all its MU shared. As the data analyses proceeded, another level of interpretation emerged that consisted of comparing dimensions to organize them into larger and more embracing categories. Thus, the 13 dimensions were compared and similar dimensions were assembled together to result in 3 distinct chronological categories named "stages of sport participation." These three stages of sport participation were labeled as the sampling years (age 6-13), the specializing years (age 13-15), and the investment years (age 15 and over). All 424 MU and 13 dimensions derived from the interview transcripts were categorized into one of these three stages of sport participation. Tables 1, 2, and 3 report the dimensions that emerged within the sampling, specializing, and investment stages; the number of participants who elicited each dimension; and the number of family represented in each dimension.

Sampling Years

The first stage of sport involvement, the sampling years, occurred between the ages of 6 and 13 for all the participants. During the sampling years, parents were responsible for initially getting their children interested in sport. The results suggested that the main emphasis during this stage was to experience fun and excitement through sport. The characteristics of the family dynamics during the sampling years are identified in Table 1.

Parents provide opportunities for their children to enjoy sport. Parents of children in the sampling years were responsible for initially getting their children interested in sport and allowing them to sample a wide range of enjoyable activities without focusing on intense training. The main emphasis was to have their children experience fun and excitement through sport. As long as their children

Table 1 Dimensions of the Family Dynamics During the Sampling Years

Participants*	M	F	A	S	T	Fa
Number of participants	3	3	4	5	15	4
Dimensions	No. of participants					
Parents provide opportunities for their children to enjoy sport	3	3	4	5	15	4
All children within a family participate in various extra-curricular activities	3	3	4	5	15	4
Parents recognize a “gift” in the child-athlete	2	2	0	0	4	3

*M = mother; F = father; A = athlete; S = sibling; T = total; Fa = family

had fun, the choice of the sport was reported as not being an important issue to the parents as illustrated by this mother:

He’s been rowing for two years. He was involved in a lot of sport before that, mostly soccer and then high school basketball and volleyball, hockey a little bit . . . His first year rowing was a positive experience. The coaches motivated the kids so well that they had fun. He had found something that he really liked. (M2)

Although sports have become more organized and institutionalized in the last few years (De Knop, Engström, & Skirstad, 1996), a child’s first experience in sport is still connected with the importance of experimenting with new or different means of doing things rather than attaining a goal. Although parents of the elite athletes in the present study valued sport and encouraged their children to participate in sport, they always reinforced the element of play and enjoyment in the sporting experience as illustrated by this father:

He started tennis around thirteen. He played hockey up until then. You know, pretty well all Canadian kids start out in hockey at a young age, and he just had enough of that and then he picked up a tennis racket and said he wanted to play that sport . . . He was happy with tennis – he was happy and I think that is the major thing. (F1)

A greater focus on play and enjoyment during the sampling years is in line with results of studies that investigate the motives for children’s participation in sport (Gill, Gross, & Huddleston, 1983; Gould & Petlichkoff, 1988) and the early activities of elite performers (Bloom, 1985; Carlson, 1988, 1997; Csikszentmihalyi et al., 1993; Stevenson, 1990). Kleiber (1981) suggested that the “fun” of sports for young children lies in its play qualities. Individuals involved in playing sport try out new or different combinations of behaviors which eventually enable them to reach their goal, but not essentially in the most efficient or direct manner (Miller,

1973). Some important elements of playing sport during the sampling years are that it involves the child's active participation, is voluntary and pleasurable, provides immediate gratification, and includes intrinsic motivation. Because of these characteristics, playing sport during the sampling years could be defined as a type of play that is intentional or deliberate (Côté & Hay, 1999).

All children within a family participate in various extra-curricular activities. In line with parental value and beliefs, all the children of the families interviewed experimented with a variety of extra-curricular activities early in their development. Within each family, parental support during the sampling years appeared to be similar for all children. Evidence of participation in various activities before age 13 were expressed by siblings, athletes, and parents of all the families:

I like English and outside of school I like using computers and watching hockey games. Right now I'm training for rowing, and in middle school I did gymnastics. (S3)

I play soccer, well I used to play soccer; I've played basketball, volleyball, and cross-country. (A1).

All the kids had the same opportunity. [My son] had the best hockey equipment to play hockey with . . . [while the daughter is on the Junior National team in rowing]. They all played a musical instrument. (F4)

Carlson (1988, 1997) indicated that early specialization and "professional-like training" in tennis did not favor the development of elite players. An all-around sport engagement was more important before adolescence. Results of the present study reinforce that even for those who go on to be elite performers, the sampling years was an important stage of development. It is also important to note that during the sampling years, children from the same family were offered the same opportunities to experiment and get involved in various activities.

Parents recognize a "gift" in the child-athlete. At least one parent in three out of the four families mentioned that they recognized a "special gift" for sport in the child-athlete during the sampling years. For example, a father said:

. . . his self-discipline is incredible. It may be in his genes if you will. I know of only a few other people who have a mental toughness like [him]. I don't think we taught him that. I think he had that. (F2)

A substantial body of evidence suggests that elite performance is the result of intense practice rather than some form of natural abilities (Aarnio, Winter, Kujala, & Kaprio, 1997; Ericsson et al., 1993; Helsen, Starkes, & Hodges, 1998; Hodge & Deakin, 1998). Nevertheless, some parents in the present study as well as educational professionals in music (Sloboda, 1996) believe that achieving high performance in sport and music is the result of a special gift or natural talent. Dweck (1986) presented evidence that self-beliefs are determinants of progress and persistence and are greatly influenced by the beliefs of significant adults. In the present study, whether the perceived gift for sport was present or not, the fact that most parents noticed something special about their children is an important feature of the sampling years. This "realization" provides explanation as to why parents may show behaviors that are different for each of their children later on in their

development. These findings confirm Davidson, Howe, Moore, and Sloboda's (1996) earlier findings in music that parental beliefs about their children's talents are strong determinants of their behaviors and lead to more positive reinforcement of their children's effort.

Specializing Years

The second stage, the specializing years, was characteristic of athletes' involvement between the ages of 13 and 15. Although this stage appeared to be shorter, it marked a period in which athletes gradually decreased their involvement in various extra-curricular activities and focused on one or two specific sporting activities. While fun and excitement remained central elements of the sporting experience, sport specific skill development emerged in the specializing years as an important characteristic of the child's involvement in sport. The dimensions of the family dynamics during the specializing years are identified in Table 2.

Athlete makes a commitment to one or two sports. Critical incidents that made children pursue one activity over others were: positive experiences with a coach, encouragement from an older sibling or a friend, success, and/or simple enjoyment of the activity as illustrated in the following quotation:

My older brother inspired me to row . . . He'd always help me, he'd tell me things I was doing wrong and the things I was doing right. He'd just keep me going . . . And it was fun; I enjoyed rowing with him. (A2)

Csikszentmihalyi et al. (1993) reported that many teenagers drop out of a domain because they never had the chance to enjoy using their talent. These authors stated that "no teenager will develop talent unless he or she enjoys working in the talent area" (p.148). The main reason that adolescents choose to specialize in one activity over others resides in the positive value associated with the experience. Therefore,

Table 2 Dimensions of the Family Dynamics During the Specializing Years

Participants*	M	F	A	S	T	Fa
Number of participants	3	3	4	5	15	4
Dimensions	No. of participants					
Athlete makes a commitment to one or two sports	3	3	4	3	13	4
Parents emphasize school and sport achievement	3	3	3	3	12	4
Parents make a financial and time commitment to their child-athlete	3	3	4	4	14	4
Parents develop a growing interest in the child-athlete's sport	2	1	2	2	7	4
Older sibling act as a role model of work ethic	1	1	1	3	6	3

*M = mother; F = father; A = athlete; S = sibling; T = total; Fa = family

the overall quality of the experience in the specializing years should be positive to ensure that teenagers stay involved in sport.

While fun and excitement remain central elements of the sporting experience, sport specific skill development through practice emerged in the specializing years as an important characteristic of the children's involvement. At least one member of each family recognized the important role that practice had in the specializing years:

Sometimes [rower] will go from 5:00 in the morning to 11:30 or 12:00 at night, including school. He'll get up in the morning and go to the YMCA, and then have a practice for basketball after school. In the middle of his day, he has a spare and he'll do a workout at school. After school he'll come home, go to the YMCA again or go for a run, and then go downstairs and use our rowing ergometer. (M2)

Several authors have acknowledged that in middle childhood or in the specializing years, practice becomes a more powerful factor in skill development (French & Thomas, 1987; Seefeldt, 1988). Nevertheless, although adolescents may become more committed and serious about their sport involvement by increasing the amount of practice, in this study, play and enjoyment remain central elements of the specializing years as has been previously indicated (e.g. Bloom, 1985; Carlson, 1988, 1997). In sum, because children in their middle childhood "need to perceive sport as challenging yet fun" (Gallagher, French, Thomas, & Thomas, 1996, p. 354), a balance of both practice and play activities seems appropriate in the specializing years.

Parents emphasize school and sport achievement. In all the interviewed families, it was acknowledged that school achievement was more important than sport achievement. The following MU illustrates the role that school and sport had in the lives of the children-athletes during the specializing years:

If he had tennis lessons then he'd do his homework before he went for his lessons. It had to be structured that way so that he could accomplish everything. (M1)

My parents feel that school is really important, academics have always been a priority . . . always. Rowing was kind of for fun. When I come home, all I usually do is study, sleep, or eat. (A3)

While school was the priority in all the families studied, parents did not expect their children to have part-time work in their specializing years. In fact, parents were content to have their children focus solely on sport and school achievement and alleviated extra pressure from part-time work as characterized by the following quotations:

One of the things we've always told the kids while they've been in high school—I don't know whether it's right or wrong—is if they wanted to be involved in school sports, that this was probably one of the only times in their lives that they would be able to have all of these opportunities, like basketball and volleyball and rowing. We weren't going to make them get a part-time job in order to support their extra curricular activities if they wanted

to be involved in things like that [sport]. That takes up a lot of time and we were willing to give them a little bit of money to go to shows and things like that. (M2)

My parents have always said, “No, you do the sport, you do the activities, you have a lifetime to work.” That’s their attitude. (A4)

By limiting their expectations to school and sport achievement, parents of elite athletes reduced the importance of other social demands put on children during the adolescence years. The current findings suggest that those children who achieve a high level of performance in sport have parents with high expectations about their sporting achievement. However, 12 of the 15 participants (at least one member in each family) mentioned that the parents followed and facilitated their children’s involvement in sport rather than leading and directing them. This type of parenting style is similar to what Hellstedt (1987) defined as moderately involved parents. Parents that are moderately involved are characterized “by firm parental direction, but with enough flexibility so that the young athlete is allowed significant involvement in decision-making” (Hellstedt, 1987, p.153). In sum, parents who confine their expectations to a limited number of domains (e.g. school and sport) in their children’s lives may assist the learning process most.

Parents make a financial and time commitment to their child-athlete. Parents of young athletes had numerous opportunities to demonstrate and provide tangible support. The cost of registration, equipment, supplies, and travel expenses run into thousands of dollars a year and has a significant impact on the family life. The following quotations illustrate the importance of this concept in the families studied:

When he was going four times a week, our membership at [tennis club] had to be around \$2,000. That’s just his lessons, that has nothing to do with the rackets and shoes or any traveling that we did. (F1)

It started back when they were younger, buying their first set of weights. Instead of going on vacations, we put the money into buying rowing ergometers. [My son] and I also share a single shell. We put some of our spending money or savings into training equipment and then said, “to heck with going to Whistler to go skiing.” (F2)

Kirk, Carlson, O’Connor, Burke, Davis, and Glover (1997) recently demonstrated that family income was one of the key factors in determining the likelihood of a child’s involvement in sport. However, Overman and Rao (1981) demonstrated that youth sport involvement and motivation were not associated with parents’ socioeconomic status. It appears from the results of the present study that families who are committed to their child’s involvement in sport will somehow find the financial resources necessary by often making sacrifices in their own social or recreational life.

Parents develop a growing interest in their child-athlete’s sport. All participating parents developed an interest in the sport in which their child-athlete specialized. Their interest resulted in different levels of involvement varying from spectator to coach. The following quotations from a father and an athlete demonstrate the range of involvement of parents.

I did many sports, but I was not involved with rowing. I have since become involved with it . . . I was down there so much with my sons and I knew many of the guys that rowed and were coaching. I had always wanted to scull and I said if I'm going to be coming down here this much, then I'm going to be doing something too. (F2)

He has become involved but not as an athlete. Actually, he came over and watched me in Poland [Junior World Championship]. He looked around Europe a little bit and then he met us in Poland. He's helping out; we had a fund raising auction for Poland and he organized that whole thing. He's getting more and more involved. (A3)

At least one member of each family reported that one or both parents became more involved in their child-athlete's sport during the specializing years. Similarly, Davidson et al. (1996) showed that parents of talented musicians became more involved in music after their children began lessons compared to before. This trend suggests that if parents' involvement increases as the child's interest in one sport grows, then the child's commitment to sport and physical activity may be enhanced.

Older sibling acts as role model of work ethic. It was mentioned in three of the four families that in the specializing years, older siblings had a positive influence on the work ethics of the child-athlete. In one family the influence of an older brother was directly related to rowing as characterized by this quotation:

We'd start working on ergs together and I'd bring him down to the rowing club. He would come and watch regattas; off the water, this led to a really good relationship. [We are] really close. I'm hoping that next year maybe he'll come down and study; [we can] live together. It's been good, really good. (S2)

In the other two families the older sister was an influence of work ethic in a domain other than sport as illustrated by this quotation:

Maybe he saw tennis as a way to do what he liked doing best, which was tennis and going to school at the same time. So if he had not committed himself as much with the tennis game, then he probably wouldn't have had a scholarship. I think that it may have been something that he saw in me: working academically and being happy to go to university. Then he got his way by playing tennis really hard. I probably served him a little bit as a role model. (S1)

Although competition between siblings has been observed as a more common characteristic of sibling relationships (Sulloway, 1996), cooperation emerged in this study as an important antecedent and outcome of sibling relationships. Siblings often have to coordinate interaction within a family in order to reach a common goal. Cooperation between siblings may, in some instances, create an environment favorable to the development of sport skills. For instance, Richter (1997) recently interviewed a father, mother, and their three children, all nationally ranked swimmers in their age groups. The children were a 19-year-old boy, a 17-year-old boy, and a 14-year-old girl. Richter (1997) described the family as a "swimming unit" in which every member operated together while maintaining a viable relationship with each other. The family structure resembled an interdependent, cohesive

unit, which eliminated the children's desire to seek out a distinct niche for individual recognition. One important variable that explained the cohesiveness of this particular family was that the parents were able to recognize each child's uniqueness within the unit and encourage cooperation rather than competition. Although sibling relationships have not been frequently studied, when they have been, it is often because they are assumed to be inherently conflictual. Cooperation between siblings and parental behaviors that encourage cooperation is certainly an area that needs further investigation in sport psychology.

Investment Years

At around age 15 the athletes moved into the investment years. In the investment years, the athlete was committed to achieving an elite level of performance in a single activity. The strategic, competitive, and skill development characteristics of sport emerged as being the most important elements of the investment years. The dimensions of the family dynamics during the investment years are identified in Table 3.

Athlete increases commitment to one sport. The investment years are distinguished from the specializing years mainly by the extreme intensity of the athlete's commitment to the sport and the tremendous amount of practice. It is in the investment years that the child makes a commitment to achieve a high level of excellence in his or her sport. Play activities are now replaced by an enormous amount of intense practice. This amount of daily practice in the investment years increases significantly as reported by the following athletes:

Right now, in the fall season, training is not quite as intense. I train about one and a half to two hours a day, and then when spring starts we start our serious training. It's probably between three to three and a half hours a day of training; it has been like this for the last year and a half. (A2)

Table 3 Dimensions of the Family Dynamics During the Investment Years

Participants*	M	F	A	S	T	Fa
Number of participants	3	3	4	5	15	4
Dimensions	No. of participants					
Athlete increases commitment to one sport	3	3	4	2	12	4
Parents show great interest in child-athlete's sport	3	3	4	5	15	4
Parents help athlete fight setbacks that hinder training progression	3	3	3	0	9	4
Parents demonstrate different behavior toward each of their children	2	1	2	4	9	4
Younger sibling or twin shows bitterness and jealousy toward their older sibling's achievement	2	1	1	4	8	3

*M = mother; F = father; A = athlete; S = sibling; T = total; Fa = family

I train about sixteen hours a week, maybe more. I'm not sure, because it varies, depending on what is happening at school. (A3)

Findings from the present study provide a developmental marker, the investment years (typically around age 15), at which changes in the number of hours practicing changed significantly. The age at which children attain the investment years can vary greatly depending upon the sport or activity they choose. For example, the investment of training time, money, and other resources needs to be made earlier in sports such as gymnastics and figure skating. Although the age at which children typically enter the investment years can vary, the characteristics of this stage of development are very similar across sports. That is, the number of hours of intense training increased drastically while the number of hours spent in play activities decreased (Bloom, 1985; Carlson, 1988). Also, recent findings show that even if children reach the investment years at a younger age, such as in gymnastics, they are still first engaged in the sampling years (characterized by a large amount of play activities) for at least three years and in the specializing years for at least one year (Beamer, Sedgwick, Côté, & Ericsson, 1998).

Parents show great interest in child-athlete's sport. The investment years are a period of investment not only for the child-athlete but also for the parents. In the four families investigated, the child-athlete was central to all family activities during the investment years as illustrated by the following quotations:

There are four of us that are involved in rowing, my [other son] is not. Yeah, we have to catch ourselves and make sure that he is included. Perhaps sometimes he was overlooked. By and large, if we are together, we [try to] spread the spectrum of the conversation around. (F2)

In this family, usually every conversation ends with rowing. (S3)

We never miss an event—it doesn't matter what it is—we're there and that's all we can do, we can't do the training for her. (F4)

In all the families, parents were found to provide advice to their child-athlete regarding their future in sport. Although parents were not directly involved in giving sport-specific instruction or coaching, they were involved in a range of roles that facilitated their child's participation in sport. The roles ranged from "fitness consultant" to "career advisor" and consisted mainly of general helping duties. The following quotations exemplify the different guiding roles that the parents had:

My mom does a lot with the body and working out and stuff and she has always given me advice. If I'm not feeling well if she thinks I should still do my workout, etc. That's how I decide what to do, I'll ask her. Whatever she says, I'll do, because I know she's educated. She knows about exercise and training. (A2)

He [my father] has never rowed but he comes up with little things connected to rowing. It's kind of weird. A couple of years ago he came up with a new way of putting together a boat so that it will go faster. He has little theories about how you should erg. You see he doesn't actually erg himself so it's kind of funky. (S3)

We helped him to become certified as a [tennis] instructor, a good job. That was one thing that we did that was very expensive and very time consuming. But we did it for him. He passed and we were very happy about that. (F1)

In sum, during the investment years parents provided directions and guidance in helping related duties and were not directly involved in coaching duties, a finding consistent with Kirk's et al. (1997) study of families of junior athletes. By showing great interest in their child's sporting activities, parents show a special kind of companionship or "network support" which facilitates their child's engagement in sport (Cutrona & Russell, 1990).

Parents help athlete fight setbacks that hinder training progression. Being able to deal effectively with injury, fatigue, pressure, failures, and loss of interest were important characteristics of the athletes' involvement in the investment years. Parental support was an important factor in the ability of athletes to deal effectively with setbacks as illustrated by these quotations:

. . . Christmas holidays or the long weekend she'll get a day where she sleeps till noon. She hangs around the house in her pajamas until supper time and never bothers to get dressed, and then she'll go to bed. You might see her about noon the next day, same pajamas, and then she's about ready to get going again. So you just let her put in some downtime and then she's off again. (M3)

. . . after winning in [tournament] it was three in a row, and I knew he was burnt out. We got home at about 6:30 and he was just drenched. He was happy he had won three tournaments in row, it was going to pull him up in the rankings, but I knew he was physically and mentally drained. I just said, "next weekend do you just want to go up to the cottage? We haven't been there for a while." He said, "Dad, I don't want to get in the car," so I said, "Fine, we'll just stay home." (F1)

The high level of emotional support provided by parents in times of stress and anxiety emerged as an important family characteristic of the investment years. Generally, emotional support represents the ability to turn to others for comfort and security during times of stress and anxiety. It provides for the strengthening of a child's sense of competence or self-esteem (Cutrona & Russell, 1990). Giving children positive feedback on their abilities, or expressing a belief that they are capable of coping with difficult situations will likely lead them to believe that they are cared for by others. These supportive efforts and gestures by parents in times of setbacks may also enhance their children's level of self-esteem and motivation to continue participation in their sport.

Parents demonstrate different behaviors toward each of their children. Because resources such as time and money are usually limited, parents tended to demonstrate different behavior toward each of their children in the investment years. At least one member of each family illustrated parental differences in behavior toward their children:

I know my dad is much harder on my brother. I don't know why. I think they [my parents] were much more positive toward me. (A4)

I think he [child-athlete] did get more and I think he still does in financial support. (S1)

The high demands of time and money have repercussions on family life and can create an uneven distribution of resources among children of the same family. It is important to emphasize that the parents in this study had interests in sport in the sampling years and became committed supporters of their children's lessons and practice in the investment years. This committed interest of parents toward the child who excels in sport results in an unequal distribution of money and time for children who choose not to invest in sport. Although parents were consciously aware of this uneven distribution of resources between their children, their belief about the high level of talent in their child-athlete was strong enough to determine and validate differential behaviors between children.

Younger sibling or twin shows bitterness and jealousy toward their older sibling's achievement. Instances of unfairness emerged in the investment years in the two families where the athlete had a younger or twin sibling. A serious commitment in sport by one child in the family created an uneven distribution of resources within the family, frequently resulting in feelings of tension from a sibling, as illustrated by this twin brother:

I just don't get into that conversation. It's almost gibberish to me. I just sort of sit there and eat. When they are talking about that [rowing], I'll talk about something else and then they'll get right back into rowing. That's all that's on their minds. They're almost mental about rowing. It's taking right over, especially in mid-summer when they are really into it. Actually, that's when I really get frustrated with it. It's almost like they don't care about what I do. (S2)

Sibling bitterness or jealousy could be explained using an ecological theory of the family (Klein & White, 1996; Sulloway, 1996). According to Sulloway, "siblings are different because they exemplify Darwin's principle of divergence" (p.85). Darwin's principle of divergence suggests that in the animal world, two species can not coexist in the same habitat if their ecological requirements are identical. Evolutionary diversification between animals is necessary to minimize competition and to make coexistence possible. In the same line of thought, Sulloway suggests that as children of the same family mature, they undergo adaptation and diversification in their efforts to establish their individual niche. By pursuing different interests and abilities, siblings minimize direct competition. Differences between siblings are common in families. Differences appear because siblings find a distinct niche within the family. For instance, when one sibling excels in a particular sport, other siblings carefully ponder their chances of measuring up to these achievements. Younger siblings or siblings who have not yet established their niche within the family are especially susceptible to negative comparison with their siblings. By contrast, a family with only one child represents a special case in which the only child maximizes parental investment by not having to compete with siblings (Sulloway, 1996).

General Discussion

Providing an account of the childhood and family conditions of elite athletes is a necessary step in the development of explanatory theories about the causes and origins of excellence in sport. The state of knowledge about the family conditions that are precursors of sport expertise is limited. Results of this study have provided examples of events and family conditions that may have influenced children's

involvement and achievement in sport. Without doubt, the family conditions that emerge from this study are an incomplete picture of the family dynamics of talented performers. The findings presented in this study result from an analysis of intact and middle-class families and, therefore, may not be representative of various types of family structures. More qualitative studies of families need to be conducted and the qualitative data need to be complemented by quantitative findings. Nevertheless, even when more qualitative and quantitative studies are available, the data will still have to be placed within a temporal dimension of children's development in sport. By providing a generic pattern of events that marks children's progress in sport, the present study provides a basis for making more accurate generalizations about the development of talent in sport. Sport achievement does not emerge from nowhere, therefore the importance of identifying events and family dynamics that may be influential at particular moments in time is an important step toward understanding and improving competence in sport.

The three stages of sport participation outlined in this paper have shown that different themes are important at each phase of a child's participation in sport. Although these stages are similar to Bloom and colleagues' (1985) three phases of learning (the early years, the middle years, and the later years), they are also different in two important aspects. First, the stages elicited in this study are specific to sport and are anchored in the theoretical concepts of deliberate play and deliberate practice. The concepts of deliberate play and deliberate practice are two variables that mark the transition between the sampling, specializing, and investment years. In general, the sampling years are characterized by a lower frequency of deliberate practice and a higher frequency of deliberate play; the specializing years are marked by more equal amounts of deliberate play and deliberate practice; and the investment years are characterized by a higher frequency of deliberate practice and a lower frequency of deliberate play (Beamer, Côté, & Ericsson, 1999; Côté & Hay, 1999). Second, the time span covered by the sampling, specializing, and investment years is from early childhood (approximately age 6) to late adolescence (age 18). Because this time period is more condensed than Bloom's et al. three phases of learning, which covers the entire career of a performer, it is more representative of talent development in sport. The emergence of three stages of sport participation before age 18 also points toward the existence of a fourth stage marked by the maintenance and perfection of skills. This "perfection" or "performance" stage would appear after the "investment years."

With a child's pursuit of excellence in sport, important changes also occur at the parental and family levels. The role of the parents changed from a leadership role in the sampling years to a follower/supporter role in the investment years. During the sampling years, the parental belief that sport is an important factor in a child's overall development resulted in parents encouraging their children to be involved in various types of sporting activities. Parents assumed a leadership role during the sampling years by initially getting their children interested in sport and allowing them to sample a wide range of enjoyable sporting activities. During the specializing years, parents became committed supporters of their child-athlete's decision to be involved in a limited number of sports. In all the families studied, parents did not put any kind of pressure on the child regarding the type of sport in which he or she should specialize. This role of follower and supporter became more apparent in the investment years where parents made sacrifices in their personal lives and their family's life to allow their child-athlete to have optimal training

conditions. During the investment years, parents responded to the various demands and expectations put on their child-athlete by fostering an optimal learning environment rather than creating new demands or pressure.

At the family level, all children from the same family appeared to receive the same kind of support during the sampling years. Parental attention and resources were progressively shifted toward their child-athlete during the specializing years. It is also during the specializing years that in some families, older siblings had a positive influence on the child-athlete's decision to specialize and focus their effort in a specific sport. During the investment years, the gradual shift of family attention and resources toward the child-athlete was obvious and resulted, in some instances, in bitterness and jealousy from younger siblings.

The role of the family in children's sport involvement is a complex phenomenon because of the diversity of the family context. To further our understanding of family influence on talent development, the complete family environment needs to be studied at each stage of a child's development. Combined with other perspectives on talent development (e.g. Bloom, 1985; Régnier, Salmela, & Russell, 1993; Stambulova, 1994), the stages of sport participation described in this paper demonstrate a somewhat consistent pattern in the process of developing sport motivation and abilities in children. The stages form a useful framework for researchers studying family influence on youth sport participation and the development of expertise in sport. Practitioners can also use these stages as guidelines to help develop programs to encourage children to maintain a commitment to sport and exercise activities.

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Appendix Interview Guide

Athlete's form

1. Getting started. Looking back, can you remember and tell me about how you got started in sport
2. Family background. Can you tell me anything about your family or home environment which might have influenced your becoming a (name sport)?
3. Tangible support and resources. Can you tell me about the tangible things that your parents, siblings or relatives provided to support your development as a (name sport).
4. Motivation. Looking back through various stages of your development as a (name activity) can you tell me how you kept motivated to keep learning and practicing? What kind of things did your parents and other family members say and do to keep you practicing and working hard to develop as a (name sport)?
5. Effort and concentration. Can you tell me about how you have managed over the years to invest such a high level of effort and concentration into your learning and practicing? What roles did your parents or other family members play in helping you to fit regular practicing into your life, and to get the most out of each practice, without messing up your health, school, or general satisfaction? Can you comment on how your practicing may have changed over the years, in terms of level of effort, concentration, goal setting, and general quality, and how your parents' influence on your practicing may have changed?