

Sport Values of Bantam, Midget and Intermediate Female Hockey Players
and Their Minor Hockey Associations

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Abstract

The sport values of female hockey players and their minor hockey associations were explored to better inform a values-based approach for adult-managed minor hockey. Data were collected from 294 participatory HL and competitive Rep players (12-22 years of age) using the Youth Sport Values Questionnaire-2 and from 30 hockey association board members using a modified YSVQ-2.

Results indicated player importance (VI) ratings for Moral ($M = 4.08$) and Competence ($M = 4.15$) values were not significantly different but were significantly higher than Status ($M = 2.11$) value. Significant weak relationships between age and competition level versus VI ratings were found. There were medium/ high Moral, medium/ low Competence and high/ high Status value congruence between Rep and HL Player-Board Members, respectively. Based upon the findings, girls' minor hockey associations need to recognize the values female youth players prioritize, and ensure each is considered within a values-based decision-making approach to governance.

Key words: female, sport values, value congruence, ice hockey, value importance.

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Chapter One: Introduction

Amongst Canadian youth, participation in physical activity in general, and in *organized* physical activities and sport specifically, tends to decline as youth reach the age of 19 years (Canadian Fitness & Lifestyle Research Institute [CFLRI], 2010, 2011b). The 2009-2011 CANPLAY study (CFLRI, 2011b) found that 84% of 5-10 year olds participated in organized activities, as compared to just 60% of 15-19 year olds. In addition, a gender difference was observed in the older-aged group, with more boys than girls participating in organized physical activities and sports. A review of hockey registration data over the 16 years ending with the 2008-09 season (Hockey Canada, 2009) showed a steady increase in female registration levels; however, the numbers began to level off in the late 2000s with declining year-to-year increases. The Ontario Women's Hockey Association (OWHA), the largest female hockey association in Canada, experienced a player registration increase of only 5.5% in the five years ending with the 2012-13 season, as compared with a nearly 28% increase in the preceding five years (from 2002-03 to 2007-08 [OWHA, 2013]). Participation in female hockey may still be expanding, but the diminishing yearly growth in registration levels should be a warning to minor hockey associations that immediate action is needed to retain existing members and attract new participants to the sport.

An increased level of youth participation and retention, as well as continued sport involvement throughout adulthood allows both individuals and communities to enjoy the positive outcomes of sport. For example, sport

contributes to the physical and mental health and well-being of participants, develops skills and attitudes, reduces the risk of certain diseases, promotes healthy aging, reduces health care costs, and provides social and economic benefits (Bloom, Grant, & Watt, 2005; Fraser-Thomas, Côte, & Deakin, 2005; Mulholland, 2008). There are particular benefits of sport for girls, including enhanced mental health, development of self-esteem and empowerment, and provision of female leadership opportunities (Johnstone, 2012; Mulholland, 2008). In addition, habits of participation formed during childhood and adolescence are important for maintaining physical activity and organized sport during adulthood (Perkins, Jacobs, Barber, & Eccles, 2004). Thus, sport managers should be concerned about retaining and growing female participation in organized hockey as a means for girls and young women to access the health and well-being benefits associated with physical activity, and to encourage life long participation.

However, not all sport experiences are positive. The True Sport report *What Sport Can Do* (Mulholland, 2008) suggests that declining participation in community sport may be due to a number of serious issues, including “too much focus on winning and competition, violence, under- and over-involvement of parents, poor coaching and leadership, harassment, intolerance/ racism, lack of fair play, and injuries” (p. xi). Given that many of these problems are associated with Canadian hockey at all levels (Ackery, Tator, & Snider, 2012; Cusimano et al., 2011; Hemond, 2012; Wilson, 2006), it would be reasonable to suggest that these issues assert a detrimental impact on participation in minor hockey. *The*

Sport We Want Symposium Final Report (Canadian Centre for Ethics in Sport [CCES], 2003) concluded that to move from the sport we have to the sport we want requires adoption of a values-based sport system. Symposium participants acknowledged differing stakeholder expectations of sport as one reason for failure of the Canadian sport system (CCES, 2003), and identified the need to “seek the input of children and youth” (p. 5). Thus, examining the sport experiences of youth from a values-based perspective may provide insights that can be acted on to enhance the positive benefits and minimize the negative aspects of sport.

Rokeach, in his seminal work, *The Nature of Human Values* (1973), defined a *value* as “an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence” (p. 5). Dolan, Garcia, and Richley (2006) defined values as beliefs which guide and direct preferable behaviour or focus on achieving desirable outcomes. Further, Rokeach (1973) defined a *value system* as “an enduring organization of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of relative importance” (p. 5). While factors such as age, gender, socio-economic status and education of youth and/ or their parents impact decisions around sport participation (Berger, O’Reilly, Parent, Séguin, & Hernandez, 2008; CFLRI, 2010, 2011a, 2011b); Simmons and Dickinson (1986) noted that measurement of athletes’ values may provide insight into satisfaction about sport participation, and thus consideration of the athletes’ values may be another means to favourably influence participation.

Traditionally, sport organizational values are adult leader-imposed, with little or no input from the athlete user group (Houlihan, 2004; Jackson & Ritchie, 2007). Frank (2006) discussed the importance of including youth as a stakeholder in the planning process, and noted that “we cannot assume that the adult-oriented approach to planning serves youth by default, because in many respects the needs and preferences of youth are different” (p. 351). MacPhail, Kirk and Eley (2003) advocated for including the views of young people to inform sport policy, noting that rarely are they asked to provide input, and that it is “vital that young people’s views towards facilitating participation in sport are taken into account ...in order to provide a climate and conditions that meet young people’s needs” (p. 60). This study examines the importance of sport values of female minor hockey players, followed by an assessment of the level of value congruence between the players and the values of their respective minor hockey associations. Adopting a philosophy that intentionally utilizes values as a framework for management decision-making (Dolan et al., 2006) within a minor sport organization can create “a culture that is people-centred, values-driven and results-oriented” (Bell-Laroche, 2009, p. 2) that in turn may positively affect participation.

The purpose of this study is to examine the personal values of female hockey players related to their participation in organized hockey. The findings from this study may inform female sport organizations that aspire to adopt a values-based sport management approach, resulting in female hockey programs that better reflect the athlete user group values.

RQ1. What are the personal sport values of females related to their participation in organized minor hockey?

RQ1a. Are there differences in values importance ratings based on age, length of participation or competition level?

RQ2. What is the level of congruence between the personal sport values of female hockey players and the values of their local minor hockey associations?

By examining the personal values of female hockey players, insights drawn from this research better informs girls' hockey associations about the values that females place on their participation in organized hockey. The aim of this research is to identify athlete values that may be intentionally utilized through adoption of a human values-based management approach to guide the strategic and operational decision-making processes of minor hockey organizations for program planning and implementation, resulting in initiatives that meet the needs of the female athlete users, provide positive sport experiences and ultimately lead to continued sport participation.

Chapter Two: Review of Literature

This chapter reviews literature around the history and organization of female hockey in Ontario, personal values in sport and the measurement of values importance associated with sport. Finally, this literature review examines the theory of values-based management and values congruence, and their application to management of sport organizations.

The History and Governance of Women's Hockey in Canada

A brief history of the growth and governance of women's hockey in Canada, and in Ontario in particular, is presented in order to provide historic context as well as an understanding of the current organizational structure and culture in which most females play organized hockey in Ontario.

The earliest recorded women's hockey game in Canada was played in 1891 in Ottawa (Etue & Williams, 1996). The female game grew both in participation and popularity during the 1920s and 1930s, primarily in Ontario but also in Alberta, Montreal and the Maritimes (Adams, 2008; Avery & Stevens, 1997; Etue & Williams, 1996). The Depression, World War II and the rise of professional men's hockey contributed to the demise of organized women's hockey in Canada during the 1940s and 1950s (Etue & Williams, 1996). However, several milestones in the 1990s were catalysts for growth in Canadian female hockey. The first world tournament was hosted by the OWHA in 1987, a precursor to the first Women's World Championships in Ottawa in 1990 (Etue & Williams, 1996). Female hockey was added in the Canada Winter Games in 1991, and 1993 saw the first Under 18 (under 18 years old) national championships.

Finally, in 1992 the International Olympic Committee announced the inclusion of women's hockey in the 1998 Nagano Winter Olympics (Etue & Williams, 1996). The impact of these events led to a ten-fold increase in female hockey registration in Canada from 1990 to 2013 (Avery & Stevens, 1997; Hockey Canada, 2013). In 2013 nearly 87,000 females comprised 14% of the total number of registered hockey players in Canada (Hockey Canada, 2013), and over 45% of these were members of the OWHA (Hockey Canada, 2013; OWHA, 2013).

Early organization of women's hockey in Canada was often rooted in player-driven initiatives. Kidd (1996, p. 109), stated that by the 1920s "most sportswomen felt they should administer their own activity as much as possible". The first Canadian provincial women's hockey association, the Ladies Ontario Hockey Association (LOHA), was established in 1922, due mainly to the efforts of players and coaches (Etue & Williams, 1996); however, the LOHA management faced many challenges, including "maintaining control over women's hockey with men in advisory positions" (Adams, 2009, p. 133), and the league ultimately dissolved in 1941 (Adams & Stevens, 2007). With low participation in the following decades, there were no female organizations until the 1970s (Adams & Stevens, 2007). During the 1970s, female hockey at this time was largely concentrated in Ontario (Etue & Williams, 1996), and in 1975 the OWHA was formed, the only provincial hockey organization focused entirely on the development of female hockey (Adams & Stevens, 2007; Avery & Stevens, 1997). This governance structure persists today, with all Canadian female hockey

programs except those in Ontario integrated within male-dominated provincial/territorial organizations.

The OWHA, with the stated objective to “promote the participation of girls and women in all aspects of female hockey” (OWHA, 2012, p. 1), has jurisdiction over all organized female hockey programs in Ontario. The OWHA also oversees the Provincial Women’s Hockey League (PWHL) for elite players under 22 years of age, and sponsors a provincial Under 18 team (consisting of players 17 years of age and younger) which competes in an annual national championship. At the community level programs operate under an independent female hockey association or as a division within an integrated local minor hockey organization.

Despite a strong mandate to promote, provide and develop female hockey opportunities in Ontario (OWHA, 2012), the OWHA has diminished representation within Hockey Canada (Adams & Stevens, 2007), the national sport organization for ice hockey. The OWHA is one of seven members of the Ontario Hockey Federation (OHF), which in turn is one of thirteen provincial branches within Hockey Canada, including three from Ontario (Hockey Canada, n.d.). The mandate of Hockey Canada, the national sport organization for hockey at all levels and ages, includes boys and girls minor and senior hockey, the junior men’s Canadian Hockey League (CHL), and the men’s and women’s national teams. Hockey Canada oversees, among other areas, development and enforcement of playing rules; player, coach and game official development; officiating plus sanctions a number of national championships (Hockey Canada,

2013). Female hockey was not recognized at the national level until 1982 with the formation of the National Female Council (Avery & Stevens, 1997, p. 82). The Female Hockey Council continues to govern female hockey policy and programs within Hockey Canada, (Adams & Stevens, 2007; Avery & Stevens, 1997), yet the Chair of the Female Hockey Council “is the only voice for female hockey on the 43-member [now 44-member] national Hockey Canada board” (Adams & Stevens, 2007, p. 354). At the provincial/ territorial level all of the branches of Hockey Canada are gender integrated with the exception of Ontario (Theberge, 2000). Indeed, “the influences of female hockey leaders, be they from the OWHA or other provinces and territories, is severely limited, as its representation is deeply nested within the larger male-dominated hockey structure” (Adams & Stevens, 2007, p. 354).

Expansion of the female game has not occurred without challenges. Formation of the OWHA was in part due to the contention that “the issues in women’s hockey were very different from those in men’s hockey” (Etue & Williams, 1996, p. 71), including appropriateness of the sport for girls, and the concern that “a male bureaucracy ... would be unlikely to take the female game seriously” (p. 71). In its early years, the OWHA had to manage lack of ice (or lack of ice at convenient times), the paucity of girls’ leagues, and lack of support (Etue & Williams, 1996; Stevens & Adams, 2013). Sadly, equitable ice time is still an issue: in 2009 the Toronto Leaside Girls Hockey Association launched a media and lobbying campaign that eventually succeeded in revising the ice allocation policy for Toronto city-owned arenas (Toronto Leaside Girls Hockey Association,

2013). Limited access to ice has meant that, in Ontario at least, game times for girls are drastically reduced as compared to boys' game (girls' games are 32 or 42 minutes as compared to up to three 20-minute periods for boys' games (Ontario Minor Hockey Association [OMHA], 2011; OWHA, 2012).

The concept that female hockey is unique and distinct from the male game, not just in the rulebook but in the culture of the game, is promoted by the OWHA (2013), as well as researchers such as Adams and Stevens (2007) and Theberge (2000) and. Aside from game lengths, the two main areas of difference between female and male hockey regulations in Ontario are body-checking and player movement. Ontario eliminated body-checking from female hockey in 1989, leading to a reduction of injuries, improving the image of the female game, and forcing players to be more creative in their play (Etue & Williams, 1996). However, the most recent OWHA discipline and injury reports (OWHA, 2013) demonstrated that the game is still quite physical in nature. Player movement, the ability for a player to play for a team other than their 'home' association, is generally restricted within boys' minor hockey, but free player movement is allowed within girls' hockey (OMHA, 2011; OWHA, 2012). The opportunity to play anywhere was originally intended to allow and encourage girls from lower population centres to travel in order to play on all girl teams (as opposed to boys teams) or on more competitive girls teams, in the absence of local options. Today, some girls associations restrict player movement through the implementation of policies that control the number of 'imports' into the association as a means of promoting the development of hometown players. Conversely, an association may

allow an unrestricted number of highly skilled import players with the aim of creating a more competitive team (than could be formed using only local players).

The female and male games also differ from a cultural perspective. With limited financial rewards and the national team being the highest level to which female hockey players can aspire (Etue & Williams, 1996), one would expect the experiences, motivations and values of female players to be vastly different from their male counterparts, who have national, professional and semi-professional playing opportunities as well as the potential to earn significant sums of money through contracts and endorsements. Some suggest that “values are different between men and women, as is the spirit in which they approach the game” (Avery & Stevens, 1997, p. 244). Others describe female hockey as “a pure form of the sport” where “players are motivated by the sheer excitement of playing the game” (Avery & Stevens, 1997, p. 244). However, the male-defined model dominates the female game: Stevens (2006) notes that “while recreational programs have expanded, a majority of resources are focused on the elite and competitive tiers of the game, so that female hockey now mirrors the competitive pyramid that exists in male hockey” (p. 91). Since the early 1990s, “Hockey Canada has moved its programming away from female grassroots hockey development towards female hockey high-performance” (Adams & Stevens, 2007, p. 354).

While the OWHA embraces the concept of a distinct female game and its mandate includes the promotion of female hockey at all levels, the influence of Hockey Canada has shifted priorities to a more competitive, performance-based

focus rather than emphasizing participation and development (Stevens, 2000). If the female game is distinct from the male game, then the adult male-imposed policies filtering down from Hockey Canada may be incongruent with the values of the female members, including female hockey players.

Human Values

Values are criteria that influence behaviour and justify the choices of individuals (Schwartz, 1992). Values in sport have been studied from various perspectives, including prediction of behaviour, motivation, and moral development (Camiré, Forneris, Trudel, & Bernard, 2011; Lee, Whitehead, & Ntoumanis, 2007; Weiss, Amarose, & Wilko, 2009). This review includes discussion about theories of personal values, measurement of values, and research about values in sport.

Seminal research on values and value measurement conducted by Milton Rokeach and Shalom Schwartz provided assumptions, definitions and features related to the concept of values. In *The Nature of Human Values* (1973), Rokeach presented five assumptions: (a) each person possesses a relatively small number of values; (b) people everywhere possess the same values to varying degrees; (c) values are organized into values systems; (d) human values are linked to “culture, society and its institutions, and personality” (p. 3); (e) the manifestation of human values is central to all social sciences. Rokeach (1973) defined a *value* as “an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence” (p. 5). A *value system* is an enduring organization of

values “along a continuum of relative importance” (Rokeach, 1973, p. 5); when faced with a social situation with several competing values, the relative importance of values are considered and those most important will be used as criteria to direct behaviour.

A similar conceptual definition of value was developed by Schwartz and Bilsky (as cited by Schwartz, 1992, p. 3) which includes five formal features:

Values (1) are concepts or beliefs, (2) pertain to desirable end states or behaviours, (3) transcend specific situations, (4) guide selection or evaluation of behaviour and events, and (5) are ordered by relative importance. (p. 4)

Schwartz also described the relationship between and/ or amongst compatible or conflicting values as a *value structure* (Schwartz, 1992, 1994). For example, values such as achievement and power are considered compatible while tradition and hedonism are conflicting (Schwartz, 1992). Schwartz (1992) postulated that values could be considered as goals, and achieving value goals would benefit individuals and/ or collectives; by extension, “values that serve individual interests are postulated to be opposed to those that serve collective values” (p. 13). Some values, such as universalism and security, may be marginal; that is, they are somewhat related to both individual and collective interests (Schwartz, 1992, 1994). An example observed in community team sports is the conflict between the individualistic goal of skill development versus the collective goal of winning. This conflict may be manifested at the local level through issues of resource allocation, such as increased facility access for competitive (representative) teams

as compared to participatory (house league) teams, or development of policies, such as an import policy that endorses competitiveness at the expense of community participation. At the team level, this individual versus collective tension may be observed in issues related to equal playing time, regardless of skill, versus trying to win at all costs by playing certain players more than others.

Values are generally considered enduring beliefs which transcend specific situations (Rokeach, 1973; Schwartz, 1992). One fundamental feature of values theorized by both Rokeach and Schwartz (Rokeach, 1973; Schwartz, 1992, 1994) is that values transcend objects and situations, and thus each person has his/her own “single value-system seeking expression in all activities” (Simmons & Dickinson, 1986, p. 652). However, others (Priest, Krause, & Beach, 1999; Bredemeier & Shields, 1986), particularly those examining moral and character development within sport, challenge this assumption and theorize that athletes may assign different relative importance to values depending upon the context (sport or general life).

Values in Sport

Character and moral character may be considered as proxies for values systems in sport contexts, with former constructs defined as having possession of values such as justice, honesty, compassion, fairness, sportspersonship, integrity and responsibility (Camiré & Trudel, 2010). Bredemeier and Shields (1986) found a divergence between life reasoning and sport reasoning in their study of high school and college athletes and non-athletes, and proposed their game reasoning theory that postulates that “sport involves a moral transformation” (p. 271). In

their study of ethical values choices amongst college athletes, Priest et al. (1999) concluded that the norms associated with sports situations “may override athletes’ willingness to use general moral principles for resolving ethical dilemmas in athletic competition” (p. 175).

Simmons and Dickinson (1986), in their development of the Survey of Values in Sport instrument, extended the sport-specific values system by proposing that “each sporting activity is an arena to express different values in different sport” (p. 652). Simmons and Dickinson (1986) found differences in the values expressed by collegiate athletes involved in volleyball (a team sport) versus gymnastics (an individual sport), supporting the theory that values’ importance may be influenced by a general sport context but also by specific sporting activities.

Values in sport have been examined from multiple perspectives, including moral character and positive youth development, values transference, coaching approaches and motivation, and athletes’ values related to sport-specific domains. Weiss (2008) presented a broad summary of over 25 years of empirical research conducted in North American into positive youth development through sport, including character development, motivation, and life skills transfer. The multiplicity of frameworks is the result of overlapping definitions and concepts; for example, discussion of coaching strategies may focus on youth development objectives or alternatively on motivations to enhance participation and/ or performance. While the current study focuses on personal values linked to sport participation, it is useful to briefly discuss the other values-related research.

Extensive research has been conducted on sport as an environment well-suited for positive youth development (Camiré & Trudel, 2010; Forneris, Camiré, & Trudel, 2012; Fraser-Thomas et al., 2005; Jones, Dunn, Holt, Sullivan, & Bloom, 2011) and values transference (Brunelle, Danish, & Forneris, 2007; Coakley, 2011; Hartmann, Sullivan, & Nelson, 2012; Martinek & Lee, 2012). For example, Mielke and Bahlke (1995) examined the potential influence of sport participation on values development amongst German students (13-17 years of age) who participated in sport and non-sport hobbies (music and non-defined 'other' activities); results indicated there was no sport-based transfer effect (however, the values' importance measurement was not framed within the context of a specific activity [i.e., sport, music, other]).

Values have also been studied in relation to coaching strategies, and specifically around approaches that foster positive youth development and impact motivation. Researchers have examined purposeful coaching strategies to facilitate character development and life skills acquisition (Camiré et al., 2011; Gould & Carson, 2008; McCallister, Blinde, & Weiss, 2000). Such programs typically focus on development of skills such as time management, leadership and problem-solving (Camiré et al., 2011), but may include initiatives to help athletes discover their own values, or activities such as volunteerism which foster compassion and empathy. Coaches' value systems, expressed through coaching philosophies and motivational climate, have been shown to impact athlete enjoyment and motivation (Boixadós, Cruz, Torregrosa, & Valiente, 2010; Ntoumanis & Standage, 2009; Weiss et al., 2009).

While much is known about values in sport related to positive youth development, and the influence of coaching philosophy on athlete motivation, less is known about the value importance, value systems and value structures of youth and young adult athletes associated with their participation in sport. Research into values importance related to sport participation was conducted with youth (11-16 years of age) in the United Kingdom by Lee and colleagues in the development and application of the Youth Sport Values Questionnaire (YSVQ), (Lee & Cockman, 1995; Lee, Whitehead, & Balchin, 2000; Lee et al., 2007). Other sport values research has been conducted on university-age athletes (MacLean & Hamm, 2008; Simmons & Dickinson, 1986; Trail & Chelladurai, 2002). More recent research has focused on sport values and ethical decision-making (Lee et al., 2007; Šuksy & Jansonienė, 2012; Whitehead, Lee, & Hatzigeorgiadis, 2003) including refinement of the YSVQ into the three scale multi-item YSVQ-2 (Lee, Whitehead, Ntoumanis, & Hatzigeorgiadis, 2008). The three higher order values in the YSVQ-2 of Competence, which includes self-referenced values such as Achievement and Self-Direction; Moral, including such interpersonal values as Fairness, Sportsmanship and Contract Maintenance; and Status, consisting of comparative items such as Winning and Public Image, reflect the three factors identified in Webb's (1969) seminal work on sport values: playing well, playing fairly and winning, respectively. Webb (1969, p. 166) surveyed schoolchildren in United States and asked them to rank the importance to "play as well as you can" (Competence), to "play the game fairly" (Moral) and to "beat the other player or team" (Status). Consequently, this study utilizes the YSVQ-2 to measure the

importance of Moral, Competence and Status values in Canadian female athletes related to their participation in the specific sport of organized girls' hockey in Ontario.

The following section provides a review of selected empirical studies on values in sport in general. The research examined the independent variables of gender, age, length of sport participation and level of competition as they related to expressed sport values of participants. Note that value labels that are capitalized relate to items in specific values measurement instruments.

Gender

Early research on sport values typically included investigation of potential gender differences. While males did not participate in this study, it is useful to review the results of previous studies for an overall indication of the relative sport value importance of female athletes. Studies found females placed higher importance on moral values such as fair play, compassion and other social values, while males valued status and competitive values such as achievement and performance (Knoppers, Schuiteman, & Love, 1986; Simmons & Dickinson, 1986; Watson & Collins, 1982).

Watson and Collins (1982) found that Australian female high school students placed higher importance on moral and competence-related values versus achievement or status-related values, as compared to their male counterparts. Moral values included Affiliation, Co-operation and Participation; competence was defined by the values of Knowledge, Fitness/Health and Self-concept; and achievement was related to Competition, Achievement, Excellence and

Recognition (Watson & Collins, 1982). In their review of literature around game orientation, Knoppers et al. (1986) found that males tended to display a greater degree of professionalism than females; that is, males valued winning over fair play and fun, as compared to females. However, in a study of over 850 American high school students, Knoppers et al. (1986) found no differences in game orientation based upon gender (although a gender effect approaching significance was observed within a subset of Hispanic students). In a study of 95 American university students (of unspecified sport and competition level) it was found that females scored Maintaining Health, Physical Pleasure, Time-Out and Reaching Limits as the highest values expressed in their favourite sport (Simmons & Dickinson, 1986). Both females and males scored Rewards, Winning and Risk as the values least expressed in their favourite sport (Simmons & Dickinson, 1986).

In a series of studies utilizing the YSVQ conducted by Lee et al. (2000) involving British school children 12-18 years of age, it was observed that the girls rated 18 sport values in more or less the same order of importance as the boys, with both genders rating Enjoyment, Achievement and Sportsmanship highest, and Winning the lowest. It was also found that the mean values importance ratings for the boys were significantly higher than those from the girls (Lee et al., 2000). Research into moral decision-making in sport by British adolescents (Lee et al., 2007) confirmed these findings: females scored Keeping Winning in Proportion higher than males, while males scored Acceptance of Cheating and Acceptance of Gamesmanship higher than females. MacLean and Hamm (2008) observed gender differences in their research using Canadian high school and

university athletes, as females rated Being Fair, Compassion and Good Game significantly higher than males, and Conformity and Public Image significantly lower.

Studies in the development and application of the YSVQ-2 (Lee et al., 2008; Whitehead & Gonçalves, 2013) revealed consistent value structures for the three higher order sport values amongst youth participants in Europe, Asia, Kenya and Brazil. Lee et al. (2008) found that 491 British club and school competitors aged 11-16 years of age rated Competence and Moral values similarly, and higher than Status values. In a review of cross-cultural studies utilizing the YSVQ-2, Whitehead and Gonçalves (2013) found that Competence was constantly rated highest, while Status was constantly rated lowest and Moral was rated between Competence and Status values. Šuksy & Jansonienė (2012) found that in their study of 318 university-aged elite athletes in Lithuania the female participants rated Moral values significantly higher than the male participants, but both genders displayed a similar pattern of values structure, consistent with that described above.

Based on the above research, the following hypothesis is proposed for the values importance of female athletes, based on the participant group as a whole (i.e., not for any particular criterion group):

H₁: Competence value importance (VI) will be rated highest followed by Moral VI, and Status VI will be rated lowest.

Age and Length of Sport Participation.

Participant age and, to a much lesser extent, length of sport participation have been used as criteria to analyze differences in sport values. Increasing age is associated with development of values, while length of participation may also reflect the influence of coaches, peers and other significant people within the athlete's sport realm.

Studies where differences in values importance were analyzed based on age have produced varying results. In general, overall importance of sport values amongst adolescents (11-17 years of age) was observed to decrease with age (Watson & Collis, 1982; Lee et al., 2000); however, MacLean and Hamm (2008) found no age-based differences in values importance rankings amongst three groups (14-17, 18-21 and 22-25 years of age) of high school and university students. Examination of the results reported by Lee et al. (2000) showed there were no major differences in values importance rankings amongst four adolescent age groups (under 13, 14, 15 and 16 years of age); Enjoyment, Achievement and Sportsmanship were consistently ranked highest across the four age groups, and Winning was ranked last.

Differences in importance for specific sport values have been revealed in other studies. Knoppers et al. (1986) found that adolescents valued winning over fair play as compared to younger children, while Lee found that college athletes were "concerned predominantly with competitive success" (as cited in Lee & Cockman, 1995, p. 340). Webb (1969), in his study involving over 1000 adolescents in grades 3 to 12 (approximately 8-18 years of age), found that the

importance of playing fairly decreased while the importance of playing well increased as the age of the participants increased. However, studies involving only adolescents (11-17 years of age) have shown that winning was rated least important by all age groups analyzed (Lee et al., 2000; Watson & Collis, 1982). Age-based trends have been suggested in the inferred rankings of other individual values: ranking of importance of the competence values of Showing Skill and Self-Actualization appeared to be positively related to age, while the moral values of Contract Maintenance and Obedience were negatively related (Lee et al., 2000). Further research by Lee and colleagues (Lee et al., 2007) found that older athletes (14-16 years of age) were more accepting of Cheating and Gamesmanship as compared to younger athletes (11-13 years of age), but there was no age-based difference in ratings for Keeping Winning in Proportion. These results suggest that with increasing age the importance of interpersonal moral values will decrease and the importance of self-referenced competence values will increase.

The length of sport participation has shown differences in values importance similar to that observed with participant age. Priest et al. (1999) observed a small but significant decrease in the ethical values of college athletes over a four-year period. Vallerand and Losier (1994) found a decline in sportsmanship orientation over a 5-month season in their study of adolescent male hockey players at a very competitive level (Midget AAA), but also noted that there was no significant correlation between numbers of years in competitive hockey (which ranged 4 to 13 years) and sportsmanship orientation. However, Šuksy & Jansonienė (2012) found that elite university-aged athletes with 8-11

years of experience rated both Moral and Competence values higher than athletes with less than 8 years of experience, but athletes with 12 or more years sports experience rated Moral and Competence values not significantly different from the other two groups. Šuksy & Jansonienė (2012) suggested that the apparent contradiction in their findings with respect to Moral values importance and years of experience may be that sport experience has a bigger influence on moral values with younger participants.

For this study, the following hypotheses for differences in sport values in females based on age and length of sport participation are proposed:

H₂: Sport values importance decrease with increasing age.

H₃: Competence value importance increases with increasing age.

H₄: Moral value importance decreases with increasing age.

H₅: Competence value importance increases with increasing length of participation.

H₆: Moral value importance decreases with increasing length of participation.

Competition Level.

In development of the YSVQ, Lee and colleagues (Lee et al., 2000) observed that sport values are “more important at higher levels of performance” (p. 323). An examination of the mean importance ratings from this research involving British athletes 12-15 years of age showed that overall ratings tended to increase with higher levels of competition (Lee et al., 2000, p. 320), and all performance groups rated Enjoyment and Achievement most important, and

Winning amongst the least important values. These findings appear to contradict the literature review summation by Knoppers et al. (1986) that the performance level of sport competition was positively related to professionalization, with greater emphasis on winning versus fun and fairness, as compared to play orientation with recreational participants.

Differences in importance for individual values related to level of sport competition have also been observed. Lee et al. (2000) found that athletes competing at higher levels positioned status values including Showing Skill, Public Image and Health/ Fitness relatively higher in inferred value importance rankings as compared to less competitive school or club athletes (p. 320). MacLean and Hamm (2008) also observed trends in values importance amongst athlete groups, although the competition levels of the groups were not clearly differentiated, consisting of university varsity athletes, university recreational (intramural) participants, students enrolled in physical education and sport management programs, and students from a private high school in which sport participation was mandatory. High school students (whose level of competition was not defined) rated Showing Skill significantly less important compared to highly competitive varsity athletes and less competitive recreational participants. Trends of the mean ratings showed that varsity athletes rated Public Image as the most important value related to sport participation, while recreational participants and university students rated this value least important. Companionship was identified as the most important value by recreational participants, and high school students identified Health/ Fitness as most important (MacLean & Hamm,

2008). Šuksy & Jansonienė (2012) found that university-aged athletes who had competed at the international level rated Competence values significantly higher than national level athletes.

Based on previous research into sport values importance related to level of competition, the following hypotheses are proposed:

H₇: Sport values importance increase with increasing competition level.

H₈: Status value importance increases with increasing competition level.

Values-Based Management

Traditionally discussed as a leadership tool within the context of corporate business, values-based management has recently been touted as a valuable approach for sport organizations (Bell-Laroche, 2009; Bell-Laroche & MacLean, 2010; Bell-Laroche, MacLean, Thibault, & Wolfe, 2014; Kerwin, MacLean, & Bell-Laroche, 2014). Sports organizations operate in increasingly complex climates (Bell-Laroche & MacLean, 2010), and must deal with financial accountability, legal requirements, governance issues, volunteer turnover, funding shortages and pressures to effectively manage sensitive issues such as bullying, abuse, and injuries. From a sport management perspective, values can be useful to guide volunteer behaviour and decision-making without having “to resort to formal structures” (Buchko, 2006, p. 38). Many minor sports associations still exhibit characteristics of the ‘kitchen table’ organization model (Kikulis, Slack, & Hinings, 1995), with organizational capacity and administrative services limited by the abilities of current volunteers, and few documented policies and procedures

(Thiel & Mayer, 2009); in this absence of formal guidance, values can be useful to direct board operations as well as coaching actions.

Typically, the values used in a values-based management approach are those of leaders or management, sometimes reflected in an organizational value statement. Within a sport organization, where association management is often transitory and mainly volunteer-based, it is suggested that the athletes' values be considered as the framework for decision-making. *What Sport Can Do: The True Sport Report* (Mulholland, 2008) voices the concerns of Canadians that:

community sport is increasingly being pulled towards the values of commercial sport, undermining its benefits which can only be fully realized when sport is conducted in a positive and intentional way – when it is inclusive, fair, fun and fosters genuine excellence. (p. ix)

Value Congruence

Value congruence is the level of agreement between the values of two entities. This is often studied in the context of Person-Organization (P-O) fit, and specifically the impact of employee-organization value congruence on organizational change (Amis, Slack, & Hinings, 2002), employee satisfaction (Chatman, 1991), organizational commitment (Abbott, White, & Charles, 2005), leadership (Hood, 2003; Krishnan, 2001, 2002), recruitment and retention (Chatman, 1991), and employee performance (Adkins, Ravlin, & Meglino, 1996). Bell-Laroche (2009) noted that when there is incongruence between individual and organizational values the “result is unhappiness, stress and alienation, which in turn, diminish performance” (p. 2). The participants in P-O research are

typically paid employees (Amos & Weathington, 2008), or less frequently, staff and volunteers in management or administrative roles in not-for-profit organizations, including sports associations (Hamm, MacLean, Kikulis, & Thibault, 2008; van Vianen, Nijstad, & Voskuijl, 2008). The participants in this study are voluntary participants of not-for-profit organizations, and of interest is the congruence between the personal sport values of female athletes and the organizational values of their respective community sport associations.

Although athlete members are voluntary participants, values congruence is important in understanding their satisfaction, and hence commitment to continued participation in their sport organization. Canadian Sport for Life (CS4L, 2007), through the development of Canada's Long-Term Athlete Development (LTAD) program, recognized that children play sport to have fun, be with friends, do something they are good at, feel good about themselves, feel accepted, and develop new skills. The LTAD program is athlete-centred, coach-driven and supported by sport administrators (CS4L, 2007). If the values identified by CS4L are fulfilled then children will enjoy and continue sport, and be less likely to experience burnout or dropout of sport (CS4L, 2007). Dziubiński (2014) found that the ideals and values of the local physical culture were one of three key factors that influenced sport participation (in addition to social factors and the state of physical education in schools) of Polish citizens. Johnstone (2012), in the CAAWS publication *Actively Engaging Women and Girls: Addressing the Psycho-social Factors*, proposed a socio-ecological model of the influences and barriers to sport participation for women and girls (p. 12); values were identified

as one of the key interpersonal factors. From a customer perspective, personal values may be used to predict consumer behaviour (Vinson, Scott, & Lamont, 1977); in a sport context that could translate to players' satisfaction and intention to continue participation in organized sport. Accordingly, it was appropriate to measure the value congruence between player sport values and the organizational values of their respective associations.

Value congruence may be a subjective same-source measure of fit, with reported personal values compared to perceived organizational values, or a different-source measure of fit, where perceptions of others (within the organization) provide organizational values (van Vianen as cited in van Vianen, De Pater, & Van Dijk, 2007, p. 189). Van Vianen observed that a different-source work value fit measure was a better indication of employee turnover intention than a same-source work value fit measure (van Vianen et al., 2007). While van Vianen focused on work value fit and person-organization fit with employees, the concept could be applied to athletes and their continued voluntary participation (similar to employee turnover intention) in organized sport. As such, the perceptions of board members of the participating minor hockey associations are used as a measure of the organizational values of the relevant associations.

As there has been no previous research into the value congruence between athletes and minor sport associations, no hypotheses are proposed. This study is exploratory research. Gaining an understanding of the level of value congruence between individual players' values and those values demonstrated by the organization, as perceived by the board members, may provide associations with a

measure of the ability of their programs to meet the needs and expectations of their members. Identifying those values most important to their members may assist minor hockey associations utilizing a values-based management approach to offer initiatives that are athlete-centred and provide positive sport experiences.

Although research has been conducted into the importance of sport values amongst school children and university/college students, there is limited knowledge of the values of adolescent athletes, particularly in relation to their participation in organized “club” or community sport (as opposed to school-based sport). Much of the sport values research to-date has focused on improving coaching tactics, enhancing participant motivation, and increasing sportsmanship and fairness, with a paucity of knowledge of the value orientations of participants. Even less is known about the value congruence between player members and their respective sport associations. This study aims to measure values-importance of female hockey players and to identify their value systems related to their voluntary participation in organized minor hockey. Measures of congruence between the sport values of the players and the values of their respective minor hockey associations may provide insights into how well the needs of their members are being met, with implications for implementation of a values-based management approach for girls’ minor hockey associations.

Chapter Three: Methodology

Research Design

Quantitative survey research makes inferences about a population from a representative sample of the target population (Fowler, 2009). Neuman (1997) described surveys as “appropriate for research questions about self-reported beliefs or behaviours” (p. 228). For this study, a survey method was selected in order to efficiently collect a relatively large amount of data in a short period of time (Creswell, 2009), which allows examination of participants from a greater range of girls’ minor hockey associations. The survey, in the form of a self-administered questionnaire, can be completed by an entire hockey team of 17 players in a matter of minutes, or a number of teams within a single day (i.e., at a tournament). A cross-sectional design approach was used to collect data within a one-month period at the end of the 2013-14 minor hockey season (mid-March to mid-April, 2014).

Case Selection

Girls’ minor hockey associations in Ontario may be described as endorsing *competitive* (strong focus on representative teams), *participatory* (strong focus on house league teams) or *dual* orientations (offering distinct representative and house league programs). Selection of particular hockey associations as instrumental cases for this study served to provide background and understanding for the actual research into athlete values (Berg, 1998). Within an association with a dominant focus (primarily competitive or participatory) there is greater likelihood of self-selection by members of associations with a strong

singular orientation due to the perceived reputation of the association (Dubois, 1986), and thus a potentially high level of congruence between the values of the players and the association (Chatman, 1991). Additionally, single-oriented associations are thought to be less likely to incur internal tensions as their mission is more clearly defined and understood, if not explicitly articulated. Dual orientation associations were strategically selected for this research as there is greater potential for conflict between competitive representative and participatory house league programs (i.e., for resources and recognition), and hence a richness of data. Finally, dual orientation associations are more likely to benefit from this study by gaining insights into the values of their female members within their representative and house league programs, as well as an understanding of the respective levels of values congruence and the resulting implications for association management.

Content analysis of association websites and documentation was conducted to classify the orientation of potential participating girls' minor hockey associations. If such data sources did not exist or were unclear then clarification was obtained from association board executives (President, Representative Director and/ or House League Director). Program orientation categorization for each association was based upon five considerations: the relative number of representative and house league teams, ice time, import policy details, type of hosted tournaments, and coach selection. First, dual orientation associations had a ratio of representative to house league teams that ranged from approximately 1:1 to 1:5, respectively. Second, practice and game lengths were examined to

determine the amount of ice time allocated by competition level (representative or house league). Third, limited import policy restrictions in dual orientation associations demonstrate a balance between competitiveness and participation, as opposed to unlimited or liberal import policies implemented by highly competitive associations that encourage and accept players from outside an association's geographical catchment area in order to increase the skill and performance level of representative teams.

Fourth, hosting one or more tournaments with divisions and levels that reflected the teams offered by the association was observed with dual orientation associations, whereas highly competitive oriented associations often host *showcase* tournaments exclusively for AA teams (the highest level of competition within any division in Ontario) calculated to attract scouts from Canadian and American universities as well as the Provincial Women's Hockey League (PWHL) and the Canadian Women's Hockey League (CWHL). It should be noted, however, that the ability of associations to host multiple or extensive tournaments may be limited by availability of ice time. Coach selection elements were the fifth consideration, including application requirements, selection process, and the presence or absence of paid, non-parent coaches (the former are more frequently observed with competitively oriented associations). Finally, there were practical issues related to the geographical proximity of the association to the researcher, and the willingness of association executive to cooperate in participant recruitment and survey administration.

Participants

This study involved females playing Bantam and Midget “travel” or representative (Rep) hockey, and Bantam, Midget and Intermediate house league (HL) hockey within organized girls’ minor hockey associations in Ontario in the 2013-14 season. A representative (Rep) team is made up of players who are selected for the team based upon their skills, level of commitment and other factors deemed important by the head coach and/ or selection committee. A house league (HL) team is comprised of players who want to participate, regardless of ability. Participants were 12-22 years of age at the time of data collection. The age of travel team players is regulated by the OWHA (2012); however, it should be noted that Bantam players are usually 13 and 14 years of age (as of December 31st), and Midget players are typically 15, 16 and 17 years of age (as of December 31st). Local girls’ associations may use different terminology to describe their house league team divisions, depending upon their registration numbers. For example, house league teams may be labelled as Midget/ Intermediate or simply Intermediate in order to accommodate older players (up to 21 years of age as of December 31st) but may consist primarily of Midget-aged players. House league teams may play against other house league teams within their own association, or they may participate in *local leagues*, where competition involves house league teams from multiple associations. Study participation was restricted to girls playing on all-girl teams (which play in girls’ leagues and tournaments, and/ or in boys’ leagues) and did not include girls who played exclusively on boys’ teams. While some of the study participants also played high school hockey, girls who

played *only* high school hockey were excluded from this research by virtue of the recruitment protocol.

A stratified sampling design was used for this study. In stratified random sampling the population is divided into subgroups, or strata, based upon pre-determined criteria, and then samples were recruited from within each stratum (Neuman, 1997). Stratified sampling generally ensures that samples are “more representative of the population” (Neuman, 1997, p. 212), and is used to ascertain sufficient sample size for meaningful statistical analyses within each stratum. For this study, the strata were defined by participant division and level with a target of approximately equal participant subgroups (house league versus representative; and Bantam versus Midget versus Intermediate). A minimum of 20 participants per stratum from each of the selected associations (for a target sample size of 320-400 participants) is desired to have statistical power and sufficient numbers to perform meaningful statistical analyses for each subgroup (Tabachnick & Fidell, 2013).

Values Measurement and Instrument Selection

A quantitative approach was chosen because of the ability to survey a large number of participants, from which generalizations may be possible, and to allow for the application of more advance statistical analyses, including multivariate analysis. By using a larger number of study participants, the quantitative results may be analyzed by sub-groups, leading to further understanding of the selected independent variables (demographic factors) and the values importance of female hockey players.

The Rokeach Value Survey (Rokeach, 1973) was considered for this study, but discarded for several reasons. First, the value concepts may be difficult to understand and irrelevant for the target participants in this study. Second, the values are not reflective of sport values. Third, the task of ranking 18 values may be too difficult for the target population, practically too time-consuming from a test administration perspective (Moore, 1975), and the resulting ordinal data would limit the choice of potential statistical analyses.

The Youth Sport Values Questionnaire (YSVQ) developed by Lee et al. (2000) was also considered. The YSVQ was developed to address the above concerns, using a series of qualitative and quantitative studies involving British children aged 12-16 years of age. The survey items were based upon values expressed spontaneously by adolescent athletes rather than adult preconceptions (Lee & Cockman, 1995). The value statements were refined using focus groups followed by pilot testing of three forms of the survey (Lee et al., 2000), which legitimized the values incorporated in the tool, and resulted in a comprehensive list of sport values salient to the target population of youth sport participants (p. 311). Item-total correlations for each value, using Spearman's rank-order correlation, plus Pearson's product-moment correlations and confirmatory factor analyses, were used to determine the item "that provided the strongest statistical indicator of the construct and was unrelated to other values" (Lee et al., 2000, p. 317). Lee et al. (2000) found "no evidence of social desirability response bias, the items yielded a wide range of responses, and skewness was modest" (p. 322). The 18-item YSVQ has been used to measure the value systems of youth sport

participants in the United Kingdom, Europe and Canada (Whitehead & Gonçalves, 2013).

The YSVQ-2 was modified for use in a study to examine the relationship between values and achievement orientation as predictors of pro- and anti-social behaviour (Lee et al., 2008). The 18 single-item YSVQ was revised to assess the value structures of young athletes using three higher order multi-item scales to measure Moral, Competence and Status values importance. Study One, using British males and females 11-16 years of age who participated in team or individual sports at the school, club or higher level, resulted in a 13-factor three-item instrument (Lee et al., 2008). Factor loadings were moderate to high, skewness and kurtosis were low, the scales had little or no social desirability bias, and internal reliability, based on Cronbach's alpha coefficients for each of the three items, was described as acceptable (Lee et al., 2008, p 594). In Study One (Lee et al., 2008, p. 594) the means for Moral and Competence were higher than for Status, and Competence correlated significantly with Moral and Status; however the correlation between Moral and Status was low. These observations reflect Schwartz's compatible and conflicting value domains (1992, 1994). The final 13-item YSVQ-2 model includes five Moral items (Obedience, Fairness, Sportsmanship, Helpfulness and Contract Maintenance), four Competence items (Personal Achievement, Showing Skill, Self-Direction and Improvement) and four Status items (Dominance, Leadership, Winning and Public Image). Refer to Table 1 for the scale sub-items and the YSVQ-2 proxy statements.

Table 1

*Sport Values Proxy Statements from Player YSVQ-2**

| Value | Value Sub-Item | Proxy Statement |
|------------|----------------------|-------------------------------------|
| Moral | Obedience | I do what I'm told |
| | Sportsmanship | I show good sportsmanship |
| | Helpfulness | I help people when they need it |
| | Contract Maintenance | I always play properly |
| | Fairness | I try to be fair |
| Competence | Achievement | I become a better player |
| | Showing Skill | I use my skills well |
| | Self Direction | I set my own targets |
| | Improvement | I improve my performance |
| Status | Dominance | I show that I am better than others |
| | Leadership | I am a leader in the group |
| | Winning | I win or beat others |
| | Public Image | I look good |

Note: *YSVQ-2 = Youth Sport Values Questionnaire-2 (Lee et al., 2008)

The Player YSVQ-2 (Lee et al., 2008) was used in this study to measure the importance of sport-related values around participation in organized hockey (see Appendix A). Part A of the questionnaire measured the importance of the sport values using proxy statements. The original stem was modified from participation in the athletes' main sport (Lee et al., 2008) to "Please rate how important each idea is to you when you play *organized hockey*..." followed by a list of value proxy statements. Rating responses were recorded on an asymmetrical bipolar seven-point rating scale, where -1 = "This idea is opposite of what I believe", 0 = "This idea is not important to me", and 5 = "This idea is extremely important to me" (Lee et al., 2000; Lee et al., 2008; MacLean &

Hamm, 2008). The use of rating scales (as opposed to ranking) is easier for individuals, particularly youth, to evaluate a large number of value statements. This approach also avoids forcing participants to discriminate between values of equal importance, and provides the possibility of including additional value statements without affecting the ratings of the other values (Schwartz, 1992, 1994). Negative numbers on the response scale are appropriate when the variable can be conceptualized in “clear bipolar terms” (Neuman, 1997, p. 243); for this study, the negative category allows participants to indicate those values which are not important, due possibly to cross-cultural differences (Schwartz, 1992, 1994).

Part B of the Player questionnaire was comprised of both closed and open-ended questions to obtain information about demographics. These questions include birth month and year (B1), minor hockey association (B2), current and previous year competition levels (B3, B4 and B6), recognition (B5), number of years playing hockey (B7), organized sport participation (B8) and family sport participation (B9, B10 and B11).

Organizational values of the respective minor hockey associations were obtained from board members using the Board Member YSVQ-2 (see Appendix B). The 13 value proxy statements in the Player survey were modified so that responses were in the context of the values that the Board Members used to guide decisions about their Representative (Rep) program (Part B) and their House League (HL) program (Part C). Value importance was measured using the stem “Rate how important each idea is to the operation of the Representative [or “House or Local League” for Part C] program in your hockey association ...”

followed by a list of 13 modified value proxy statements. For example, “I show good sportsmanship” was changed to “Players show good sportsmanship”. Rating responses were recorded on an asymmetrical, bipolar seven-point rating scale similar to that in the Player questionnaire, where -1 = “This idea is opposite of what the Board believes”, 0 = “This idea is not important to the Board”, and 5 = “This idea is extremely important to the Board”. Descriptive information was also collected from each Board Member (Part A), including association, gender, age (in years), current board position and time in the position, other volunteer roles in the association in the current and previous years, board positions in other hockey associations (current or previously), and the number of daughters currently involved in their respective hockey association.

Data Collection

Girls’ hockey associations identified as being dual orientation (i.e., having distinct representative and house league programs) were contacted to obtain their cooperation and assistance, and qualified players who meet the stated criteria (Bantam and Midget-aged players on representative teams, and Bantam, Midget and Intermediate-aged players on house league teams) were recruited from their membership. Personal contact was made with executive board members of a number of girls’ minor hockey associations in southern Ontario and all association personnel expressed verbal interest in participating in this research. Ultimately six associations were invited to participate in this study. *An Association Request Letter* (refer to Appendix C) with detailed information was sent to the executive members of the six organizations. Associations were requested to assist with

recruitment by having their registrars, coaches and / or other designated persons contact potential study participants and issue an invitation to participate in this research study. Ultimately four associations agreed to participate in the study; the other two associations declined due to concerns about the perceived time and effort required to participate.

Coaches of Bantam, Midget and Midget/ Intermediate (house league only) teams were sent the *Player Letter of Invitation* and *Participant Assent/ Parent Consent Form* (refer to Appendices D and E) either from their association executive or directly from the Researcher, and requested to forward these documents to their players, along with the date for the data collection. Players could choose to not participate without penalty. Due to the timing of the data collection, not all potential players in each association were available to participate, as some teams no longer had scheduled practices or games (for example, in the case where a representative team had already been eliminated from post-season play). This was particularly true for Association D, and as such the only representative players available for data collection for this association were contacted during a closed tryout session (open only to players currently registered with the association).

Participating Players were required to provide a signed *Participant Assent/ Parent Consent Form* prior to completing the research survey. Participants responded to the *Player YSVQ-2* survey individually using a paper-based self-administered survey, in a location away from other research participants in order

that responses remained confidential. Some participants provided previously completed forms to the Researcher.

Board Members of the participating associations were sent the *Board Member Letter of Invitation*, *Board Member Consent Form* and *Board Member YSVQ-2* (Appendices F, G and B, respectively) via email. Follow up emails were sent every two to three months. Some Board Members provided their responses verbally during pre-arranged phone calls.

Ethics approval was applied for and received from the Brock University Research Ethics Board (REB) in April 2012 and renewed in April 2013 based on the 18-item YSVQ (Lee et al., 2000) and Part B of the player survey. A pilot study was conducted in April 2012 with 42 house league participants (12-20 years of age) to collect preliminary data for Parts A and B using the original 18-item YSVQ (Pitts, 2012, unpublished research). While not the primary objective, the pilot study confirmed the data collection procedures. The pilot version of the YSVQ included an open-ended question where respondents could add new values, but no additional values were provided. Responses to Part B indicated a need to clarify the question regarding participation in other sports (B8) by adding “in addition to hockey”. The pilot study was also useful to rule out any issues related to clarity of instructions, wording and vocabulary comprehension.

Modifications to the ethics application were submitted to the Brock University REB (March 2014) to use the 13-item *Player YSVQ-2* to collect Player responses and the modified *Board Member YSVQ-2* to collect responses from minor hockey association Board Members. A further modification request (June

2014) was approved to allow for the options of collecting Board Member data via telephone or fillable pdf surveys in order to increase the response rate from Board Members.

Data Analysis

Raw data from the paper surveys were manually entered into a Microsoft Excel worksheet and imported into IBM© SPSS© Statistics Version 22. The original data were visually compared to the raw data file to ensure no errors in data entry. The data set was examined for missing data points and patterns of missing data, including Little's Missing Completely at Random (MCAR) test (Little, 1988) for the values importance (VI) questions. The following strategies were implemented to address the missing data (Tabachnick & Fidell, 2007): as the missing data were random, and there were only a few data points missing from the independent values (less than 5%) then the missing values were estimated using Estimation Maximization (EM). Cases with missing independent variable responses were omitted for any descriptive analyses, and if the variable was used as group selection criterion then the case was deleted for the specific analysis. Cronbach's alpha coefficients were calculated to assess the internal consistency reliability of the multi-item scales (Cronbach, 1951) for Moral, Competence and Status values importance.

Responses to selected open-ended questions were coded and converted to numerical values as follows. Player birth month and year were converted to age in years at the time of data collection (as of March 2014) in order to calculate descriptive statistics and to aid in sorting of the data by age. Current minor hockey

associations were arbitrarily assigned a letter (i.e., ABC Girls Hockey Association = A, XYZ Girls Hockey Association = B, etc.) in order to calculate descriptive statistics and to aid in sorting of the data by current association. Player responses related to recognition, previous association, other sport participation, family sport participation were converted into nominal data where 1=yes, 2=no and 0= not applicable. Board Member responses related to other volunteer positions, previous board positions and daughter participation were also converted to nominal data (0, 1 or 2, as described above for player responses). Open-ended responses for Players and Board Members were entered into an Excel worksheet and the “Find All” command used to establish preliminary counts for selected questions.

Scale measures for Moral, Competence and Status VI ratings were calculated as the means of the relevant sub-item measures, using the modified dataset (with missing values replaced) for both Player and Board Member responses. Descriptive analysis was performed on VI ratings, age, and length of hockey participation, and reported as measures of central tendency (means and medians), standard deviation, and frequencies. Frequencies are reported for all nominal variables. The hypotheses were tested using competition level (Rep versus HL, plus Competition Level), age, and number of participation years as grouping criteria. A summary of the hypotheses testing analyses is presented in Table 2.

Correlation analysis was used to determine the relationships between age, number of years of participation, and competition level versus VI ratings.

Importance ratings were collected on a seven-point Likert-type scale, and so it

Table 2

Summary of Analytical Strategies for Hypotheses Testing

| Research Questions and Hypotheses | Independent variable | Dependent variable(s) | Analyses |
|--|----------------------|---|--|
| RQ1: What are the personal values of females related their participation in organized hockey? | | Player Moral, Competence and Status VI* ratings | Means, standard deviation, medians |
| H₁: Competence value importance (VI) will be rated highest followed by Moral VI, and Status VI will be rated lowest. | | Player Moral, Competence and Status VI ratings | - Means, standard deviation, medians - RM ANOVA** |
| H₂: Sport values importance decrease with increasing age. | Age (Years) | Player VI ratings for all value statements | Spearman's rank-order correlation |
| H₃: Competence value importance increases with increasing age. | Age (Years) | Player Competence VI rating. | Spearman's rank-order correlation |
| H₄: Moral value importance decreases with increasing age. | Age (Years) | Player Moral VI rating | Spearman's rank-order correlation |
| H₅: Competence value importance increases with increasing length of participation. | Years Participation | Player Competence VI rating. | Spearman's rank-order correlation |
| H₆: Moral value importance decreases with increasing length of participation. | Years Participation | Player Moral VI rating | Spearman's rank-order correlation |

Table 2

Summary of Analytical Strategies for Hypotheses Testing

| Research Questions and Hypotheses | Independent variable | Dependent variable(s) | Analyses |
|--|---|---|--|
| H₇ : Sport values importance increase with increasing competition level. | 7a. HL_Rep*** | 7a. Player Moral, Competence and Status VI ratings | 7a. Means, Cohen's <i>d</i> analysis & RM ANOVA for HL and Rep sub-groups |
| | 7b. CompLevel** | 7b. Player Moral, Competence and Status VI ratings | 7b. Spearman's rank order correlation of CompLevel vs. VI |
| H₈ : Status value importance increases with increasing competition level. | 8a. HL_Rep | 8a. Player Status VI ratings | 8a. Means, Cohen's <i>d</i> analysis & RM ANOVA of Status VI for HL and Rep sub-groups |
| | 8b. CompLevel | 8b. Player Status VI ratings | 8b. Spearman's rank order correlation of CompLevel vs. Status VI |
| RQ2 : What is the level of congruence between the personal sport values of female hockey players and the values of their local minor hockey associations? | HL_Rep Board Member – Rep / Board Member – HL | Player VI Ratings Board Member- Rep VI Ratings Board Member – HL VI Ratings | Means, Cohen's <i>d</i> analysis |

Notes: *VI = Value Importance, **RM ANOVA = Repeated Measures Analysis of Variance, ***HL_Rep = House League or Representative, ****CompLevel = Competition Level

was appropriate to use one-tailed Spearman's rank-order correlation as the measure of association for the ordinal data (Huck, 2000). The value of

Spearman's rank-order correlation coefficient, rho (r_s) can range from 0 (no relationship) to ± 1 , which indicates perfect positive/negative correlation (Field, 2009; Neuman, 1997).

Repeated Measures of Analysis of Variance (RM ANOVA) was performed to determine if there were differences between the mean Player VI ratings for Moral, Competence and Status values, in order to determine the value structure of the players. RM ANOVA was also used to analyze the VI ratings for the Rep and HL player sub-groups. Although typically used to assess differences over time, RM ANOVA may be used when the same participants evaluate the different conditions or treatments (Field, 2009; Tabachnick & Fidell, 2013). This statistical approach was used to compare the means of three measures of intra-group conflict (Hamm-Kerwin & Doherty, 2010) and the means of four measures of group cohesion (Doherty & Carron, 2003) Assumptions to be met for RM ANOVA include normal distributions and sphericity using Mauchly's test (Field, 2009; Tabachnick & Fidell, 2013). *Post hoc* paired *t*-tests were used to identify where significant differences occurred amongst the three VI ratings for each group/ sub-group.

Differences in the values of the player participants and the values of their organizations (as reported by the board members) were analyzed by calculating Cohen's *d* for each of the six pairs of value importance ratings (moral, competence and status for representative and house league players/programs. Cohen's *d* provides a measure of the estimated effect size difference between the means of two groups, independent of the sample sizes of the groups (Cohen,

1992; Field, 2009). Effect sizes are operationally defined as small ($d \geq .20$), medium ($d \geq .50$), and large ($d \geq .80$), (Cohen, 1992), and hence could provide an indication of the degree of sport value congruence between Players and Board Members. Small, medium and large effect sizes could be interpreted as high, medium and low levels of value congruence.

Chapter Four: Results

Preliminary Data Analysis

Upon completion of data collection preliminary analysis was conducted in order to determine response rates, patterns of missing data and demographic descriptives of the participants.

Response rates. As noted earlier, six girls' hockey associations were invited to participate in this research, but two declined. A total of 299 player surveys were collected; however, five were omitted from the study as two were from coaches, one was missing the consent/ assent form, one was from a Peewee player (the level preceding Bantam with players typically 11 and 12 years of age), and another survey was missing several responses and was from a single player from a fifth association. The player response rate of 61.4% is based upon the potential study participants in the teams contacted during the data collection period, rather than the potential Bantam/ Midget/ Intermediate participants in the entire association memberships. A response rate of at least 60% has generally been considered acceptable (Johnson & Wislar, 2012). Also, the Rep players from Association D were assigned a 100% response rate, as their responses were collected during a tryout session, and thus their potential numbers based on their current teams were not applicable. The response rate was higher for Rep players (76.5%) as compared to HL players (50.2%); this may have been due to the actual attendance at each ice time, as there are higher expectations for Rep players to attend team activities. The response rate for Midget and Intermediate players (71.0%) was higher than that for the Bantam players (51.3%), which may reflect

the logistical and perhaps philosophical issue of requiring parental consent for the younger Bantam players.

A total of 30 Board Member responses were obtained, with a response rate of 49.2%; this varied between associations from a low of 27.8% to a high of 73.3%. The response rate from Board Members may have been due to the time of data collection (near the end of the season, when board members may be approaching the end of their terms), plus the reluctance of three of the associations to have the Researcher attend a board meeting in order to collect data.

Patterns of missing data. Missing values analysis of the player dataset found 53 missing values (0.7%). However, examination of those variables required for hypothesis testing found only one missing value (0.1%) amongst the 5 independent variables and 40 missing values (1.1%) in the 13 dependent variables. Little's MCAR test was not significant (Chi-Square = 269.719, $df = 242$, $p = .107$), indicating that the missing data in the player dataset was completely at random (Little, 1988). The most common pattern observed was "No missing values across all variables", and other patterns had low frequency and were consistent. Even though the level of missing values was less than the 5% generally acceptable level (Tabachnick & Fidell, 2013), data trimming (ignoring any cases with missing values via list-wise deletion) was rejected in order to retain as many cases as possible. Missing values in the dependent variables were imputed using Estimation Maximization (EM). As a missing values replacement strategy, EM works well for further analyses of means, standard deviations,

coefficient alpha analysis and correlations, and is useful for exploratory research (Graham, 2009). EM has the drawback of incorrectly reporting standard error and the resulting dataset is biased and should not be used for inferential hypothesis testing, however, datasets with EM-imputed values can be useful if the amount of missing data “are small and inferential statistics are interpreted with caution” (Tabachnick & Fidell, 2013, p. 68). Missing values in the independent variables were not imputed, and analyses were conducted using case-wise deletion.

Missing values analysis of the Board Member dataset showed 14 missing values (1.4%), all of which were dependent variables. One Board Member’s value related to the Rep program was missing, and this was imputed using EM. Thirteen HL program-related values were missing, and as these were all related to one participant and thus considered systematic, this case was deleted for hypotheses testing related to HL programs.

Participants. Player survey participants were 12.5-22.7 years of age at the time of data collection, with a mean age of 15.95 years ($SD = 1.862$). Of the 294 player participants, 46.9% ($n = 138$) played house league and 53.1% ($n = 156$) played representative level hockey. The participants had been playing hockey for an average of 7.9 years ($SD = 3.32$), ranging from 1 to 17 years. Participants were from three divisions: 40.8% ($n = 120$) from Bantam, 35.0% ($n = 103$) from Midget and 24.1% ($n = 71$) from Intermediate. Those identified as Intermediate level played on combined Midget/ Intermediate house league teams, and may actually have been Midget-aged players. Players were from four girls’ minor hockey associations: 46.9% ($n = 138$) from Association A, 20.1% ($n = 59$) from

Association B, 22.8% ($n = 67$) from Association C and 10.2% ($n = 30$) from Association D. Study participation from Associations B, C and D were low as some of the teams in these Associations had completed their post-season activities and so potential participants were unavailable at the time of data collection; teams from Association A were all still involved in post-season activity. The vast majority of players (84.0%) were registered with the same association in the previous season, 8.5% played for a different association in the previous season, and 5.8% did not play hockey in the previous season. Individual recognition, such as being captain, assistant captain, Most Valuable Player (MVP) for a team/ tournament/ game, most improved, or most sportsmanlike in hockey or any other team sport had been received by 86.7% of the participants. Many of the players (80.6%) participated in other organized sports in the past year; in an open-ended question over a third listed soccer, while other frequently mentioned sports included field hockey, softball or baseball, volleyball, rugby, basketball, and track and field or cross-county running. When asked about family participation, players indicated that 31.0% of their mothers, 52.0% of their fathers and 81.6% of siblings were involved in organized sport or organized physical activity in the past year. Table 3 presents the Player demographic information.

Board Members were 33-57 years of age, with a mean of 46.8 years ($SD = 5.85$). Of the 30 Board Members, 53.3% ($n = 16$) were female and 46.7% ($n = 14$) were male. Board Members represented the same four minor hockey associations as the player participants, with 36.7% ($n = 11$) from Association A, 13.3% ($n = 4$)

Table 3

Player Demographic Information

| Variable | Category | Frequency | Percentage |
|--|--------------------------|-----------|------------|
| Age in years (at time of data collection) | 12 | 3 | 1.0 |
| | 13 | 37 | 12.6 |
| | 14 | 61 | 20.7 |
| | 15 | 56 | 19.0 |
| | 16 | 56 | 19.0 |
| | 17 | 46 | 15.6 |
| | 18 | 18 | 6.1 |
| | 19 | 7 | 2.4 |
| | 20-23 | 10 | 3.4 |
| Association | A | 138 | 46.9 |
| | B | 59 | 20.1 |
| | C | 67 | 22.8 |
| | D | 30 | 10.2 |
| Division | Bantam | 120 | 40.8 |
| | Midget | 103 | 35.0 |
| | Midget/Intermediate | 71 | 24.1 |
| Competition Level | House/ Local League | 138 | 46.9 |
| | Rep* C | 7 | 2.4 |
| | Rep B | 1 | 0.3 |
| | Rep BB | 46 | 15.6 |
| | Rep A | 23 | 7.8 |
| | Rep AA | 79 | 26.9 |
| | Rep Total | 156 | 53.1 |
| Recognition | Yes | 255 | 86.7 |
| | No | 35 | 11.9 |
| | No response | 4 | 1.4 |
| Played for same association last season | Yes | 247 | 84.0 |
| | No | 25 | 8.5 |
| | Did not play last season | 17 | 5.8 |
| | No response | 5 | 1.7 |
| Number of years playing organized hockey | 1-4 years | 54 | 18.4 |

Table 3

Player Demographic Information

| Variable | Category | Frequency | Percentage |
|----------------------------------|----------------|-----------|------------|
| | 5-8 years | 109 | 37.1 |
| | 9-12 years | 105 | 35.7 |
| | 13-17 years | 25 | 8.5 |
| | No response | 1 | 0.3 |
| Played other sports in past year | Yes | 237 | 80.6 |
| | No | 57 | 19.4 |
| Mother sport participation | Yes | 91 | 31.0 |
| | No | 198 | 67.3 |
| | Not applicable | 4 | 1.4 |
| | No response | 1 | 0.3 |
| Father sport participation | Yes | 153 | 52.0 |
| | No | 134 | 45.6 |
| | Not applicable | 6 | 2.0 |
| | No response | 1 | 0.3 |
| Sibling sport participation | Yes | 240 | 81.6 |
| | No | 40 | 13.6 |
| | Not applicable | 13 | 4.4 |
| | No response | 1 | 0.3 |

Note: Player $N = 294$; *Rep = Representative

from Association B, 16.7% ($n = 5$) from Association C and 33.3% ($n = 10$) from Association D. Board Members had been in their current position for an average of 2.8 years, with a range of 1-13 years ($SD = 2.94$), while 36.7% ($n = 11$) had previously held other board positions in their current association. Over half of the Board Member participants performed other roles within their association during the season, most commonly as a team coach, assistant coach, trainer or manager. Most of the Board Members (93.3%, $n = 28$) had children playing hockey, and at least 23 of the 30 had children playing on a Rep team (two did not have children

playing hockey at all, and one did not specify Rep or HL). Table 4 presents the demographic information for the Board members.

Table 4

Board Demographic Information

| Variable | Category | Frequency | Percentage |
|---|----------|-----------|------------|
| Gender | Female | 16 | 53.3 |
| | Male | 14 | 46.7 |
| Age in years | 33-39 | 3 | 10.0 |
| | 40-44 | 7 | 23.3 |
| | 45-49 | 10 | 33.4 |
| | 50-54 | 6 | 20.0 |
| | 55-57 | 4 | 13.3 |
| Association | A | 11 | 36.7 |
| | B | 4 | 13.3 |
| | C | 5 | 16.7 |
| | D | 10 | 33.3 |
| Years in current board position | 1 | 12 | 40.0 |
| | 2 | 9 | 30.0 |
| | 4 | 5 | 16.7 |
| | 5 | 2 | 6.7 |
| | 12 | 1 | 3.3 |
| | 13 | 1 | 3.3 |
| Other non-board roles in current season | Yes | 17 | 56.7 |
| | No | 13 | 43.3 |
| Held previous board positions | Yes | 11 | 36.7 |
| | No | 19 | 63.3 |
| Had children playing in current season | Yes | 28 | 93.3 |
| | No | 2 | 6.7 |

Note: Board $N = 30$

Descriptive Statistics and Estimates of Internal Consistency

This section includes assessment of scale reliability, followed by descriptive statistics of the dependent variables, including frequencies of distributions, means and standard deviations of both Player and Board Member data.

Reliability. Estimates of internal consistency of the multi-item scales were determined using Cronbach's alpha (Cronbach, 1951). Analysis was performed separately on the Player and Board Member datasets after missing values replacement.

Cronbach's alphas for the Player higher-order value variables were all greater than .7 and ranged from .776 to .844. Deletion of any items from the Player Moral or Player Competence scales would result in only marginal to no increase in reliability, and all corrected item-total correlations were $> .40$ (and therefore considered acceptable [Gliem & Gliem, 2003]) so all sub-items for these two scales were retained. Examination of the correlation statistics for Player Status indicated that Cronbach's alpha would increase (from .776 to .810) if the Leadership item was deleted; in addition, there was poor item-total correlation for Leadership (value $< .40$). However, the original four-item Status value (with Leadership retained) was used in further analyses in order to allow potential comparisons with other research conducted using the YSVQ-2 (Whitehead & Gonçalves, 2013) and to maintain richness of the data.

Cronbach's alphas for the Board Member higher order VI ratings ranged from .690 to .888 for responses related to Rep programs, and from .733 to .922 for

HL programs. Item-total correlation for Obedience was $< .40$, and Cronbach's alpha for Board Member-Rep-Moral could be improved by omitting Obedience (from $.766$ to $.822$). However, the original scale construct for Board Member-Rep-Moral was retained in order to allow comparison with the player dataset.

Summary of Findings

Research Question 1 (RQ1). The objective of the first research question was to determine the sport values of females related to their participation in organized hockey. The means, medians, standard deviations, skewness and kurtosis for the Player value importance (VI) ratings for the 13 sub-items and the three higher-order factors are displayed in Table 5. Statistics are presented for Moral (based on Obedience, Sportsmanship, Helpfulness, Contract Maintenance and Fairness), Competence (based on Achievement, Showing Skill, Self Direction, Improvement), and Status (based on Dominance, Leadership, Winning, Public Image).

Examination of the histograms and descriptives showed that Player Moral displayed acceptable but negative skewness (-1.13) and positive kurtosis (1.52), within the generally accepted values of ± 2 (George & Mallery, 2012). Player Competence also displayed acceptable but negative skewness (-1.38), but kurtosis was leptokurtic (2.19). However, the impact of negative kurtosis diminishes with higher samples greater than 200 (Watermaux, 1976, as cited by Tabachnick & Fidell, 2013). Player Status showed reasonably normal distribution, with little skewness (0.15) and acceptable negative kurtosis (-0.83).

Table 5

Means and Descriptives for Player Sub-Item Value Importance Ratings

| Variable | Mean | Standard Deviation | Median | Skewness | Kurtosis |
|-------------------------|------|-----------------------|--------|----------|----------|
| Player Moral | 4.08 | .715 | 4.20 | -1.126 | 1.531 |
| Obedience | 3.82 | 1.084 | 4.00 | -0.812 | 0.065 |
| Sportsmanship | 4.34 | .855 | 5.00 | -1.531 | 2.782 |
| Helpfulness | 4.21 | .913 | 4.00 | -1.152 | 1.100 |
| Contract Maintenance | 3.94 | 1.032 | 4.00 | -0.918 | 0.321 |
| Fairness | 4.12 | .913 | 4.00 | -1.023 | 0.879 |
| Player Competence | 4.15 | .799 | 4.25 | -1.379 | 2.188 |
| Achievement | 4.40 | .817 | 5.00 | -1.192 | 0.550 |
| Showing Skill | 4.15 | .894 | 4.00 | -1.263 | 1.930 |
| Self Direction | 3.82 | 1.139 | 4.00 | -0.958 | 0.837 |
| Improvement | 4.24 | .995 | 4.67 | -1.685 | 3.553 |
| Player Status | 2.11 | 1.404 | 2.00 | 0.153 | -0.833 |
| Dominance | 1.52 | 1.893 | 1.00 | 0.404 | -1.020 |
| Leadership | 2.97 | 1.591 | 3.00 | -0.648 | -0.381 |
| Winning | 2.40 | 1.817 | 3.00 | -0.132 | -1.063 |
| Public Image | 1.54 | 1.944 | 1.00 | 0.360 | -1.060 |

Note: Player $N = 294$

Frequencies of the Player sub-item value importance ratings are presented in Table 6. Of the three value factors, only Status items were considered not important, or even opposite in importance by some of the study participants (particularly for Dominance and Public Image, with each receiving nearly 40% of responses for these two categories). **H₁: Competence value importance (VI) will be rated highest followed by Moral VI, and Status VI will be rated lowest.**

Prior to conducting RM ANOVA on the Player dataset, normalcy was assessed (through examination of histograms of frequency of distributions, skewness and kurtosis). Mauchly's test of sphericity was found to be

Table 6

Frequencies (percentages) of Responses for Player Sub-Item Value Importance Ratings

| | This idea is the opposite of what I believe (-1) | This idea is not important to me (0) | This idea is slightly important to me (1) | This idea is quite important to me (2) | This idea is Important to me (3) | This idea is very important to me (4) | This idea is extremely important to me (5) |
|-------------------------|---|--|--|---|--|--|---|
| Moral | | | | | | | |
| Obedience | 0 | 0 | 12 (4.1) | 25 (8.5) | 57 (19.4) | 110 (37.4) | 90 (30.6) |
| Sportsmanship | 0 | 0 | 5 (1.7) | 5 (1.7) | 30 (10.2) | 101 (34.4) | 153 (52.0) |
| Helpfulness | 0 | 0 | 4 (1.4) | 11 (3.7) | 41 (13.9) | 102 (34.6) | 136 (46.2) |
| Contract Maintenance | 0 | 0 | 8 (2.7) | 23 (7.8) | 48 (16.3) | 114 (38.7) | 101 (34.4) |
| Fairness | 0 | 0 | 4 (1.4) | 13 (4.4) | 44 (14.9) | 116 (39.4) | 117 (39.8) |
| Competence | | | | | | | |
| Achievement | 0 | 0 | 0 | 9 (3.1) | 36 (12.2) | 78 (26.5) | 171 (58.2) |
| Showing Skill | 0 | 0 | 6 (2.00) | 9 (3.1) | 35 (11.9) | 128 (43.5) | 116 (39.5) |
| Self Direction | 1 (0.3) | 1 (0.3) | 10 (3.4) | 25 (8.5) | 62 (21.1) | 98 (33.3) | 97 (33.0) |
| Improvement | 0 | 4 (1.4) | 1 (0.3) | 13 (4.4) | 34 (11.6) | 94 (32.0) | 148 (50.3) |
| Status | | | | | | | |
| Dominance | 42 (14.3) | 72 (24.4) | 50 (17.0) | 34 (11.6) | 41 (13.9) | 27 (9.2) | 28 (9.5) |
| Leadership | 7 (2.4) | 22 (7.5) | 28 (9.5) | 38 (12.9) | 70 (23.8) | 78 (26.5) | 51 (17.3) |
| Winning | 17 (5.8) | 34 (11.6) | 56 (19.0) | 35 (11.9) | 63 (21.4) | 39 (13.3) | 50 (17.0) |
| Public Image | 50 (17.0) | 61 (20.7) | 50 (17.0) | 35 (11.9) | 42 (14.3) | 24 (8.2) | 32 (10.9) |

Note: Player N = 294

significant, indicating that the assumption of sphericity was violated, $\chi^2(2) = 166.12, p < .001$. The Greenhouse-Geisser correction ($\epsilon = .70$) was used to adjust the degrees of freedom (Field, 2009).

One-way RM ANOVA for within-subject effect was significant, $F(1.39, 408.69) = 501.35, p < .001$, partial $\eta^2 = .631$, indicating that there were significant differences in the Player VI ratings. In order to control experiment-wise Type I error with multiple comparisons, *post-hoc* pair-wise comparisons were adjusted using the Bonferroni test. *Post-hoc* paired *t*-tests found no significant difference ($p = .379$) in VI ratings between Player Moral ($M = 4.08, SD = .715$) and Player Competence ($M = 4.15, SD = .799$). The VI rating of Player Status ($M = 2.11, SD = 1.404$) was significantly lower than both Player Moral and Player Competence values importance ($p < .001$).

The results partially support H_1 , which posited that Competence would be rated higher in importance than Moral VI, and Status VI would be rated lowest in importance. In this study of female hockey players, higher-order Player Moral (Obedience, Fairness, Sportsmanship, Helpfulness and Contract Maintenance) and Player Competence (Personal Achievement, Showing Skill, Self-direction and Improvement) values were rated as similarly important, and Player Status values (Dominance, Leadership, Winning and Public Image) considered important but significantly less so than Player Moral and Player Competence. Thus, the results of this study support H_1 ; that is Competence will be rated highest and Status will be rated lowest in value importance.

Additional objectives of RQ1 were to determine the relationships, if any, between the independent variables of age, length of hockey participation, and level of competition, with the value importance of the players.

H₂: Sport values importance decrease with increasing age.

H₃: Competence value importance increases with increasing age.

H₄: Moral value importance decreases with increasing age.

Correlation analysis was used to determine the relationship between players' age (in years) and VI ratings. There were significant but weak negative relationships between player Age and Player Moral VI, $r_s = -.109$, p (one-tailed) $<.05$), Age and Player Competence VI rating, $r_s = -.122$, p (one-tailed) $<.05$), and Age and Player Status VI rating, $r_s = -.114$, p (one-tailed) $<.05$. Refer to Table 7.

Table 7

Correlation Coefficients of Players' Age, Years Playing and Competition Level versus Value Importance Ratings

| Independent Variable | Value | r_s | p |
|----------------------|-------------------|-------|--------|
| Age (in years) | Player Moral | -.109 | .031* |
| | Player Competence | -.122 | .019* |
| | Player Status | -.114 | .025* |
| Years Playing | Player Moral | -.098 | .046* |
| | Player Competence | .029 | .308 |
| | Player Status | .107 | .034* |
| Competition Level | Player Moral | .180 | .001** |
| | Player Competence | .236 | .000** |
| | Player Status | .245 | .000** |

Note: * Correlation is significant at the 0.05 level (1-tailed), ** significant at the 0.01 level (1-tailed).

The results of this study found significant but weak negative relationships between Player Age and all three Player Moral, Player Competence and Player

Status VI ratings. Thus, the hypotheses that increasing player Age would be related to decreasing importance of sport values (**H₂**), and Moral values specifically (**H₄**), were supported by the results of this study. However, the hypothesis that Competence VI increases with increasing age (**H₃**) was not supported by the results of this study of female minor hockey players.

H₅: Competence value importance increases with increasing length of participation. The current study found no significant relationship between Length of Participation and Competence value importance, based on correlation analysis of length of participation (in terms of number of years playing) and Player Competence VI rating. See Table 7. Thus, this hypothesis (**H₅**) was not supported by this study of female minor hockey players.

H₆: Moral value importance decreases with increasing length of participation. There was a significant but weak negative relationship between length of participation and Moral value importance. Correlation analysis showed a significant weak negative relationship between length of participation (in terms of number of years playing) and Player Moral VI rating, $r_s = -.098$, $p < .05$. See Table 7. Thus, the results of this study of female minor hockey players supported the hypothesis (**H₆**) that Moral value importance decreased with increasing length of participation.

H₇: Sport values importance increase with increasing competition level.

H₈: Status value importance increases with increasing competition level.

These two hypotheses were examined using two different grouping criteria and analytical approaches. Competition level was examined based on a) Rep versus HL players, using parametric strategies, and b) team categorization from HL through progressively higher levels of Rep team categories (from “C” to “AA”) using a non-parametric approach.

Measures of central tendency for the Rep and HL sub-groups are presented in Table 8.

Table 8

Descriptives for Rep-Player and HL**-Player Value Importance Ratings*

| Variable | Mean | Standard Deviation | Median | Skewness | Kurtosis |
|-----------------------|------|--------------------|--------|----------|----------|
| Rep-Player Moral | 4.23 | .614 | 4.20 | -1.111 | 1.892 |
| Rep-Player Competence | 4.33 | .659 | 4.50 | -1.748 | 4.246 |
| Rep-Player Status | 2.43 | 1.33 | 2.50 | 0.000 | - 0.795 |
| HL-Player Moral | 3.92 | .786 | 4.00 | - 0.983 | 0.889 |
| HL-Player Competence | 3.95 | .892 | 4.00 | -1.022 | 1.037 |
| HL-Player Status | 1.74 | 1.405 | 1.50 | 0.417 | - 0.628 |

Notes: *Rep = Representative, **HL = House League, Rep Player $n = 156$, HL Player $n = 138$

Values from Table 8 were used to calculate Cohen’s d (based on pooled standard deviations) in order to estimate the effect size between mean VI ratings for Rep and HL players. For Moral VI (between Rep and HL players), Cohen’s $d = 0.43$; for Competence VI, Cohen’s $d = 0.49$; and for Status VI, Cohen’s $d = 0.50$. In all cases the Rep Player VI ratings were higher than the corresponding HL Player VI ratings, and the estimated effect sizes were small for Moral and Competence VI and medium for Status VI (Cohen, 1992).

The Player dataset was divided in Rep and HL sub-groups, and then analyzed by RM ANOVA for within-group differences to determine the relative VI ratings within each sub-group, and hence the value structures for the Rep and HL Players.

The dataset for the Rep Players ($n = 156$) was found to violate the assumption of sphericity as indicated by a significant result for Mauchly's test, $\chi^2(2) = 100.46, p < .001$. The one-way RM ANOVA with degrees of freedom adjusted using the Greenhouse-Geisser correction ($\epsilon = .68$) produced a significant within-subjects effect, $F(1.35, 263.98) = 240.60, p < .001$, partial $\eta^2 = .608$, indicating that there were significant differences in the Rep Player VI ratings. *Post-hoc* pair-wise comparisons, adjusted for multiple comparisons using the Bonferroni test, found no significant difference ($p = .171$) in value importance between Rep-Player Moral ($M = 4.23, SD = .614$) and Rep-Player Competence ($M = 4.33, SD = .659$). The value importance of the Rep-Player Status ($M = 2.43, SD = 1.327$) was significantly lower than both Rep-Player Moral and Rep-Player Competence values importance ($p < .001$).

The dataset for the HL Players ($n = 138$) was found to violate the assumption of sphericity as indicated by a significant result for Mauchly's test, $\chi^2(2) = 65.62, p < .001$. The one-way RM ANOVA with degrees of freedom adjusted using the Greenhouse-Geisser correction ($\epsilon = .72$) produced a significant within-subjects effect, $F(1.45, 198.16) = 266.11, p < .001$, partial $\eta^2 = .660$, indicating that there were significant differences in the HL-Player VI ratings. As the RM ANOVA indicated at least one significant difference it was appropriate to

conduct *post-hoc* pair-wise comparisons, adjusted for multiple comparisons using the Bonferroni test. There was no significant difference ($p = 1.00$) in value importance between HL-Player Moral ($M = 3.92$, $SD = .786$) and HL-Player Competence ($M = 4.95$, $SD = .892$). The VI rating for HL-Player Status ($M = 1.74$, $SD = 1.405$) was significantly lower than both HL-Player Moral and HL-Player Competence values importance ($p < .001$).

Correlation analysis of Competition Level (from house league through five levels of representative hockey from “C” to “AA”) versus Player VI ratings determined significant positive relationships with all three of the higher-order values. Competition Level was significantly related to Player Moral VI rating, $r_s = .180$, p (one-tailed) $< .01$, to Player Competence VI rating, $r_s = .236$, p (one-tailed) $< .01$, and to Player Status VI rating, $r_s = .245$, p (one-tailed) $< .01$. See Table 7.

Analysis of the Player data at the program level showed that Rep players rated all three value items of higher importance than the HL players, with small to medium estimated effect sizes. While Rep players indicated higher levels of importance for all three value factors as compared to HL players, the value structure of both sub-groups were similar and reflected that of the entire participant group: Moral and Competence had similar value importance, and both values were more important than Status. Further analysis based on team membership showed that the level of competition was positively related to sport values importance; that is, the importance of all three higher order values increased with higher competition levels in terms of increasingly competitive

team categorization. Thus, the results of this study of female hockey players supported both **H₇** and **H₈**: that the importance of sport values, and specifically Status values (respectively), increase with increasing competition level.

Research Question 2 (RQ2). The objective of RQ2 was to examine the value congruence between the female hockey players and the values of the participating players' minor hockey associations, as perceived by Board Members of the respective associations. Descriptives for the Board Member VI ratings for the three value factors are presented in Table 9. Examination of the histograms of frequencies of distributions along with the descriptive statistics in Table 9 show normal distribution for most of the Board Member variables; however, similarly to Player Competence, Board Member-Rep Competence displayed acceptable but negative skewness (-1.33), and leptokurtic kurtosis (2.42).

Table 9

Means and Descriptives for Board Member VI Ratings for Rep and HL Programs

| Variable | Mean | Standard Deviation | Median | Skewness | Kurtosis |
|-----------------------------|------|--------------------|--------|----------|----------|
| Board Member-Rep* Moral | 3.83 | .835 | 3.90 | -1.017 | 1.621 |
| Board Member-Rep Competence | 3.75 | 1.081 | 4.00 | -1.328 | 2.415 |
| Board Member-Rep Status | 1.94 | 1.166 | 1.63 | 0.396 | -1.169 |
| Board Member-HL** Moral | 3.67 | .967 | 3.60 | -0.616 | 0.387 |
| Board Member-HL Competence | 3.04 | 1.333 | 3.25 | -0.300 | -0.739 |
| Board Member-HL Status | 1.16 | 1.066 | 1.00 | 0.633 | -0.282 |

Note: *Rep = Representative, **HL = House League, Board Rep $n = 30$, Board HL $n = 29$ (one case deleted list-wise due to systematic missing values)

Values from Tables 8 and 9 were used to calculate Cohen's d (based on pooled standard deviations) in order to determine the estimated effect sizes

between means related to the Rep program (by comparing Rep Player VI ratings and Board Rep VI ratings) and to the HL program (by comparing HL Player VI ratings and Board HL VI ratings). Refer to Table 10.

Table 10

Comparisons of Player and Board Member Value Importance Ratings

| Value | Player <i>M</i> * | Player <i>SD</i> ** | Board <i>M</i> | Board <i>SD</i> | Cohen's <i>d</i> |
|----------------|-------------------|---------------------|----------------|-----------------|------------------|
| Rep*** Moral | 4.23 | .614 | 3.83 | .914 | 0.51 |
| Rep Competence | 4.33 | .659 | 3.75 | 1.081 | 0.65 |
| Rep Status | 2.43 | 1.327 | 1.94 | 1.167 | 0.39 |
| HL**** Moral | 3.92 | .786 | 3.67 | .967 | 0.29 |
| HL Competence | 3.95 | .892 | 3.04 | 1.333 | 0.80 |
| HL Status | 1.74 | 1.405 | 1.16 | 1.066 | 0.47 |

Notes: **M* = Means, ***SD* = Standard Deviation, ***Rep = Representative (program), ****HL = House League

Comparisons between Rep Player and Board Member VI ratings for Rep programs found for Moral VI, Cohen's $d = 0.51$; for Competence VI, Cohen's $d = 0.65$; and for Status VI, Cohen's $d = 0.39$. In all cases the Rep Player VI ratings were higher than the corresponding Board Member VI ratings for the Rep program, and the estimated effect sizes were medium for Moral and Competence VI, and small for Status VI (Cohen, 1992). These results suggest medium levels of congruence for Moral and Competence values, and a high level of congruence for Status values between the Rep Players and the decision-making values of their minor hockey associations around Rep programs, as perceived by the Board Members.

Comparisons related to the HL program, involving HL Player and Board Member-HL VI ratings found for Moral VI, Cohen's $d = 0.29$; for Competence,

Cohen's $d = 0.80$; and for Status, Cohen's $d = 0.47$. In all cases the HL Player VI ratings were higher than the corresponding Board Member HL program VI ratings, and the estimated effect sizes were small for Moral VI and Status VI, and large for Competence VI (Cohen, 1992). These results suggest high levels of congruence for Moral and Status values, and low congruence for Competence values between the HL Players and the values used in decision-making by their minor hockey associations for HL programs, as perceived by the Board Members.

Both Rep and HL Players placed greater importance on the three higher order values of Moral, Competence and Status compared to the Board Members' perceptions of importance accorded these values during decision-making for the respective hockey programs. The congruence in values importance was medium to high between Rep Players and the Board Members for all three value factors. The congruence amongst HL players and Board Members was dependent upon the value factor: there was high congruence for importance of HL Moral and HL Status values, but low congruence for HL Competence values.

Chapter Five: Discussion and Conclusions

The objective of this study was to determine the sport values of female hockey players in order to better inform a values-based decision making approach within girls' minor hockey associations. Such an approach for the development of programs and policies would assist organizations in meeting the needs of their female members within the context of the male- dominated framework of Hockey Canada, with the ultimate goal of continued female participation. The study was also an initial effort to determine the level of congruence between the sport values of female athletes and the values of minor hockey associations as perceived by the adults who develop and manage their sport programs (specifically board members of minor hockey associations). This study extended the work of Lee and colleagues (Lee et al., 2000; Lee et al., 2008) and filled several research gaps identified by Whitehead, Telfer, and Lambert (2013) by using the YSVQ-2 to measure the sport values of 1) female athletes, in 2) different competition levels (participatory house league and selected performance-based representative team players), 3) from another culture (North America, and Canada, specifically), who participated in 4) a different sport than previously studied (the team sport of ice hockey).

This chapter first discusses the results in relation to the research questions and associated hypotheses. Implications of the study findings are then addressed. Thirdly, limitations and recommendations for future research are presented.

RQ1: Player Sport Values

The results of this study are generally consistent with previous research into the sport values of adolescent athletes: Moral and Competence values were each deemed similar and most important, and Status values were rated less important. Direct statistical comparisons are not possible with many of these previous studies of youth sport values as different survey instruments were utilized, such as ranking (Simmons & Dickinson, 1986; Webb, 1969) or rating of single-item values (Dubois, 1986; Hatzigeorgiadis & Whitehead, 2013; Lee et al., 2000; MacLean & Hamm, 2008; Watson & Collins, 1982; Whitehead & Gonçalves, 2013). However, the results of the current study reflect the findings from these previous studies in which participants placed greater importance on competence and moral-related values such as playing well, being/ playing fair, personal achievement, contract maintenance, sportsmanship, team cohesion, honesty, cooperation and participation, and less importance on status-related values such as winning, competition and public image.

The current study extends and confirms the findings from previous studies using the YSVQ-2. The results of four studies utilizing the YSVQ-2 were reported by Hatzigeorgiadis and Whitehead (2013) and Whitehead and Gonçalves (2013), and involved youth of both genders (all studies had more male than female participants), and ranging collectively from 11 to 18 years of age; these four studies were conducted in the United Kingdom (Lee et al., 2008), Greece (Gymnopoulou & Vatali; 2009), Kenya (Kanyiba Nyaga, 2011) and Hong Kong (Chan, Whitehead, Hatzigeorgiadis, & Chow, 2013). The value importance

ratings in the current research for Moral and Competence ($M = 4.08$ and $M = 4.15$, respectively) were within the range of means in the four other studies as reported by Hatzigeorgiadis and Whitehead (2013, p. 224); however, the mean rating for Status in the current study ($M = 2.11$) was slightly higher than those reported for the above four studies (range 1.40 – 1.96).

Full details for the studies by Chan et al. (2013), Gymnopolou and Vatali (2009) and Kanyiba Nyaga (2011) were not obtainable (these sources were not available online and could not be located by the researcher); however, any differences in the results from these studies, including Lee et al. (2008), and the current study could be attributed to the older age range (the current study involved athletes 12-22 years of age versus 10-18 years of age), the female-only athlete participant group, and the focus on one team sport (ice hockey) in the current study versus a mixture of unspecified sports (only the Hong Kong study involved a single sport: golf) (Whitehead & Gonçalves, 2013). In addition, the current study was conducted within a Canadian (North American) context; Hatzigeorgiadis and Whitehead (2013) cautioned that items in the YSVQ-2 may have different meanings in other cultures, or translations of the YSVQ-2 may give a different meaning or context to an item.

In addition, the higher importance accorded to Status values in the current study could be explained by the increasing emphasis on high performance female hockey in Canada (Stevens, 2006). The pyramid of competitive opportunities available within Hockey Canada, including national and Olympic teams, plus hockey scholarships in Canada and the United States have shifted the emphasis

from a development climate to one of increased expectations and elite performance (Stevens, 2006). This emphasis on elitism is exemplified in the 2015 Hockey Canada Guide to Female Hockey (Hockey Canada, 2015). Most of this 14-page document focuses on the high performance pathway, various national teams, university teams and championships, and the Canadian Women's Hockey League. Just two pages discuss the Long-Term Player Development Model, an introductory grassroots program and recreational opportunities (in two paragraphs). Thus, the higher importance placed on Status values in this study compared to previous studies may be a reflection of increased competitiveness in female hockey in Canada.

Two previous studies (MacLean & Hamm, 2008; Šukys & Jansonienė, 2012) for which results by gender were reported provide a more direct comparison with the current study. MacLean and Hamm (2008) used the single-item YSVQ to measure sport values and reported mean scores for each of the 18 items; amongst females Public Image was ranked highest (based on ranking of mean scores, for which Public Image was $M = 4.97$), followed by the moral and competence-related values of Being fair, Having a good game, Companionship and Obedience. Winning was ranked 10th of 18 value items, with a mean score of 4.29 (MacLean & Hamm, 2008). Šukys & Jansonienė (2012) reported VI ratings using the YSVQ-2 from female participants that were very similar to the current study for Moral ($M = 3.98$) and Competence ($M = 4.04$), but the Status VI rating ($M = 3.26$) was higher than the Player Status ($M = 2.11$) observed in the current study. The relatively lower status-related VI ratings observed in the current study

as compared to the studies by MacLean and Hamm (2008) and Šukys and Jansonienė (2012) could be related to the higher mastery levels in the former two studies, as those included elite athletes involved in university varsity sports, and national and international competition, respectively. The relationship between competition level and sports values importance is discussed in more depth later but the current study of female hockey players found a positive relationship between competition level and Status VI, which was in agreement with previous studies (MacLean & Hamm, 2008; Šukys & Jansonienė, 2012).

It was hypothesized (**H₁**) that the higher-order Competence factor would be more important than the Moral factor, but the results showed no significant difference in importance between the two values. The two-dimensional conceptual value model proposed by Bardi and Schwartz (2013) positions the higher order values of Competence and Fairness as adjacent and compatible to each other, and thus the pursuit of these two values are not in conflict. The model (Bardi & Schwartz, 2013) explains the similar value importance for Competence and Moral values observed in this study.

The high degree of importance accorded to Competence in this study is consistent with self-determination theory (SDT) (Ryan & Deci, 2002) and cognitive behaviour theory (Bandura, 1977). SDT posits that there are three universal psychological needs required for optimal functioning: competence, relatedness and autonomy (Ryan & Deci, 2002). Within the context of SDT, the concept of competence relates to people seeking challenges that are “optimal for their capacities and to persistently attempt to maintain and enhance those skills

and capacities through activity (Ryan & Deci, 2002, p.7). Amorose, Anderson-Butcher, and Cooper (2009) found that perceived competence was related to athlete well-being and positive sport experiences, and in turn to continued participation. Competence is fundamental to Bandura's concept of self-efficacy: that is, belief in one's ability to master a skill or situation influences how one feels, thinks and behaves, including embracement of challenging tasks and a stronger sense of commitment to interests (1977, 1990). Two of the four major sources of self-efficacy are clearly available in a sports setting: performance experiences (i.e., competence) and social modeling (observing others successfully complete a task, such as teammates displaying skill) (Bandura, 1977). In the context of sport, competence enhances one's sense of self-efficacy, which in turn can lead to increased interest and commitment to playing a sport/ to one's team. Thus, the high Player value importance rating for Competence is consistent with meeting psychological needs and enhancing self-efficacy.

The higher relative importance placed on Moral values in the current study could be associated with gender: all of the participants in the current study were female, as compared to the mixed gender groups in other studies using the YSVQ-2 reported by Whitehead and Gonçalves (2013). In a study of university-aged athletes using the YSVQ-2, Šukys and Jansonienė (2012) found that females rated Moral values significantly more important than males. The higher-order Moral factor includes Obedience ("I do what I am told"), Sportsmanship ("I show good sportsmanship"), Helpfulness ("I help people when they need it"), Contract Maintenance ("I always play properly") and Fairness ("I try to be fair"). In a study

of Canadian high school and university-aged athletes utilizing the 18-item single order YSVQ, MacLean and Hamm (2008) found that females rated the moral values of Fairness and Compassion significantly higher than males, while Companionship and Obedience were also ranked highly by the female participants.

Although Status values were rated as least important, values such as Winning, Domination and Public Image must still be considered important sport values to youth (Whitehead & Gonçalves, 2013), but less so relative to Moral and Competence values. Winning can provide focus for training efforts and be a measure of improvement (Gonçalves, Carvalho & Light, 2011), and winning can be considered a consequence of improved skill and competence development (Cumming, Smoll, Smith, & Grossbard, 2007). While not appropriate to use the single item measures for analyses (Gliem & Gliem, 2003), the frequency of responses (see Table 6) demonstrate lack of agreement by female hockey players around the importance of Status values. Only Status sub-items (versus Competence and Moral sub-items) received responses for “Not important” or “Opposite of what I believe”, especially for Dominance (“I show that I am better than others”) and Public Image (“I look good”), with each receiving nearly 40% of responses for these two categories. Conversely, approximately 20% of the players rated Domination, Winning and Public Image as “very” or “extremely important”, and nearly 44% rated Leadership as “very” or “extremely important” (refer to Table 6).

The importance of Public Image for female athletes appears to be linked to the actual sport, and specifically to the uniform or clothing worn while competing. In this study of female hockey players, Public Image was one of the least important values ($M = 1.54$) and ranked 12th out of 13 sub-items (inferred ranking based on mean VI ratings), yet MacLean and Hamm (2008) found Public Image was ranked most important (of 18 items) by females who participated in a variety of varsity, inter-mural and high school sports ($M = 4.97$, using the same 7-point Likert-type scale). Slater and Tiggeman (2010) found that female adolescents were concerned about how their body looked in uniforms that were exposing, tight-fitting or unattractive, while Reel and Gill (1996) found that revealing uniforms contributed to weight pressures among collegiate cheerleaders. Hockey players are required to wear bulky protective equipment, helmets and uniforms which expose very little of their body. Liechty, Sveinson, Willfong and Evans (2015) observed that females who participated in sports such as hockey, which does not focus on the appearance of the participants, had more positive body image than those who participated in 'aesthetic' sports such as gymnastics, swimming and wrestling. The female participants in the MacLean and Hamm (2008) study participated in hockey, but also other sports where their bodies were clearly on display (swimming, wrestling, and to a lesser extent, volleyball and rowing), which may account for the higher importance placed on Public Image. Conversely, it would appear that the female hockey players in the current study were not concerned about their body image and thus accorded Public Image with low importance.

Relationships between sport value importance and the demographic factors of player age, number of years of hockey participation and competition level were explored in order to provide insights to Board Members for values-based decision-making for specific programs in their minor hockey associations.

Age. It was hypothesized that the importance of sport values, and Moral values in particular, would decrease as the athletes' age increased (**H₂** and **H₄**, respectively), and that Competence would increase in importance with increasing age (**H₃**). The findings of the current study demonstrated that all three higher-order sport values, Moral, Competence and Status, decreased in importance with increasing athlete age; these negative relationships were significant but weak. These findings are consistent with early work by Watson and Collis (1982) of Australian high school students, which found lower ratings by those in Grade 12 (17 years of age) for five higher-order values (Affiliative, Moral, Competence, Expressive and Achievement) as compared to those in Grade 8 (13 years of age). Lee et al. (2000) evaluated sport value importance using the 18-item YSVQ with youth 12-16 years of age, and trend analysis found a significant decreasing linear trend across age groups, although there were variations within the rankings of the individual 18 value items between age groups.

Watson and Collis (1982) and Lee et al. (2000) suggested that the negative relationship between age and sport values importance could be attributed to a decreasing level of commitment as other activities and interests become more important to youth. Declining youth sport participation rates over time (Berger, 2008) would seem to support this suggestion. However, in the current study the

female athletes were active participants in organized hockey, and so while a negative relationship between age and the sport values VI ratings was observed, this relationship was weak.

Previous research (Lee et al., 2000; Webb, 1969) suggested that the importance of specific Competence values would increase with increasing athlete age (**H₃**), but the findings of the current study showed the opposite: as athlete age increased there was a decrease in Competence values importance. It might be expected that athletes would place increasing importance on mastery of skills as they grew older, but this assumes that there is correlation between athlete age and length of participation (i.e., the longer one participated in sport as one grew older, then the more one would develop skills and deem competence to be more important). However, examination of the participants in the current study shows no correlation between age and length of participation. The contradiction in results may also be due to the wider and older range of age in the current study (12-22 years of age) as compared to 12-15 years of age (Lee et al., 2000) and 8-18 years of age (Webb, 1969). As discussed above, the negative relationship between age and Competence observed in the current study may be based on declining interest in sport with older participants (Lee et al., 2000; Watson & Collis, 1982)

A negative relationship between sport values importance and age was predicted (**H₂**) and supported by the findings of this study. The specific focus on the hypothesized negative relationship between age and Moral VI (**H₄**) was based on previous research that found adolescents valued winning over fair play as compared to younger children (Knoppers et al., 1986), and older athletes were

more accepting of Cheating and Gamesmanship as compared to younger athletes (Lee et al., 2007). The current study provided partial support for the hypothesis, with the results showed a significant but weak negative relationship between age and Moral VI. The weakness in correlation observed in the current study ($r_s = -.109$) may be explained by the female-only participant group; Lee et al. (2007) found that males scored higher on Acceptance of Cheating and Acceptance of Gamesmanship and the negative relationship between age and Moral VI may have been influenced by males in the study.

In summary, there were significant weak negative relationships between player age and sport value importance ratings in this study of female hockey players, and so it is recommended that player age be only a minor consideration for values-based decision making in female minor hockey associations.

Length of Participation. It was predicted that length of participation in organized hockey would be related to increasing importance of Competence values (**H₅**) and decreasing importance of Moral values (**H₆**). The current study found no significant relationship between years of hockey experience and Competence values importance, and a significant but weak negative relationship between years of participation and Moral value importance amongst female hockey players.

The results of the current study both contradict and reflect the findings of Šukys and Jansonienė (2012) in their study of university-aged elite athletes. Šukys and Jansonienė (2012) observed positive relationships between years of sport experience based on two groupings (7 years and less, and 8-12 years), for both

Competence VI and Moral VI. The differences in results may have been based on gender, as approximately 75% of the participants were male; age, as the participants were university-aged and, therefore, older than those in the current study; or competition level, as the participants were elite athletes who had participated at the national or international level (Šukys and Jansonienė; 2012). Finally, the groupings appear to be arbitrary, and different groups (perhaps more groups with narrower ranges of experience) may provide different findings.

The lack of significant relationship between length of participation and player Competence VI ratings may be a reflection of the universality of competence as described in Ryan and Deci's self-determination theory (2002). That no relationship was observed between years of playing hockey and Competence demonstrates that this value is important to sport participants regardless of length of experience.

The negative relationship between length of participation and Moral value importance observed in this study of female hockey players was similar to that observed in several previous studies. Vallerand and Losier (1994) found a negative relationship between Moral VI in terms of sportsmanship orientation and length of participation over a short time period (from the beginning to the end of a hockey season for a total of 5 months), with male adolescent hockey players. Priest et al. (1999) also observed a significant but small decrease in the ethical values of college athletes over a four-year period.

The lack of relationship between length of participation and Competence VI and the weak relationship with Moral VI observed in the current study

suggests that length of sport experience is not an important consideration in values-based decision-making for female minor hockey associations.

On a cautionary note, one must not confuse player age with length of playing female hockey. Boys tend to start hockey earlier than girls, and continue their participation into their teens; examination of registration data for a boys' league in southern Ontario and the OWHA for the 2012-13 season shows that girls appear to join organized hockey up to the Pee wee level at 12 years of age (OWHA, 2013), while boys join by 8 years of age in Novice (Minor Hockey Alliance of Ontario [MHAO], n.d.). Approximately 25% of the boys' 2013-14 association membership was under 8 years of age (MHAO, n.d.), as compared to only 12% of the OWHA 2013-14 membership (OWHA, 2013). Organized female hockey is a relatively new opportunity; when the OWHA was created in 1977 there were 65 teams (Etue & Williams, 1996), as compared to 2605 teams in the 2013-14 season (OWHA, 2013). Thus, the girls now entering the female hockey system are amongst the first generation of female players whose mothers may have had the opportunity to play hockey as adolescents, and the tradition of playing female hockey is still being established.

Competition Level. The final hypotheses predicted that the importance of sport values would increase with higher levels of competition (**H₇**), and Status values in particular would be positively related to competition level (**H₈**).

Analyses based upon enrolment in representative or house league programs showed that VI ratings for Moral, Competence and Status values were higher amongst Rep program female hockey players (mean ratings of 4.23, 4.33 and

2.43, respectively) compared to HL players (mean ratings of 3.92, 3.95 and 1.74, respectively). The estimated effect size differences for all three VI rating Rep-HL pairings were small (Cohen's d values ranged from 0.43 to 0.50). Similar value structures for players within each of the Rep and HL programs was observed: RM ANOVA for within-group differences found that Moral and Competence values were rated similar and higher in importance than Status values by players within both the Rep program and within the HL program. However, it should be noted that the absolute VI ratings were higher for Rep Players compared to those for HL Players, as discussed above.

These result from the current study support the findings of previous studies by Lee et al. (2000), MacLean and Hamm (2008) and Šukys and Jansonienė (2012) with respect to the relationship between Competition Level and sport values importance. A study of UK adolescents (12-15 years of age) who participated at regional or higher levels of competition gave higher VI ratings for all values in the 18-item YSVQ compared to those who participated at the lower school or club levels, and the values of Showing Skill, Public Image and Winning were ranked higher by the regional athletes compared to the school/ club participants (Lee et al., 2000). MacLean and Hamm (2008) reported inferred rankings (based on VI ratings) that showed university varsity athletes ranked the Status values of Public Image and Winning higher than the students in sport-related academic programs who did not participate in varsity or inter-murals sports. Šukys and Jansonienė (2012) found that university-aged international-level

athletes rated Competence values significantly higher than did national-level athletes.

Competition level was also analyzed in terms of increasing female hockey team categorization, from house league to Rep “C”, the lowest level of girls Rep team categorization, up to “AA”, the highest level of female minor hockey in Ontario (note that other Canadian provinces designate the highest level of female minor hockey as “AAA”). Correlation analysis showed significant moderate positive relationships between increasing Competition Level and increasing importance for all three sport values in this study of female hockey players. Moral VI had the lowest correlation ($r_s = .141$) with Competition Level, then Competence VI ($r_s = .236$) and Status VI was found to have the highest correlation ($r_s = .245$). Thus, Status VI was linked more closely to competition level, and Moral VI was less related to competition level.

Participation in organized hockey is generally done so voluntarily, particularly at the age level of the participants in the current study (12 years of age and older, whose participation is more likely their own decision), and thus one would expect the participants to attribute importance to sport values. Involvement in the selection-based competitive Rep program requires a higher commitment of time, money and effort compared to house league program participation. Based on content analysis of the websites of the four minor hockey associations which were involved in this study, house league registration fees were \$400 - \$600 and players typically received 2 hours of ice time per week. Rep players' fees were approximately \$1200 - \$1500, plus additional fees for tournament registrations,

dryland training and other expenses which could increase the cost to over \$3000 per year, and Rep players typically had 2-5 hours of ice time per week. The extra commitment for Rep hockey may explain the higher importance given to sport values. Along with the higher commitments, there is expectation that teams at higher levels of competition display higher levels of skill; winning is a consequence of physical and psychological development (Cummings et al, 2007), and thus all sport values, including Status values, will be considered more important by Rep players relative to HL players.

Although female Rep Players rated all three higher-order values as more important when playing hockey as compared to HL Players, there was similarity in the values structures and high value congruence between Rep and HL players, particularly for Moral and Competence VI ratings (based on Cohen's *d* values). These similarities in the responses may, at least partially, be explained by the conditions for enrolment in the respective programs. Enrolment in the representative program was by choice; that is, the players voluntarily tried out and were selected to a Rep team based on certain selection criteria (primarily skill ability). However, there may be some players in the house program there not by their own choice: they may have tried out for the Rep program but been released to house league, or external factors such as family characteristics or other commitments may have restricted their options to participate in the Rep program. Berger et al. (2008) found lower sport participation among Canadian adolescents was related to lower household income and family structure (family break-ups can be a barrier to sport participation). Female sport participants spend less time per

day working, suggesting that “adolescent girls are being asked to make a trade-off between work and sport participation” (Berger et al., 2008, p. 290), while female athletes in upper years of high school and post-secondary education expressed concern about the conflict between sport and schooling leading to a decreased commitment to sport (Gonçalves et al., 2011). Given that these are barriers to female sport participation in general, these factors may also be barriers to participation in Rep hockey, with the higher financial and time commitments, and thus girls ‘settle’ for house league. This suggests that there might be girls’ in house league programs due to extrinsic factors, but whose values may be more congruent with those of Rep players.

It is also important to note that relationships do not imply causality; that is, enrolment in the Rep or house league program will not predict values importance, nor vice versa. Thus, while competition level should be considered in values-based decision-making, Rep and HL players demonstrated similar values structures, with Moral and Competence values being rated similarly important, and Status values rated relatively lower yet still of importance.

RQ2: Player – Board Member Value Congruence.

The objective of Research Question 2 was to determine the level of congruence between the sport values of female hockey players and their respective minor hockey associations. Association values were represented by Board Members’ perceptions of the importance of specific sport values used to guide decision-making for their respective Rep and HL programs, and not their personal values importance. Board Member VI ratings were compared to Rep and

HL Player VI ratings. For both Rep and HL programs, the Player VI ratings were higher than the Board Member VI ratings for their respective programs.

A possible reason for the overall lower Board Member VI ratings (as compared to the Player VI ratings) may be the relative recentness of values-based decision making (Dolan et al., 2006), and specifically for volunteer-managed sport organizations such as minor hockey associations (Bell-Laroche, 2009). Jurbala (2014) contends that “volunteer club leaders spend much of their time and energy battling resource constraints ... so they have relatively little capacity left over for changes to programs that would make them better for participants” (p. 3). Thus, volunteer board members of the minor hockey associations in this study may be operating more from a management by objectives approach, with little consideration for values-based decision-making, and hence the reason for observed lower value importance ratings

The results of this study show that there are varying degrees of value congruence between the female hockey Players and the Board Members of their respective associations. To-date there has been little research in the area of sport value congruence between athletes and minor sport associations. However, business management research into person-organization fit could be applied to athletes and their participation in organized minor sport. Although minor sport participation is voluntary, athletes could be considered employees, coaches could be considered supervisors, minor sport associations could be considered the employers, and organizational commitment or turnover intention could be related

to athlete intention to stay with their minor sport association (as opposed to joining a different association) or even continued participation in the sport.

Perceived person-organizational (P-O) value-congruence by employees has been found to be positively related to satisfaction with the job and with the organization as a whole, and to employee commitment to the organization (Amos & Weathington, 2008; Chatman, 1991). Thus, a higher level of player-organization (Board Member) value congruence should relate to higher player satisfaction and reduced intention to leave the organization. Given the free movement aspect of female hockey in Ontario, where female players can move freely from one association to another without geographical restrictions (OWHA, 2012), this should be of interest to girls' minor hockey associations wishing to retain their members, and ultimately to foster continued sport participation.

There was generally higher levels of HL Player – Board Member value congruence (high congruence for Moral and Status values, and low congruence for Competence values) as compared to Rep Player – Board Member value congruence (medium congruence for Moral and Competence values and high congruence for Status values). The higher level of value congruence observed for the HL Players in this study may be partially due to the lack of movement between associations, which is common with house league hockey. In this study, only 4 of 138 HL players were members of a different association in the previous season, as compared to 21 of 156 Rep players. Chatman (1991) found that person-organization fit is created, in part, by selection and socialization. As HL players tend to stay with the same minor hockey association (rather than the free

movement to different associations observed in female Rep hockey), the higher value congruence observed in HL may be partially explained by organizational influences on the HL players' values.

For Moral values, there was medium value congruence between the Board Member VI ratings and those of the Rep Players, and high value congruence with HL Players (based on Cohen's *d* values). The high degree of congruence for Moral values in the HL program may be explained by the understood participatory nature of HL (everyone who registers is assigned to a team, team rosters are created with the goal of parity, and there is expectation of equal playing time, including use of a 3-minute clock at younger levels to indicate a mandatory player shift change), with less emphasis on winning and skills development. The lower (medium) level of value congruence for Moral values between Rep Players and Board Members may be attributed to the accepted competitive nature of Rep hockey. Butcher and Schneider (2003) discussed the inconsistencies displayed by 'other players' in community sport – coaches, parents, other volunteers – who fail to match what they do with what they say, such as espousing fair play, but then rewarding only winning. Butcher and Schneider (2003) also recognized that many volunteers, such as coaches, are faced with inconsistent demands; this could also apply to Board Members making decisions around Rep programs. Moral values conflict with Status values such as Winning and Domination (Schwartz, 1992), thus Board Members may place lower importance on Moral values within their Rep programs as compared to the Rep Players in this study.

Normative and affective organizational commitment is enhanced when employees perceive higher values congruence, and in particular, around pro-social values (Abbott et al., 2005). Given that female hockey players in this study rated Moral values as very important, consideration of Moral values during decision-making by minor sport association board members could build organizational commitment. Moral values include interpersonal values such as Obedience, Sportsmanship, Helpfulness, playing properly (Contract Maintenance) and Playing Fairly. Association initiatives that fulfill Moral values needs could include team/ association-generated player contracts or Codes of Conduct that state expectations for attendance (at games and practices), on and off-ice behaviours and consequences for excessive or serious penalties. Coaches are key influencers in minor sport (Reinboth & Duda, 2006), and so association boards could require coach contracts that call for equitable and fair dealings with players and which condone aggressiveness and gamesmanship (Guivernau & Duda, 2002). Players could be encouraged and recognized for displaying sportsmanship and fair play, and for participating in community activities (food drives, charity events, etc.). Bardi and Schwarz (2013) suggested the use of certificates or similar rewards to acknowledge positive behaviours (fair play, sportsmanship, least number of penalties, etc.); however, they cautioned against making such rewards too prestigious or too much like a prize, as such rewards may become extrinsic motivations and may lead to displays of dominance and other status values related to power. Initiatives and decisions based on moral values are recommended in

order to enhance organizational commitment and encourage continued sport participation.

This study of female minor hockey players found for Competence values there was medium congruence for Rep Players and low congruence for HL players compared to the Board Members. These were the lowest levels of value congruence observed in this study.

Given the focus on skills development for Rep Players, as outlined in Hockey Canada's Long Term Player Development (Hockey Canada, 2011), it would seem that there is a disconnect between the vision of Hockey Canada and the local minor hockey associations with respect to the importance given to Competence values when making decisions around the Rep program. One would expect minor hockey associations to focus on Competence (including improvement, showing skill, and achievement) in the management of Rep programs. However, this lack of values consideration could be a due to more practical factors, such as resource capacity, and specifically lack of ice time, or financial or human resource capacity (Misener & Doherty, 2009).

The low congruence observed for HL Player-Board Member value importance for Competence reflects the perceived lower standing associated with house league programs (Hockey Canada, 2015). The focus on performance-based programs relegates house league to secondary status (Stevens, 2006), with a lower emphasis on skills development for HL players. Coaching guidelines recommend HL teams have two to four hours of ice time per week (based on one practice and

one to two games) versus four to six hours (two to three practices and games per week) for Rep teams (Hockey Canada, 2005).

Competence was observed to have the lowest levels of Player-Board Member value congruence (for both Rep and HL programs); however, Players rated Competence values as highly important. This study found positive relationships between Competence value importance and increasing competition levels, which would suggest that associations should allocate a greater share of limited resources to more competitive Rep teams (at the “AA” and “A” levels, for example), at the expense of less competitive Rep teams and HL teams. However, Competence is a fundamental psychological need (Ryan & Deci, 2002), and a source of self-efficacy (Bandura, 1977, 1990). The high value importance accorded Competence, coupled with the gaps in value congruence between Players and Board Members instead suggests that girls’ minor hockey associations need to give greater consideration to Competence values during decision-making for *all* competition levels in order to meet the needs of their members.

Competence values are self-referenced interpretations of achievement (Whitehead & Gonçalves, 2013) and include personal achievement, demonstrating or using skills well, setting one’s own targets, and improving performance. Local girls’ minor hockey associations can fulfill these player Competence value needs through programming initiatives (opportunities for player skills development, increased ice allotment, coaching development), encouraging players to set performance goals for the season (Locke & Latham,

1985; Reinboth & Duda, 2006), encouraging coaches to conduct regular skills testing, and providing feedback and recognition of player improvement (Weiss et al., 2009).

There was high value congruence for Status values between the Board Member and both Rep and HL players. Acceptance of the performance-based environment for Rep teams and common expectations of having a successful season defined in terms of a higher level of skill, with a winning record as a desirable outcome, would account for the high level of Rep Player – Board Member Status values congruence. The higher Status VI ratings for Rep Players and Board Members-Rep reflect the elitism associated with performance-based Rep programs (Stevens, 2006). The lower HL Player and HL Board Member Status VI ratings are consistent with the understood participatory and less competitive nature of house league programs.

Status values are interpersonal and comparative in nature; they include showing that one is better than others (Domination), Winning, Leadership and Public Image. Status –based decisions could be expressed as initiatives such as recognition of achievements and wins (i.e., on the association website or in the newspapers), and unique uniforms and exclusive branded off-ice clothing and gear (such as warm-up suits, hockey bags and equipment). Status values-based decision making can also be applied to policy development. For example, import policies establish limits on the number of non-members who can be rostered on Rep teams (HL teams generally do not allow any import players). Given the higher importance place on Moral values as compared to Status values by the

female hockey players in this study, decisions around an import policy might favour fewer imports by demonstrating fairness, helpfulness and perhaps even contract maintenance by “protecting” current members and placing less emphasis on “winning at all costs” through the use of more highly skilled import players. Status value-based decision making could also be applied during coach selection, by favouring candidates with coaching philosophies that did not endorse a “win at all costs” approach (i.e., wanting to have smaller team roster or advocating shortening the bench during games in order to play only the most skilled players).

The Board Member VI ratings are similar to the stated values of the participating minor hockey associations (obtained from the association mission statements posted on their respective websites). Table 11 presents a summary of the espoused values, which have been combined to maintain the confidentiality of the associations. The heavy emphasis on Moral values is reflective of the higher Board Member Moral VI ratings. The smaller number of Competence values are consistent with the lower Board Member Competence VI ratings (as compared to Moral VI; see Table 9), and support the conclusion of lower Player-Board Member congruence for this value factor. Finally, the paucity of Status-related values in the association mission statements is consistent with the lower importance accorded Status by the Board Members.

Board Members of female minor hockey associations wanting to implement a values-based decision making approach should give greater consideration to the sport values of their members, with emphasis on Competence and Moral values over Status values. The value needs of female athletes

Table 11

Summary of Sport Values from Mission Statements of Participating Minor Hockey Associations

| Moral | Competence | Status | Other |
|---------------------------|-----------------------|------------|-----------|
| Accountability | Athletic commitment | Leadership | Enjoyment |
| Community involvement (2) | Confidence | | Fun (3) |
| Cooperation | Personal achievement | | |
| Discipline | Skill development (3) | | |
| Fair play | | | |
| Honesty | | | |
| Integrity | | | |
| Respect | | | |
| Self-esteem | | | |
| Sportsmanship (3) | | | |
| Team work (3) | | | |
| Trust | | | |
| Work ethic (2) | | | |

Note: Numbers in parenthesis indicate counts where a value was mentioned by more than one association.

can be met through allocation of resources (such as ice time, funding of player and coach development) and promotion of a motivational climate that supports task orientation (Weiss et al., 2009) which focuses on the process rather than the outcome. Such an environment promotes Moral values through development of pro-social behaviour (Gonçalves, Coelho e Silva, Cruz, Torregrosa, & Cummings, 2010; Lee et al., 2008), emphasizes Competence (Cumming et al., 2007; Reinboth & Duda, 2006), and minimizes Status values (Cummings et al., 2007). While grounded in the realm of sport psychology, minor hockey associations can implement these recommendations through sport management practices of programming initiatives and policy development that address the values needs of their female athlete members.

Limitations and Recommendations for Future Research

This research provides insights into the sport value of female hockey Players and Board Members from four minor hockey associations in Ontario. As such, generalization of the results is limited to this sample and the participating associations.

Secondly, the participant responses are self-reported, which in the case of values importance could be influenced by social desirability; in development of the YSVQ-2, Lee et al. (2008) found significant but low correlations between a social desirability index (based on the Personal Reactions Questionnaire) and both moral and status values.

Thirdly, the cross-sectional research design of the current study provides only a snapshot at one point and does not capture social change (Neuman, 1997) nor can it imply causality (Weiss, 2008). Priest et al. (1999) cautioned that age-based differences observed in cross-sectional studies may not be indicative of developmental difference, but rather reflect cohort differences. Cross-sectional studies can only provide insights on relationships and not causal interaction (Weiss, 2008), and thus a longitudinal study would be beneficial for further research into the relationship of temporal factors (player age, length of sport experience) and player values importance.

Fourthly, while the overall player sample size was acceptable ($N = 294$), the association sample sizes were not similar, and ranged from 30 to 138 players; thus comparative analyses at the association level was not possible due to the

varied and, in some cases, small sample sizes. The small sample size of Board Members ($N = 30$) also precluded association level analysis of value congruence.

Finally, there are several limitations related to the statistical analyses. The estimation maximization (EM) technique was used to impute missing values, due to an unresolved issue with using the Multiple Imputation (MI) approach in SPSS. EM-imputed data should not be used for inferential analyses, although it can be analyzed and interpreted with caution if the level of missing variables is low (less than 5%) as was observed in the dataset for this study (Tabachnick & Fidell, 2013). The final, and perhaps most serious, limitation is the controversial treatment of the Likert-type ordinal scale data as interval data, with the assumption of equal intervals. Parametric analyses of Likert-type data is not generally supported, even for the reporting of means and standard deviations [(Blaikie, 2003; Clegg, 1998) as cited by Jamieson (2004)]. However, Allen and Seaman (2007) state that Likert scale data can be analyzed as interval data when sets of Likert items are combined to form indexes and when the combined scales demonstrate internal reliability (i.e., using Cronbach's alpha).

Prior to future research using the YSVQ-2, the face construct of Public Image should be re-evaluated. Some participants in the current study asked the Researcher for clarification of this value statement, suggesting that some interpreted the proxy statement of "looking good" to refer to performance, rather than appearance. It is also possible that, in spite of the wording of the survey proxy item, Board Members responded in terms of the public image or reputation of their minor hockey association.

Consideration should be given to the validity of including the value of health/ fitness in the Competence value factor. Health/ fitness was rated highly by participants in the Watson and Collins (1982) study and by female participants in the MacLean and Hamm (2008) study. A recent study of young adults 16 to 25 years of age observed an increasingly functional relationship with sport/ physical activity, where participation was based on health, fitness and appearance outcomes (Sport England, 2014). While not a sub-item in the YSVQ-2 used in this study, the concept of health and fitness could be considered part of competence, as this value is a self-directed behaviour and not related to any extrinsic reward.

Computerized data collection should be considered for future research. Computerized data collection would allow for easier randomized rotation of the value proxy statements (as compared to paper-based surveys) in order to avoid positional bias (Siminski, 2008). As compared to paper-based testing, computerized data collection improves the internal consistency of higher-order scales (Norman, Sallis & Gaskins, 2005). It would reduce the time for and potential errors associated with manual data entry, and would reduce the number of missing data points by forcing responses (while providing a 'no response' option), thus increasing the validity of the data and potentially increasing the number of participants. The increasing availability of low-cost tablets and smart phones would make it efficient to collect data face-to-face using multiple devices at a central location (i.e., at an arena or other location).

The number of participants in this study was less than anticipated (the target was a minimum of 80 participants per association), and as such, analyses by

association was not possible. Future research with minor sport associations should include strategies for increasing the number of participants, such as eliminating the need for parental consent and conducting data collection at a time when more players/ teams are available. The response rate for younger (teenage) player participants (those 13 - 16 years old) could be increased by omitting the need for parental consent. The most recent Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada & Social Sciences and Humanities Research Council of Canada, 2014) allows for consent to be based on the decision-making ability of the potential participant, rather than chronological age, in the case of studies with minimal risk (where the “probability and magnitude of possible harms implied by participation in the research is no greater than those encountered...in everyday life”) (p. 22). As the YSVQ-2 does not contain any sensitive questions and thus minimal risk, the request to omit parental consent (for Bantam-aged participants and older) would likely receive ethics board approval.

For future research involving participants in organized sport, and minor hockey specifically, it is recommended that data collection occur at the end of the regular season (prior to post-season activity) in order to connect with those players/ teams who have limited post-season play. This timing recommendation also applies to data collection from board members by moving the time of data collection away from the busy end-of-season. It is also recommended that board members be convinced to utilize in-person data collection, using either paper-

based or computerized ballots (on a laptop, for example), or via a link to an internet-based computerized survey (with a unique security code to access the survey).

Future research in the area of congruence of sport values in organized minor hockey and the potential impact on continuous athlete participation would benefit from alternative approaches to measuring organizational values. The current study used board member perceptions of the importance of sport values considered during decision-making for Rep and HL programs. The findings from van Vianen's study of same-source and different-source fit and employee turnover (2007) found that individuals' work values were correlated with perceived work 'team' values, and that individual-team fit (P_i-O_{team} fit) was significantly correlated to turnover intention. These findings could be applied in a minor sport association context (at local, provincial or national levels) by using perceptions of organizational values based on teammates' perceptions of organizational values to determine P_i-O_{team} fit, and hence intention for an athlete to leave an association (or perhaps the sport). Coaches and team staff could provide another perspective on the operating values of the association and increase the validity of the association – player value congruence (van Vianen et al., 2007). Including perceptions of organizational values based on those directly involved with the athletes (teammates, coaching staff) could improve the validity of the measure of value congruence between athletes and minor sport organizations.

For research focused on female hockey, including Intermediate A and AA players would be beneficial in terms of expanding both the level of competition

and the age range. Intermediate teams are theoretically females 18 to 21 years of age; however, this age range is more applicable to Intermediate “A” teams, as Intermediate “AA” teams are now typically primarily elite midget-aged players, and even second-year bantam-aged players (14 to 17 years of age) who may be pursuing positions on Canadian or American university/ college varsity team (along with scholarships, in the case of the latter). Including Intermediate A and AA players would add two new competitive levels to the participant dataset. Expanding the data collection to other associations from different geographical areas, particularly associations with competitive orientation (i.e., that have only representative teams) would provide a richer dataset.

Conclusion

The objective of this study was to determine the sport values of females about their participation in organized hockey, with the goal of providing insights to girls’ minor hockey associations for the development of programs and policies that meet player needs in order to support continued sport participation. Giving a voice to the female members within the adult-managed male-dominated culture of Hockey Canada acknowledges the distinctness of the female game.

The female minor hockey Players rated Moral and Competence values similar and higher than Status values. Values importance decreased slightly with increasing age. Although value importance ratings amongst Rep Players were higher than those for HL, the relative importance of the values, or value structures, were the same for both competitive levels. As competition level increased, the importance of each of the three sport values increased.

The importance of values used in decision-making for both Rep and HL programs, as perceived by Board Members, were less than the importance assigned by Players of the respective programs. There was medium to high value congruence for Moral values between Rep and HL Players (respectively) as compared to Board Members. The lowest levels of value congruence were observed for Competence values, with medium and low congruence observed for Rep and HL Players (respectively) compared to Board Members, suggesting that greater consideration be given to Competence-based decision-making in order to address the gaps. There were high levels of Status value congruence for both Rep and HL Players compared to Board Members. The findings indicate that Competence and Moral values are the most important considerations for girls' minor hockey associations utilizing values-based decision making, but Status values should also be a minor consideration.

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Appendix A: Youth Sport Values Questionnaire-2

Youth Sport Values Questionnaire (YSVQ-2): What is important to me in sport.

Part A: Please rate how important each idea is to you when you play *organized hockey* by putting a mark (with a 'X' or ✓) in the appropriate box.

| | | This idea is the opposite of what I believe (-1) | This idea is not important to me (0) | This idea is slightly important to me (1) | This idea is quite important to me (2) | This idea is Important to me (3) | This idea is very important to me (4) | This idea is extremely important to me (5) |
|----|-------------------------------------|--|--------------------------------------|---|--|----------------------------------|---------------------------------------|--|
| 1 | I do what I'm told | | | | | | | |
| 2 | I show good sportsmanship | | | | | | | |
| 3 | I help people when they need it | | | | | | | |
| 4 | I always play properly | | | | | | | |
| 5 | I try to be fair | | | | | | | |
| 6 | I become a better player | | | | | | | |
| 7 | I use my skills well | | | | | | | |
| 8 | I set my own targets | | | | | | | |
| 9 | I improve my performance | | | | | | | |
| 10 | I show that I am better than others | | | | | | | |
| 11 | I am a leader in the group | | | | | | | |
| 12 | I win or beat others | | | | | | | |
| 13 | I look good | | | | | | | |

Part B: Please complete the following:

| |
|--|
| 1. I was born in Month: _____ Year: _____. |
| 2. My current hockey association is _____. |
| 3. My current team division is (circle one): Bantam Midget Intermediate Senior |
| 4. My current team level is (circle one): House League Local League Rep: AA A BB B C |
| 5. Have you <i>ever</i> received <i>individual</i> recognition (such as being captain; assistant captain; MVP for team/ tournament/ game; most improved; or most sportsmanlike) in hockey or any other team sport (circle one): Yes No |
| 6. Last year I played hockey for (association + division + level): _____ |
| 7. I have been playing organized hockey for _____ years. |
| 8. <i>In addition to</i> hockey, I participated in the following organized sports in the past year: _____ |
| 9. My mother participates in organized sport or organized physical activity (circle one). Yes No N/A |
| 10. My father participates in organized sport or organized physical activity (circle one). Yes No N/A |
| 11. At least one of my siblings participates in organized sport or organized physical activity (circle one). Yes No N/A |

Thank you for your time and honest responses!

Appendix B: Board Member YSVQ-2

Youth Sport Values Questionnaire (YSVQ-2) for Board Members of Girls Hockey Associations: What is important in sport?

Part A. Please complete the following.

Association: _____ Gender (circle): Female Male Age: _____

Current Board Position: _____ Time in current Board position: _____ years _____ months

Other current volunteer roles in the association (i.e., coach, trainer, etc.): _____

Previous board positions and length of service (years) in current association _____

Previous board positions and length of service (years) in other girls or boys hockey association(s); please list association, position and number of years in the position(s).

Children currently involved in girls hockey: Please list the level and division of any daughters currently involved in the association (e.g., one in Atom house league, one in Bantam A rep, etc.). _____

Please turn over and complete the other side. Thank you!

Please answer the two sections below based upon the values that guide the operations of the REPRESENTATIVE (Travel) and HOUSE LEAGUE (or Local League) programs of your hockey association, respectively. *Do not respond based upon your own personal values.*

Part B: Rate how important each idea is to the operation of the Representative program in your hockey association by putting a mark (a 'X' or ✓) in the appropriate box.

| | | This idea is the opposite of what the Board believes (-1) | This idea is not important to the Board (0) | This idea is slightly important to the Board (1) | This idea is quite important to the Board (2) | This idea is important to the Board (3) | This idea is very important to the Board (4) | This idea is extremely important to the Board (5) |
|----|---|---|---|--|---|---|--|---|
| 1 | Players do what they are told | | | | | | | |
| 2 | Players show good sportsmanship | | | | | | | |
| 3 | Players help people when they need it | | | | | | | |
| 4 | Players always play properly | | | | | | | |
| 5 | Players try to be fair | | | | | | | |
| 6 | Players become better players | | | | | | | |
| 7 | Players use their skills well | | | | | | | |
| 8 | Players set their own targets | | | | | | | |
| 9 | Players improve their performance | | | | | | | |
| 10 | Players show that they are better than others | | | | | | | |
| 11 | Players are leaders in the group | | | | | | | |
| 12 | Players win or beat others | | | | | | | |
| 13 | Players look good | | | | | | | |

Part C: Rate how important each idea is to the operation of the House or Local League program in your hockey association by putting a mark (a 'X' or ✓) in the appropriate box.

| | | This idea is the opposite of what the Board believes (-1) | This idea is not important to the Board (0) | This idea is slightly important to the Board (1) | This idea is quite important to the Board (2) | This idea is important to the Board (3) | This idea is very important to the Board (4) | This idea is extremely important to the Board (5) |
|----|---|---|---|--|---|---|--|---|
| 1 | Players do what they are told | | | | | | | |
| 2 | Players show good sportsmanship | | | | | | | |
| 3 | Players help people when they need it | | | | | | | |
| 4 | Players always play properly | | | | | | | |
| 5 | Players try to be fair | | | | | | | |
| 6 | Players become better players | | | | | | | |
| 7 | Players use their skills well | | | | | | | |
| 8 | Players set their own targets | | | | | | | |
| 9 | Players improve their performance | | | | | | | |
| 10 | Players show that they are better than others | | | | | | | |
| 11 | Players are leaders in the group | | | | | | | |
| 12 | Players win or beat others | | | | | | | |
| 13 | Players look good | | | | | | | |

Appendix C: Association Request Letter

Department of Sport Management
Faculty of Applied Health Sciences



[Minor Hockey Association Name]

Attention: [President]

c.c.: [Vice President]

[Date]

Dear [President]:

This letter is a request for the [Association Name]'s assistance with a project I am conducting as part of my Master's degree in the Department of Sport Management at Brock University, St. Catharines, Ontario, under the supervision of Dr. Julie Stevens. The title of my research project is "Values of Female Youth in Organized Hockey". I would like to provide you with more information about this project that explores the personal values of female youth hockey players around their participation in organized hockey. Within traditional youth minor hockey, organizational values are typically 'adult-imposed' by those who organize and manage the service group, such as the national, provincial and local hockey associations. In a majority, if not all instances, there exists little or no input from the athlete user group.

The purpose of this study is to examine adolescent female hockey players, and the values they place upon their participation in organized hockey. Knowledge and information generated from this study will offer insight regarding the congruence/incongruence between the values of female youth who play the game and how the game is managed, and may better inform female hockey organizations of sport management strategies to generate more effective programs which reflect athlete values.

It is my hope to connect with Bantam, Midget and Intermediate players who are participating in [Association Name] programs to invite them to participate in this research project. I believe that GGHA players can provide valuable input related to their personal values around playing organized hockey within an independent female hockey association. During the course of this study, I will be administering a short survey (no more than 10 minutes) with players to obtain a measure of each player's personal values. At the end of this study the publication of this thesis will share the knowledge from this study with other hockey associations, other sport organizations, community recreation leaders, as well as the broader research community.

To respect the privacy and rights of the [Association Name] and its participants, I will not be initiating contact with the players or parents directly. I intend to provide the [Association Name] with information, a parental consent form, and a participant informed consent form, to be distributed by the [Association Name], ideally via email from the Registrar; alternatively, this information could be distributed by team managers or coaches. Contact information for me and my advisor will be contained in the information packages.

Participation of any player is completely voluntary. Each player will make her own independent decision as to whether or not she would like to be involved. All participants will be informed and reminded of their rights to participate before any data collection. Parents will receive an information letter including detailed information about this study, as well as a Parent Consent Form for players under the age of 18 years old. Participants will receive a Participant Informed Consent Form. Data collection will take place at before or after a practice or game, or at a mutually agreed upon time and location.

In order to protect the identity of participants, personal identifiers will not be collected and all data will be anonymous. Participants will only be described by playing level (e.g., Midget BB or Bantam house league) and type of organization (independent girls association or integrated association).

The identity of the organization will remain confidential, and a pseudonym will be given to the organization. All surveys collected will be retained locked in a secure cabinet in my office. All surveys will be confidentially destroyed after three years. Further, all electronic data will be stored in password-protected files on a CD with no personal identifiers, and destroyed after five years. Finally, only my advisor, Dr. Julie Stevens (Department of Sport Management, Brock University), and I will have access to these materials. There are no known or anticipated risks to participants in this study.

I would like to assure you that this study is being reviewed by the Research Ethics Office, Brock University, and this project will not be initiated until ethics clearance is received. However, the final decision about participation belongs to the players and their parents. If you have any comments or concerns with this study, please feel free to contact the Research Ethics Office at (905)688-5550 ext. 3035 or by email at reb@brocku.ca.

If you have any questions regarding this study or would like additional information to assist you in reaching a decision about participation, please contact me by email at sp11pm@brocku.ca or c/o (905)688-5550 ext. 4668. You may also contact my supervisor, Dr. Julie Stevens at (905)688-5550 ext. 4668 or by email at jstevens@brocku.ca.

I hope that the results of my study will be beneficial to the [Association Name] executive and members, and to other female hockey organizations, as well as the broader research community. I very much look forward to speaking with you and thank you in advance for your assistance with this project.

Yours sincerely,

Sandra Pitts
Masters Student
Department of Sport Management, Brock University
[*sp11pm@brocku.ca*](mailto:sp11pm@brocku.ca)

Dr. Julie Stevens
Associate Professor
Department of Sport Management, Brock University
[*jstevens@brocku.ca*](mailto:jstevens@brocku.ca)

Association Permission Form

Project Title: Values of Female Youth in Organized Hockey

We have read the information presented in the information letter about a study being conducted by Sandra Pitts of the Department of Sport Management at Brock University, St. Catharines, Ontario, under the supervision of Dr. Julie Stevens at Brock University. We have had the opportunity to ask any questions related to this study, to receive satisfactory answers to our questions, and any additional details we wanted.

We are aware that the name of our organization will not be used in the thesis or any publications that comes from the research with our permission.

We were informed that our organization may withdraw our assistance for contacting potential participants for the project at any time. We were informed that players may choose not to participate without penalty. Ultimately, the decision to participate in the project is with the player and their parent.

We have been informed this project is being reviewed by the Research Ethics Office at Brock University, and this project will not be initiated until ethics clearance is received. Questions we have about the study may be directed to Sandra Pitts at *sp11pm@brocku.ca* or c/o (905) 688-5550 ext. 4668, or Dr. Julie Stevens at (905) 688-5550 ext. 4668 or by email at *jstevens.@brocku.ca*.

We were informed that if we have any comments or concerns with in this study, we may also contact the Research Ethics Office at (905) 688-5550 ext. 3035 or *reb@brocku.ca*.

Sandra Pitts
Masters Student
Department of Sport Management
Brock University

Dr. Julie Stevens
Associate Professor
Department of Sport Management
Brock University

We agree to help the researchers recruit participants for this study from among the families who are users of the program and services of the [Association Name].

YES NO

Board of Directors Representative Name: _____
(please print)

Board of Directors Representative Signature: _____

Date: _____

Appendix D: Player Letter of Invitation

Department of Sport Management
Brock University
St. Catharines, Ontario

[Date]

Dear [Association Name] Player and Parent:

This letter is an invitation to consider you/ your daughter participating in a study I am conducting as part of my Master's degree in the Department of Sport Management at Brock University under the supervision of Dr. Julie Stevens, Associate Professor, Department of Sport Management. I would like to provide you with more information about this project that explores the personal values of female youth in organized hockey, and what your/ your daughter's involvement would entail, should you/ she decide to take part.

First, I would like to thank-you for your interest and consideration of participating in this study. The aim of this study is to better understand the personal values of female youth around their participation in organized hockey. In particular, I will be surveying Bantam, Midget, Intermediate and Senior players on representative and house league teams.

Participation in this study is completely voluntary, and participation is not required. Each player should make her own independent decision as to whether or not she would like to be involved. You/ your daughter can withdraw at any time during the survey, without penalty. The decision to participate or not in the study will in no way affect your/ your daughter's participation in playing hockey.

Further, as this study involves minors (those less than 16 years old), only those with parental permission and minors who themselves agree to participate (in addition to their parent's permission) will be included in the study.

If a player does choose to be involved, you/ she will complete a survey of about 30 questions that should take no more than 10 minutes. The survey may be completed at home and returned to the researcher on a specified date, or it may be completed before or after a practice or game in the near future, or at another mutually agreeable place and time.

All information collected will be anonymous, and considered completely confidential except as required under law to report. You/ your daughter, nor your/ her individual responses, will not be identified in any way. You/ your daughter's name will not appear in any thesis, report or presentation resulting from this study. All surveys collected

during this study will be retained in a locked cabinet and will be confidentially destroyed after three years. Further, all password-protected electronic data files will be stored on a CD for five years and then destroyed. Finally, only my supervisor and I will have access to all materials. There are no known or anticipated risks to participation in this study.

As a small token of appreciation, participants may have their name entered into a draw for a gift certificate (\$50 value) for a local shopping mall. Please indicate on the consent form if you wish to have you/ your daughter's name entered into the appreciation draw.

I would like to assure you that this study has been reviewed and has received ethics clearance through the Research Ethics Office, Brock University (REB File #11-217). However, the final decision about participation is yours. If you have any comments or concerns resulting from your/ your daughter's participation in this study, please feel free to contact the Research Ethics Office at (905) 688-5550 ext. 3035 or by email at reb@brocku.ca.

If you have any questions regarding this study, or would like additional information to assist in reaching a decision about your/ your daughter's participation, please contact me by email at sp11pm@brocku.ca or c/o (905) 688-5550 ext. 4668. You may also contact my supervisor, Dr. Julie Stevens, at (905) 688-5550 ext. 4668 or by email at jstevens@brocku.ca.

Results of this study may be published in academic and professional journals, and presented at conferences. Results from will be available in December 2013. If you are interested in receiving the results of this study then please indicate this on the consent form, or contact Sandra Pitts by email at sp11pm@brocku.ca or c/o (905) 688-5550 ext. 4668.

I hope that the results of my study will be of benefit to female youths involved in organized hockey directly involved in the study, other families whose children participate in organized sport programs, as well as to the broader research community. I thank you in advance for your assistance in this project.

If you/ your daughter are under the age of 16 then please discuss the information in this Letter of Invitation with your parent/ daughter. Players under the age of 16 years must bring the completed Parent Consent / Participant Assent Form in order to participate in the survey.

Yours sincerely,

Sandra Pitts

Masters Student

Appendix E: Participant Assent / Parent Consent Form

Project Title: Values of Female Youth in Organized Hockey

Principal Student Investigator: Sandra Pitts, Masters Student
Department of Sport Management, Brock University
c/o (905) 668-5550 ext. 4668 *sp11pm@brocku.ca*

Faculty Supervisor: Dr. Julie Stevens, Associate Professor
Department Sport Management, Brock University
(905) 668-5550 ext. 4668 *jstevens@brocku.ca*

INVITATION

You are invited to participate in a research study of teenage female hockey players, and their values around playing organized hockey.

WHAT'S INVOLVED

As a participant, you will be asked to complete a survey of approximately 30 questions. Participation will take approximately 10 minutes of your time.

POTENTIAL BENEFITS AND RISKS

The research should benefit female hockey players and associations by sharing information with hockey organizations about sport management strategies that may result in more effective female hockey programs which reflect player values. There are no known or anticipated risks associated with participating in this study.

CONFIDENTIALITY

All information you provide is anonymous and will be considered confidential; your name will not be associated with the information collected in the survey. You will not be identified individually, nor will your individual responses be included in any written reports of this research.

The surveys collected during this study will be securely stored and will be destroyed after three years. All electronic files will be stored for five years and then destroyed. Only Sandra Pitts and Dr. Julie Stevens will have access to the data.

VOLUNTARY PARTICIPATION

Participation in this study is voluntary; you do not have to participate at all. You can withdraw at any time, without penalty. You do not have to answer all the questions. Your decision to participate or not will in no way affect your participation in playing hockey.

If you participate in this study, you can choose to have your name entered in an appreciation draw for a \$50 gift certificate for a local shopping mall.

PUBLICATION OF RESULTS

Results of this study may be published in professional journals and/ or presented at conferences. The results will be available in December 2013. If you are interested in receiving the results of this study, then please contact Sandra Pitts by email at sp11pm@brocku.ca or c/o (905) 688-5550 Ext. 4668.

CONTACT INFORMATION AND ETHICS CLEARANCE

If you have any questions about this study or require further information, please contact Sandra Pitts or Dr. Julie Stevens using the contact information provided above. This study has been reviewed and received ethics clearance through the Research Ethics Board at Brock University (REB File # 11-217). If you have any comments or concerns about your rights as a research participant, please contact the Research Ethics Office at (905) 688-5550 Ext. 3035, or by email at reb@brocku.ca.

Thank you for your assistance in this project. Please keep a copy of this form for your records.

PARTICIPANT INFORMED CONSENT / ASSENT

I agree to participate in this study described above. I have made this decision based on the information I read in the invitation letter about a study being conducted by Sandra Pitts of the Department of Sport Management at Brock University, under the supervision of Dr. Julie Stevens. I have had the opportunity to receive any additional details I wanted about the study and understand that I may ask questions in the future. . I acknowledge that all information gathered on this project will be used for research purposes only and will be considered confidential.

Participant Name (*please print*):

Participant Signature:

Date: _____

- Please enter my name into the appreciation draw for a \$50 gift certificate at a local shopping mall.

PARENTAL CONSENT for a MINOR (under the age of 16 years)

I have read the information presented in the Invitation Letter and discussed it with my daughter. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted. I am aware that my daughter will participate in the study if she agrees to participate and I agree to her participation. I acknowledge that all information gathered on this project will be used for research purposes only and will be considered confidential.

Parent (or Guardian) Name (please print):

Parent (or Guardian) Signature:

Date: _____

- Please enter my daughter's name into the appreciation draw for a \$50 gift certificate at a local shopping mall (*required if under 16 years*).

-
- I am interested in receiving a summary of the research results.

Parent's email (if you are under 16)

Your email (if 16 or older)

(Email addresses will not be used for any other purposes).

Appendix F: Board Member Letter of Invitation

Department of Sport Management
Brock University
St. Catharines, Ontario

[Date]

Dear [Association Name] Board Member:

This letter is an invitation for you to consider participating in a study I am conducting as part of my Master's degree in the Department of Sport Management at Brock University under the supervision of Dr. Julie Stevens, Associate Professor, Department of Sport Management. I would like to provide you with more information about this project that explores the personal values of female youth in organized hockey, and what your involvement would entail, should you she decide to take part.

First, I would like to thank-you for your interest and consideration of participating in this study. The aim of this study is to better understand the personal values of female youth around their participation in organized hockey. In particular, I will be surveying Bantam, Midget, and Intermediate players on representative and house league teams.

Participation in this study is completely voluntary, and participation is not required. Each person should make his/her own independent decision as to whether or not he/ she would like to be involved. You can withdraw at any time during the survey, without penalty. The decision to participate or not in the study will in no way affect your participation in Board matters.

If you choose to be involved, you will complete a survey of about 25 questions that should take no more than 10 minutes. The completed survey will be returned to the Researcher at an upcoming Board Meeting or at another mutually agreeable place and time.

All information collected will be kept in confidence, and considered completely confidential except as required under law to report. Although not anonymous, neither you nor your individual responses will be identified in any way. Your name will not appear in any thesis, report or presentation resulting from this study. All surveys collected during this study will be retained in a locked cabinet and will be confidentially destroyed after three years. Further, all password-protected electronic data files will be stored on a CD for five years and then destroyed. Finally, only my supervisor and I will

have access to all materials. There are no known or anticipated risks to participation in this study.

I would like to assure you that this study has been reviewed and has received ethics clearance through the Research Ethics Office, Brock University (REB File #11-217). However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please feel free to contact the Research Ethics Office at (905) 688-5550 ext. 3035 or by email at reb@brocku.ca.

If you have any questions regarding this study, or would like additional information to assist in reaching a decision about your participation, please contact me by email at sp11pm@brocku.ca or c/o (905) 688-5550 ext. 4668. You may also contact my supervisor, Dr. Julie Stevens, at (905) 688-5550 ext. 4668 or by email at jstevens@brocku.ca.

Results of this study may be published in academic and professional journals, and presented at conferences. Results from will be available in December 2014. If you are interested in receiving the results of this study then please indicate this on the consent form, or contact Sandra Pitts by email at sp11pm@brocku.ca or c/o (905) 688-5550 ext. 4668.

I hope that the results of my study will be of benefit to female youths involved in organized hockey directly involved in the study, other families whose children participate in organized sport programs, as well as to the broader research community. I thank you in advance for your assistance in this project.

Yours sincerely,

Sandra Pitts

Masters Student

Appendix G: Board Member Consent Form

Project Title: Values of Female Youth in Organized Hockey

Principal Student Investigator: Sandra Pitts, Masters Student
Department of Sport Management, Brock University
c/o (905) 668-5550 ext. 4668 *sp11pm@brocku.ca*

Faculty Supervisor: Dr. Julie Stevens, Associate Professor
Department Sport Management, Brock University
(905) 668-5550 ext. 4668 *jstevens@brocku.ca*

INVITATION

You are invited to participate in a research study of teenage female hockey players, and their values around playing organized hockey.

WHAT'S INVOLVED

As a participant, you will be asked to complete a survey of approximately 25 questions. Participation will take approximately 10 minutes of your time.

POTENTIAL BENEFITS AND RISKS

The research should benefit female hockey players and associations by sharing information with hockey organizations about sport management strategies that may result in more effective female hockey programs which reflect player values. There are no known or anticipated risks associated with participating in this study.

CONFIDENTIALITY

Although not anonymous, all information you provide will be kept in confidence and your name will not be associated with the information collected in the survey. You will not be identified individually, nor will your individual responses be included in any written reports of this research.

The surveys collected during this study will be securely stored and will be destroyed after three years. All electronic files will be stored for five years and then destroyed. Only Sandra Pitts and Dr. Julie Stevens will have access to the data.

VOLUNTARY PARTICIPATION

Participation in this study is voluntary; you do not have to participate at all. You can withdraw at any time, without penalty. You do not have to answer all the questions.

PUBLICATION OF RESULTS

Results of this study may be published in professional journals and/ or presented at conferences. The results will be available in December 2014. If you are interested in

receiving the results of this study, then please contact Sandra Pitts by email at sp11pm@brocku.ca or c/o (905) 688-5550 Ext. 4668.

CONTACT INFORMATION AND ETHICS CLEARANCE

If you have any questions about this study or require further information, please contact Sandra Pitts or Dr. Julie Stevens using the contact information provided above. This study has been reviewed and received ethics clearance through the Research Ethics Board at Brock University (REB File # 11-217). If you have any comments or concerns about your rights as a research participant, please contact the Research Ethics Office at (905) 688-5550 Ext. 3035, or by email at reb@brocku.ca.

Thank you for your assistance in this project. Please keep a copy of this form for your records.

PARTICIPANT INFORMED CONSENT

I agree to participate in this study described above. I have made this decision based on the information I read in the invitation letter about a study being conducted by Sandra Pitts of the Department of Sport Management at Brock University, under the supervision of Dr. Julie Stevens. I have had the opportunity to receive any additional details I wanted about the study and understand that I may ask questions in the future. I acknowledge that all information gathered on this project will be used for research purposes only and will be considered confidential.

Participant Name (*please print*):

Participant Signature:

Date: _____

I am interested in receiving a summary of the research results.

Email _____

(Email addresses will not be used for any other purposes).