

**THE EFFECT OF PSYCHOLOGICAL COLLECTIVISM
ON INDIVIDUAL YOUTH SPORT ATHLETES**

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ABSTRACT

The primary purpose of the current study was to determine whether values for psychological collectivism could predict enjoyment and intentions to return in individual youth sport athletes. In addition, structural interdependence and age were used as moderator variables for the proposed relationships. A total of 142 youth (*Age* = 14.44 years; *SD* = 1.63) completed questionnaires at two data-collection periods (T1 – psychological collectivism, T2 – enjoyment, intentions to return). The results indicated that psychological collectivism positively predicted both enjoyment and intentions to return. Also, task interdependence significantly moderated the relationship between psychological collectivism and enjoyment ($b = .14, t_{(137)} = -1.90, p = .06$) and intentions to return ($b = -.17, t_{(137)} = -2.07, p = .04$). Results also revealed that age significantly moderated the relationship between psychological collectivism and intentions to return ($b = .05, t_{(138)} = 2.04, p = .04$). These results will be discussed in terms of their theoretical and practical implications.

Keywords: individual sport, moderation, social environment, collectivist

PREFACE

This thesis is presented in an integrated article format, meaning that the structure of the document involves an introductory section (i.e., Chapter 1), a stand-alone manuscript that has been submitted for publication (i.e., Chapter 2), and finally, a general discussion section (i.e., Chapter 3). Due to the nature of this format, I would like to highlight that repetition and overlap were inevitable at times. Although the research and writing presented within this document is my original work, several contributors should be acknowledged. First, I would like to acknowledge the contributions of Dr. M. Blair Evans (Assistant Professor, Penn-State University) who is a co-author of the submitted manuscript (i.e., Chapter 2). Dr. Evans provided guidance for the analytic process and greatly contributed to the preparation of the manuscript for publication. Secondly, I would like to acknowledge the contributions of my supervisor, Dr. Luc Martin, for his help throughout the conceptual development of this project, and for his feedback on data analysis and writing—Dr. Martin is also a co-author on the submitted manuscript.

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ABBREVIATIONS

BPNT	Basic Psychological Needs Theory
BT	Belongingness Theory
MVPA	Moderate to Vigorous Physical Activity
PCQ	Psychological Collectivism Questionnaire
SDT	Self-Determination Theory
SIT	Social Identity Theory

CHAPTER 1

INTRODUCTION

There is extensive support for sport as an ideal environment for the promotion of health and wellbeing in younger populations (e.g., Holt, 2008). Youth sport provides participants with opportunities to develop positive lifestyle habits, including regular physical activity and healthy nutrition (e.g., Janssen & LeBlanc, 2010; Tremblay et al., 2011). In particular, physical activity is essential for optimal maturation as it facilitates proper growth and development (Sallis, Prochaska, & Taylor, 2000). Although improvements in cardiovascular fitness and weight control are among the obvious health benefits (e.g., Colley et al., 2011), improved muscular strength and endurance, flexibility, and bone structure, as well as proper skill development are all additional benefits associated with regular physical activity (Côté & Hay, 2002). Conversely, being physically inactive is associated with a variety of chronic diseases such as cardiovascular disease, diabetes mellitus, cancer, and obesity (Warburton, Nicol & Bredin, 2006). Not surprisingly, active youth are less likely to develop such diseases later in life (Health Canada, 2003), in part, because activity habits developed during adolescence are associated with sustained lifestyle choices into adulthood (e.g., Robertson-Wilson, Baker, Derbyshire, & Côté, 2003). As such, the relative benefits of living an active lifestyle are well understood, and although inactivity is certainly related to negative health outcomes, physical inactivity is considered to be a modifiable risk factor (e.g., Warburton et al., 2006). To use Xiaobei Chen's (2003) gardening metaphor, childhood through adolescence is a strategic time in life, where like a tender plant, behaviour patterns can be more easily and permanently influenced.

The Canadian Society for Exercise Physiology (2011) recommends that youth aged 12-17 years accumulate a minimum of 60 minutes of moderate to vigorous physical activity (MVPA) daily. Unfortunately, Canadian youth (ages 5-17) are falling short of this recommendation, with only 7% meeting these guidelines (Colley et al., 2011). This is perhaps not surprising, considering that Canadian children and youth are spending an average of 8.6 hours per day (62% of their waking hours) engaged in sedentary pursuits (e.g., watching television, playing video games) (Tremblay et al., 2011). In understanding these problematic trends, Wickel and Eisenmann (2007) investigated the contribution of organized youth sport to the total daily physical activity obtained by youth. On average, sport contributed to 23% of the total minutes of daily MVPA. As such, youth sport is a viable outlet for obtaining recommended levels of physical activity.

Along with fostering healthy lifestyle habits, youth sport participation has the potential to foster enhanced physical, social, psychological, and intellectual development (e.g., Côté & Fraser-Thomas, 2011; Sawka, McCormack, Nettel-Aguirre, Hawe, & Doyle-Baker, 2013). In comparison to non-sport participants, youth who engage in organized sport programs report greater affective responses during 10th and 12th grades, and have higher academic performances and more years of tertiary education by age 25 (Barber, Eccles, & Stone, 2001; Eccles, Barber, Stone, & Hunt, 2003). In addition, youth sport participation is associated with greater life-satisfaction, subjective wellbeing, and happiness (e.g., Fraser-Thomas, Côté, & Deakin, 2005). Finally, research also highlights additional benefits such as increased citizenship behaviour, social success, positive peer relationships, and leadership skills (e.g., Elley & Kirk, 2002; Wright & Côté, 2003).

Interestingly, despite the opportunity for the acquisition of such competencies, assets, values, and life skills, maintaining youth sport involvement has become a current

societal problem (e.g., Clark, 2008; Downward, Lera-Lopez, & Rasciute, 2014).

Decreased sport participation in Canada is observed across all age groups, including the transition between childhood and adolescence (Canadian Heritage, 2013). In 2010, participation rates in organized sport decreased from 75% (ages 5 to 14) to 54% (ages 15-19) during this age transition (Canadian Heritage, 2013). Current research also speculates that 30% of youth who are currently involved in organized sport will dropout of at least one sporting club annually (e.g., Boiche & Sarrazin, 2009; Delmore, Chalabaev, & Raspaud, 2011).

In discussing these current trends, it is important to acknowledge that sport participation peaks between the ages of 10 and 13 years, and subsequently declines with age (Ewing & Seefeldt, 1989; Canadian Heritage, 2013). The Developmental Model of Sport Participation (e.g., Côté, Baker, & Abernethy, 2003; Côté & Fraser-Thomas, 2011) provides structure to better understand the involvement of children and youth in sport. Namely, these authors have advanced three stages of sport development: sampling (ages 6-12), specializing (ages 13-15), and investment (ages >16) years. These developmental transitions are accompanied by a variety of changes including (a) decreased availability of sport activities, (b) less deliberate play (largely replaced with deliberate practice), and (c) shifts in roles exhibited by coaches (e.g., from helper to specialist), parents (e.g., from direct to indirect involvement), and peers (e.g., from co-participation to fulfillment of individual needs; Côté et al., 2003). During the specializing years, youth are faced with the decision to compete recreationally, pursue a more competitive stream, or retire from sport (Côté, 1999). In light of these important choices, it is perhaps not surprising that in 2010, only 26% of Canadians over the age of 15 participated in organized sport (Canadian Heritage, 2013). As this percentage reveals declining participation over recent

decades, the adolescent population is an important age range to target in terms of understanding participation and commitment motives (e.g., Wall & Côté, 2007).

Defining Sporting Groups

Groups are an integral component of the sport experience (e.g., Spink, 2016). To be clear, approximately 96% of Canadians who participate in sport do so in groups (Canadian Fitness and Lifestyle Research Institute, 2007). When discussing sporting groups, it is important to recognize that a group is more than simply a collection of individuals (e.g., Forsyth, 2010). For example, whereas individuals waiting for a bus are close in proximity, appear to have the same objectives, and may resemble a group, they are not bound together by any social mechanisms. A group consists of two or more individuals that define themselves as members of a group, have developed structured relationships, and are connected in terms of their pursuit of individual and group-level outcomes—outcomes contingent on the efforts of all group members (e.g., Carron, Hausenblas, & Eys, 2005). As a more thorough distinction between a collection of individuals and a group, Carron and Eys (2012) compiled information from previous group definitions to highlight five prerequisites for group classification. These are, common fate (i.e., an event that influences one individual will influence others in the group; e.g., Fiedler, 1967), mutual benefit (i.e., the existence of the group is beneficial for individual members; e.g., Bass, 1960), social structure (i.e., members of the group have a shared understanding of roles or norms; e.g., Newcomb, 1951), quality interactions (i.e., the presence of sustained and meaningful interactions between members; e.g., Hare, 1976), and self-categorization (i.e., members of the group must consider themselves to be a group; e.g., Turner, 1982). These classification criteria are useful in determining the existence of a group; however, within sport, variations within group designations exist,

and these are largely informed by task interdependence—team sport (e.g., hockey, soccer, basketball) and individual sport (e.g., figure skating, gymnastics, cross-country skiing). Team sport requires constant interaction between teammates in both training and competition, with performance being heavily influenced by interpersonal connections (Evans, Eys, & Bruner, 2012). In contrast, individual sport is comprised of a group of athletes who train together and may contribute to total team performance, but often compete individually and/or in opposition to teammates (Evans et al., 2012).

Unfortunately, group research has largely overlooked the individual (i.e., independent) sport environment in favour of team (i.e., interdependent) sport, perhaps due to inferences from seminal sport psychology work. An inherent assumption was that group influences were more salient when team members interacted during competition (e.g., task interdependence), and as such, were keenly assessed in team sport (e.g., Carron & Chelladurai, 1981). Consequently, with individual sport, less frequent interactions during competition were believed to create fewer opportunities to directly influence performance, and also, that any increase in cohesion could decrease productive rivalries (e.g., Carron & Chelladurai, 1981; Landers & Lueschen, 1974). These assumptions are implicitly evident by the lack of research investigating the presence of group properties within individual sport environments.

Upon reflection, individual sport performance is rarely an individual effort. These athletes spend numerous hours with teammates in training and competition, and certainly form rich interpersonal relationships (e.g., Evans, Eys, & Wolf, 2013). The use of team scores, training environments that are facilitated/enhanced by the presence of teammates, and the identification or emergence of team structure (e.g., norms, roles), support the fact that individual sport provides opportunities for athletes' to rely on one another in a group

setting. In fact, elite individual sport athletes concede that teammates are a primary source of motivation, social facilitation, social comparison, and teamwork (Evans et al., 2013). Considering that five of the ten most participated sports among youth in Canada are classified as individual sport (e.g., swimming, gymnastics, karate, figure skating, and downhill skiing; Canadian Heritage, 2013), a better understanding of the social environment within this population is certainly warranted.

The traditional dichotomous categorization of sport (i.e., team vs. individual) based on task interdependence implies that all individual sport environments are comparable; however, this is not the case (Evans et al., 2012). For example, although track and field is typically perceived as an individual sport, athletes competing in the 4×4 100meter relay may consider themselves to be a team due to the interdependent nature of their event, compared to that of a 100meter sprinter (who does not rely on teammate interdependence when competing). Interdependence is generally described as the degree to which group members rely on one another and require reciprocal interaction (e.g., Johnson & Johnson, 2005). Not surprisingly, interdependence has often been used as a key requirement for connecting members in many seminal ‘group’ definitions (e.g., Lewin, 1951). In acknowledging this salience, and misinterpretation, researchers have proposed a typology that distinguishes types of team environments according to levels of structural interdependence (Evans et al., 2012). Within this typology, Evans et al. (2012) identify three sources of interdependence that may emerge depending on the structure of competition: task interdependence (e.g., whether teammates must interact during the competitive task), group outcome interdependence (e.g., whether group-level outcomes are applicable during competition), and individual outcome interdependence (e.g., whether group members directly compete against one another during competition).

Recent investigations assessing the influence of structural interdependence in youth sport have demonstrated that the degree to which team members interact and rely on each other influences developmental experiences and individual cognitions (e.g., Bruner, Eys, Evans, & Wilson, 2015; Bruner, Hall, & Côté, 2011). In terms of developmental experiences, Bruner and colleagues (2011) investigated the influence of athlete perceptions of outcome and task interdependence in adolescent (aged 14-17) basketball and cross-country athletes. Although basketball athletes reported stronger perceptions of task interdependence, perceptions of outcome interdependence were similar for both sport types. More importantly, regardless of sport type (i.e., team, individual) perceptions of outcome interdependence were positively associated with several important developmental experiences (e.g., emotional regulation, positive relationships, social skills, etc.).

More recently, Bruner et al. (2015) further investigated whether task and outcome interdependence could predict the extent to which youth athletes identified with their teams. Interestingly, athletes who perceived higher outcome interdependence reported stronger social identity in terms of in-group ties, cognitive centrality, and in-group affect (the three dimensions comprising social identity). These results highlight the potential affect of outcome interdependence on youth athlete experiences and cognitions. In addition, Bruner et al. (2011) stated, “the developmental experiences youth garner may be more strongly influenced by how the people involved interact (outcome interdependence) than by the type of sport” (p. 131).

In summary, a common perception in sport has been the lack of social interaction in individual sport settings; however, the recent typology (e.g., Evans et al., 2012) identifies the varying levels of interdependence, and provides an opportunity for

continued investigation in terms of the influence of member interactions on participant experiences. An interesting extension would be to determine the implications of individual desires for interdependence in relation to youth athlete experiences. Put simply, perhaps outcome interdependence is only favourable for those athletes who desire such collective orientations.

Youth Sport Participation Motives

Prior to discussing the potential influence of collective orientations in youth sport, an introduction to general participant motives is warranted. Specifically, as we experience deteriorating levels of physical activity generally (e.g., Colley et al., 2011), and sport involvement more specifically (e.g., Canadian Heritage, 2013), establishing a clear understanding of participant motives becomes paramount. The introduction of motivational theories such as the competence motivation theory (Harter, 1982) and achievement goal theory (Duda & Nicholls, 1992) has greatly increased our understanding of the psychological processes involved in sustained sport participation. Generally, these theories emphasize the desire to develop and demonstrate physical competence as the primary motivational element (e.g., Allen, 2003). While this is certainly the case, and has been supported extensively in the literature, Weiss and Williams (2004) suggest that in addition to demonstrating physical competence/adequacy (e.g., improve skills, achieve goals), youth also participate in sport to experience enjoyment (e.g., energy release, excitement), and to obtain social acceptance (e.g., make new friends, belong to a team).

In relation to sport enjoyment, this experience has consistently been associated with continued sport involvement, (e.g., Scanlan, Simons, Carpenter, Schmidt, & Keeler, 1993; Scanlan, Stein, & Ravizza, 1989; Weiss, Kimmel, & Smith, 2001), and is one of

the most cited predictors for sport participation (Ewing & Seefeldt, 1989). In addition, Côté and Hay (2002) identify enjoyment as a crucial predictor for positive youth development, especially during the specializing and sampling years. To explain why youth commit to sport, Scanlan and colleagues (Scanlan et al, 1989, 1993) developed the sport commitment model, identifying four variables positively associated with commitment—enjoyment, personal investment, social constraints, and involvement opportunities. Based on their findings, enjoyment was identified as the most important component linked to youth’s commitment to sport. Considering the importance of enjoyment for commitment motives, it is interesting to note that enjoyment is positively influenced by social factors (e.g., social recognition, friendship development, quality interactions; e.g., Scanlan et al., 1989; Weiss & Smith, 2002). As such, it is not surprising that making new friends, being part of a team, and gaining social status have all been reported as significant motivators for participation (e.g., Martin, Carron, Eys, & Loughead, 2012; McCullagh, Matzkanin, Shaw, & Maldonado, 1993).

In understanding the importance of the social environment, researchers have emphasized the development of inviting and supportive settings as one approach to increase sport participation (Knight & Holt, 2011). Interventions that enhance the social environment have demonstrated improvements in attendance (Bruner & Spink 2011; Watson, Martin Ginis, & Spink, 2004), punctuality (Spink & Carron, 1993), and dropout rates (Bruner & Spink, 2011, Spink & Carron, 1993) in various populations. In youth sport specifically, two differences were identified between athletes who remained on a team and those who left—perceptions of closeness and a sense of belonging (Robinson & Carron, 1982). The desire to belong and the perceptions of membership are certainly

important motivators for the engagement of and continued involvement within extracurricular activities (Allen, 2003; Baumeister & Leary, 1995).

The Belongingness Theory (BT) advanced by Baumeister and Leary (1995) suggests this need to belong as a fundamental human motivation, which influences individuals' cognitions, behaviors, and emotions. This basic desire drives individuals to seek stable and positive interpersonal relationships, which are influential in a number of different social contexts, including the workplace (Scott & Thau, 2013), marriage/intimate relationships (DeLongis, Folkman & Lazarus, 1988), and military groups (Elder & Clipp, 1988).

This need to belong is also supported by the self-determination theory (SDT; Deci, 1971; Ryan & Deci, 2000, 2007). Based on a sub-theory within SDT, basic psychological needs theory (BPNT) suggests individuals strive to demonstrate competence, autonomy, and relatedness. In terms of relatedness, individuals are believed to seek meaningful authentic connections with others within their environment (e.g., sport). Not surprisingly then, when the need to belong, or the desire for relatedness are satiated, these close friendships are associated with improved adolescent self-perceptions and enjoyment (e.g., Cox, Duncheon, & McDavid, 2009; Weiss & Smith, 2002). Interestingly, a sense of acceptance and belonging has also been identified as a primary contributor to positive youth development (e.g., Fraser-Thomas, Côté, & Deakin, 2008; Strachan, Côté, & Deakin, 2011). Conversely, ostracism or exclusion—and thus, threatening perceptions of belonging—are associated with decreased physical activity participation in children (Barkley, Salvy, & Roemmich, 2012).

In summary, there are certainly various reasons as to why youth participate in sport, and although the experience of competence and enjoyment are necessary for

enriched and sustained experiences, the importance of satiating socially derived motivations is undeniable.

Psychological Collectivism

Psychological collectivism (i.e., collective orientation) represents a desire for group membership, and its salience has recently been identified in elite individual sport contexts (Evans et al., 2013). In general, highly collective individuals view themselves as members of one or more in-groups, are primarily motivated by the norms of those in-groups, prioritize the goals and well-being of those in-groups, and emphasize their connectedness to other in-group members (Triandis, 1995). Historically, much of the attention devoted to collectivism has identified the construct as a cultural variable, representing overarching patterns present in complex societies (e.g., Hofstede, 1980; House, Javidan, Hanges, & Dorfman, 2002). This approach is largely attributed to Hofstede's (1980) cross-cultural study, which focused on the scope of differences in national work-related value systems. Specifically, Hofstede (1980) generated country-level indicators of collectivism based on the differences in samples' responses to work satisfaction questionnaires. This approach operationalizes collectivism as a societal preference by using country mean scores, and cannot accurately account for—or does not attempt to explain—individual behaviour. Recent investigations have taken a different tact, and identified collectivism as an individual difference variable in team settings (Eby & Dobbins, 1997; Kirkman & Shapiro, 2001).

Along this line, individuals are believed to vary in terms of their collectivism (termed allocentrism) and individualism (termed idiocentrism; Triandis, Leung, Villareal, & Clack, 1985). Understanding both the cultural and individual levels of collective orientations is important because within individualistic cultures, roughly 60% of

individuals are believed to be idiocentric, whereas within collectively oriented cultures, 60% of individuals are believed to be allocentric (e.g., Triandis & Suh, 2002). This domain specific perspective is believed to more accurately represent the influence of collectivism on basic psychological processes at the individual level (Oyserman, Coon, & Kemmelmeier, 2002). As such, the current project explored the influence of collectivism in sport from an individual psychological perspective, and has eschewed the allocentrism label in favor of psychological collectivism, a less confusing term that is consistently used throughout the literature (e.g., Jackson, Colquitt, Wesson, & Zapata-Phelan, 2006)

There is consensus in the literature that collectivism and individualism are not polar opposites, but rather independent constructs (Jackson et al., 2006). With this in mind, Jackson et al. (2006) developed a questionnaire of collectivism, and were able to demonstrate relationships between psychological collectivism and several important individual-level outcomes for people working in team settings. For example, collectivism was positively associated with supervisor ratings of subordinate task-performance and citizenship behavior, and negatively associated with counterproductive work and withdrawal behaviour (Jackson et al., 2006). The preliminary results for the influence of psychological collectivism on team-member behaviour are indeed promising, and can certainly lend valuable insight with regard to sport specific group constructs.

Within organizational psychology, a large body of literature asserts that collectivism is a characteristic of a cohesive group (e.g., Bahrami & Evans, 1997; Cohen & Bailey, 1997). Cohesion, defined as “a dynamic process that is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs” (Carron, Brawley, & Widmeyer, 1998, p. 213), is a construct that represents perceptions of the social

connections within a group. In particular, individuals hold perceptions regarding both group integration (closeness and unification of the group) and their own attractions to the group (individual affect and motivations influencing adherence; Carron et al., 1998). Within sport, cohesion is positively associated with a variety of group and individual outcomes including team performance (Carron, Colman, Wheeler, & Stevens, 2002), confidence (Kozub & Button, 2000), positive affect (Terry et al., 2001), and exercise adherence (Carron, Widmeyer, & Brawley, 1988). Notably, recent research indicates that young athletes who identify closely with their sport teams, and also perceive greater amounts of cohesion, demonstrate increased prosocial behaviours (e.g., cooperation) to teammates and competitors (e.g., Bruner, Boardley, & Côté, 2014).

Interestingly, cooperation is often seen as an essential component for proper team functioning (e.g., LePine, Hanson, Borman, & Motowidlo, 2000), and this appears to be facilitated by the presence of collectively oriented team members (Cox, Lobel, & McLeod, 1991; Earley & Gibson, 1998; Wagner, 1995). Given that individuals with higher collectivistic orientations base their identities on group membership and value interdependence, teams composed of collectivistic individuals engage in behaviours that facilitate effective team functioning (Dierdorff, Bell, & Belohalv, 2011). In addition to functioning, these teams tend to provide greater emotional, informational, and appraisal support to teammates, while also demonstrating increased citizenship behaviour in comparison to less collectivistic teams (Drach-Zahavy, 2004; Jackson et al., 2006). Given the link between collectivism and supportive teamwork behaviours, athletes involved in these environments should experience greater enjoyment and subsequent adherence behaviours.

Summary and Purpose

In summary, there is support for (a) the influence of psychological collectivism on individual outcomes within varying contexts (e.g., Brougham & Haar, 2013; Cox et al., 1991), (b) the salience of the social environment in sport generally (e.g., Martin, Bruner, Eys, & Spink, 2014), and (c) the importance of social influences and processes in individual sport specifically (Evans et al., 2012; Evans et al., 2013). Accordingly, the current project sought to expand on the group dynamics in sport literature by determining whether psychological collectivism manifests itself in individual youth sport athletes, and if so, whether perceptions predict enjoyment, and intentions to return the following season. Consistent with current research, structural interdependence was assessed as a moderator variable between psychological collectivism and enjoyment and intentions to return.

Similarly, the influence of psychological collectivism may vary within the youth sport setting based on age related developmental differences. The categorization of 'youth sport' (e.g., 12-17 years) represents a wide range of social and cognitive maturation (Harter, 1978). Specifically, as adolescents mature, they are faced with increasingly complex peer social environments. The amount of time spent with peers, and the types of relationships they must negotiate expand dramatically (Brown & Dietz, 2009). Therefore, based on the age differences in social interaction patterns in sport (e.g., Horn & Weiss, 1991), we also assessed age as a moderator between the variables of interest.

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CHAPTER 2

PSYCHOLOGICAL COLLECTIVISM IN INDIVIDUAL YOUTH SPORT SETTINGS¹

The health benefits derived from living a physically active lifestyle for younger populations are well documented (e.g., Janssen & Leblanc, 2010). Adolescents who engage in regular physical activity experience physiological improvements (e.g., cardiorespiratory fitness; Ekelund et al., 2007), improved beliefs about the self (e.g., self-esteem; Biddle & Asare, 2011), and enhanced social experiences (e.g., peer relations; Iannotti, Kogan, Janssen, & Boyce, 2009). In addition, as younger individuals transition into older adolescence and adulthood, they begin to establish patterns of behaviour and make lifestyle choices that ultimately affect not only their current, but also their future health (e.g., Damon, 2004; Peterson, 2004). As such, and in considering the current trends indicating a lack of physical activity participation across the age spectrum, the salience of inactivity is a growing concern (e.g., Colley et al., 2011a, 2011b).

In addressing this concern, youth sport is one avenue where individuals can obtain the daily-recommended amount of physical activity (as advanced by the World Health Organization, 2010). Furthermore, a well-structured youth sport program can provide developmental and social health benefits beyond what can be obtained from physical activity alone (e.g., resiliency, cooperation, work ethic, self-concept; Eime, Young, Harvey, Charity, & Payne, 2013). Unfortunately, despite these numerous physical and psychosocial benefits, youth sport participation rates continue to suffer. As an example, in North America, there is an average 35% dropout rate in a given year and this is believed to increase through adolescence (Petlichkoff, 1996). In fact, in Canada specifically, the transition period from childhood (ages 5 to 14) to adolescence (ages 15

to 19) saw sport participation rates fall from 75% to 54% in 2010 (Canadian Heritage, 2013).

As concern rises for youth physical activity levels generally, and sport involvement more specifically, understanding adoption and sustained participation motives becomes paramount. As one example, Weiss and Williams (2004) suggest that youth participate in sport for reasons of physical competence (e.g., improve skills, achieve goals), social acceptance (e.g., make new friends, belong to a team), and enjoyment (e.g., energy release, excitement). In relation to sport enjoyment, this experience has consistently been associated with continued sport involvement (e.g., Scanlan, Simons, Carpenter, Schmidt, & Keeler, 1993; Weiss, Kimmel, & Smith, 2001), and is one of the most cited predictors for sport participation (Ewing & Seefeldt, 1996). Interestingly, these perceptions of enjoyment can be significantly influenced by the social environment—social recognition, development of friendships, and quality interactions (e.g., Scanlan et al., 1993). Not surprisingly then, researchers highlight the development of socially inviting and supportive environments as an approach to increase sport participation (Knight & Holt, 2011).

The presence of socially derived motives within adolescent populations has certainly been supported, and youth are believed to engage in extracurricular activities to satisfy an innate need to belong and desire for affiliation (e.g., Allen, 2003; Baumeister & Leary, 1995). Interestingly, a sense of acceptance and belonging has also been identified as a primary contributor to positive youth development (e.g., Strachan, Côté, & Deakin, 2011), and is particularly important among older adolescents who establish stronger connections with their peers (e.g., Harter, 1978; Horn & Weiss, 1991). Conversely, ostracism or exclusion—thus, threatening perceptions of belonging—are fundamentally

negative experiences and are associated with decreased physical activity participation (Barkley, Salvy, & Roemmich, 2012). From a theoretical perspective, this need to belong is supported by the self-determination theory (SDT; Ryan & Deci, 2000). Namely, based on a sub-theory within SDT, basic psychological needs theory (BPNT) suggests individuals strive to demonstrate competence, autonomy, and relatedness. In terms of relatedness, individuals seek meaningful authentic connections with others within their environment (e.g., a sport team), and consequently, when this need is satiated, adolescents demonstrate improved self-perceptions and enjoyment (e.g., Cox, Duncheon, & McDavid, 2009; Weiss & Smith, 2002).

Nevertheless, although being a fundamental need, opportunities for belongingness are sought and experienced differently, and these social desires can vary along a continuum. Psychological collectivism is one way to assess this desire for group membership, and its salience has been identified in numerous contexts, including sport (e.g., Evans, Eys, & Wolf, 2013). In general, collectively-oriented individuals view themselves as members of one or more in-groups, are primarily motivated by the norms of those in-groups, prioritize the goals and well-being of those in-groups, and emphasize their connectedness to other in-group members (Triandis, 1995). Although collectivism can be explored as a cultural variable representing overarching patterns present in complex societies (e.g., Hofstede, 1980; House, Javidan, Hanges, & Dorfman, 2002), recent investigations identify it as an individual difference evident in an individual's tendency to seek team settings (e.g., Eby & Dobbins, 1997; Kirkman & Shapiro, 2001). This domain specific perspective is believed to more accurately represent the influence of collectivism on basic psychological processes (Oyserman, Coon, & Kimmelmeier, 2002), and as such, the current project explored this orientation from an individual

psychological perspective.

Understanding athlete collectiveness orientations has implications for sport. In fact, research in organizational psychology reveals that collectively oriented team members are predisposed to cooperate (e.g., Cox, Lobel, & McLeod, 1991; Earley & Gibson, 1998; Wagner, 1995), which in turn, is essential for proper team functioning (e.g., LePine, Hanson, Borman, & Motowidlo, 2000). In addition, teams with greater proportions of collectively oriented members tend to provide greater emotional, informational, and appraisal support, while also demonstrating increased teamwork behaviours (Drach-Zahavy, 2004; Jackson, Colquitt, Wesson, & Zapata-Phelan, 2006). Similarly, collectively oriented individuals base their identity on group membership and attribute great value to interdependence (Dierdorff, Bell, & Belohalv, 2011). With these findings in mind, it is plausible that collectively oriented athletes will value, seek out, and adhere to sport opportunities that feature team environments and provide valued social experiences.

When identifying the potential for sport to feature such team environments, an important consideration involves the team versus individual sport comparison. Indeed, the distinction between traditional team and individual sport settings is largely determined by task interdependence. In relation to team sport, there is constant interaction between teammates in both training and competition, with performance being heavily based on these interpersonal interactions (Widmeyer & Williams, 1991). In contrast, individual sport is comprised of athletes who train together and may contribute to total team performance, but compete individually and often in opposition to teammates (Evans, Eys, & Bruner, 2012). By contrasting these sport types based on this task distinction, assumptions that prevailed in early sport research were that group influences

only exist when team members interact during competition (e.g., task interdependence), and therefore are more important for team sports (e.g., Carron & Chelladurai, 1981). Decreased opportunities to directly influence team member performance and the likelihood that increased cohesion could diminish productive rivalries in individual sport are two explanations for such beliefs (e.g., Carron & Chelladurai, 1981; Landers & Lueschen, 1974). Based on these early inferences, team sport could be presumed to provide collectively oriented individuals with an ideal environment to satisfy their desire for collectiveness compared to individual sport. This expectation is evident from the tendency for research on social relationships to be dominated by the study of team sport.

Upon closer inspection of individual sport, however, performances are rarely an individual effort—athletes frequently train and compete alongside teammates (e.g., Evans et al., 2012). The use of team scores, training environments that require the presence of teammates, and the identification or emergence of team structure (e.g., norms, roles), all indicate that individual sport athletes have opportunities to rely on one another in a group or team setting. In fact, elite individual sport athletes indicate that teammates are a primary source of motivation, social facilitation, social comparison, and teamwork (Evans et al., 2013). As such, the dichotomous categorization of ‘team’ or ‘individual’ sport overlooks the spectrum of opportunities for certain individual sport environments to feature interdependencies. For example, the terms ‘interdependent’ and ‘team’ are often used interchangeably when describing traditional team sport, which inadvertently indicates a lack of interdependencies present within individual sport (e.g., Evans et al., 2012). In addition, this also implies that all individual sport environments are comparable. For example, although track and field is typically perceived as an individual sport, athletes competing in the 4×100meter relay may consider themselves to be a team

due to the interdependent nature of their event, compared to that of a 100meter sprinter. Consequently, researchers have proposed an interdependent sport typology that distinguishes types of team environments according to levels of structural interdependence (Evans et al., 2012). Considering that five of the ten most participated sports among youth in Canada are ‘individual’ sports (e.g., swimming, gymnastics, karate, figure skating, and downhill skiing; Canadian Heritage, 2013), a better understanding of the social environment within this population is certainly warranted. Furthermore, because individual sport features a spectrum of social settings—all the way from completely independent training, to closely interdependent teams—it is vital to understand whether certain individual sport team environments are particularly well-suited to satisfy collectively oriented athletes.

In summary, there is support for (a) the influence of psychological collectivism in individuals from varying contexts (e.g., Brougham & Haar, 2013; Cox et al., 1991), (b) the salience of the social environment in sport generally (e.g., Martin, Bruner, Eys, & Spink, 2014), and (c) the importance of social influences and processes in individual sport specifically (Evans et al., 2012; Evans et al., 2013). Accordingly, we sought to expand the group dynamics in sport literature by exploring whether athletes reporting high levels of psychological collectivism enjoyed and expected to return to their individual sport teams. We also examined whether this relationship was stronger among athletes who belonged to teams that featured shared tasks and collective outcomes (i.e., structural interdependence). Finally, based on the wide range of social and cognitive maturation in youth sport (e.g., Harter, 1978), we also explored whether age related developmental differences emerged.

Methods

Participants

Participants included 207 recreational and competitive individual sport athletes from suburban and urban regions located in Western and Central Canada. Ultimately, 142 youth (54 male, 88 female; *Age* = 14.44 years; *SD* = 1.63) completed questionnaires at two collection periods. This sample represents 69% of the participants who completed the questionnaires at the first collection period (Baruch & Holtom, 2008). The sports involved swimming ($n = 24$), judo ($n = 11$), track and field ($n = 36$), gymnastics ($n = 31$), badminton ($n = 10$), figure skating ($n = 6$), cross-country skiing ($n = 21$), and rock climbing ($n = 3$), with 54% reporting the presence of task interdependence (e.g., relays), and 55% reporting the presence of outcome interdependence (e.g., team championships). All participants were currently active in their season, and had an average experience of 6.4 years ($SD = 3.4$) in their sport.

Measures

Demographic items. To understand sample characteristics, items were included in the Time 1 questionnaire to assess age, gender, sport type, sport experience, and level of competition.

Sport structure. Questions were completed to provide an indication of the participants' (a) task interdependence and (b) team outcome interdependence (Evans et al., 2012). The task interdependence item asked participants whether they were required to work with teammates during competition (e.g., relays). The team outcome interdependence item included the question, "does your team compete for a collective goal or outcome (e.g., team championship)?"

Collective orientation. Collective orientation was assessed using the Psychological Collectivism Questionnaire (PCQ; Jackson et al., 2006). The inventory involves five subscales that are each comprised of three items, including: (a) preference for in-groups (e.g., working in this group was better than working alone), (b) reliance on in-groups (e.g., I felt comfortable counting on group members to do their part), (c) concern for in-groups (e.g., I cared about the well-being of those groups), (d) acceptance of in-group norms (e.g., I followed the norms of those groups), and (e) prioritization of in-group goals (e.g., group goals were more important to me than my personal goals). The PCQ has previously demonstrated adequate validity and reliability (Jackson et al., 2006), and in the current sample, the total inventory as well as the separate subscales all demonstrated adequate reliability ($> .70$). In addition, the Flesh-Kincaid readability level was assessed for each item—all items were below a Grade 4 reading level.

Enjoyment. Individual enjoyment was measured using adapted items from the Sport Commitment Model (Scanlan et al., 1993). Specifically, only the subscale (four items) pertaining to sport enjoyment was utilized. These items are based on a Likert-type scale ranging from one (*Not at all enjoyable/Not at all*) to five (*Very enjoyable/Very much*). Previous research with this subscale in similar populations has demonstrated good internal consistency values ($> .70$; e.g., Scanlan et al., 1993; Weiss & Smith, 2002), and the current sample was also found to be adequate ($\alpha > .90$).

Intention for future participation. Participants were asked to complete four questions addressing their intentions for future participation (e.g., How likely are you to return to this sport next season?). Responses were provided on a 5-point Likert-type scale anchored at the extremes with “*Not at all*” and “*Very likely*” (thus, higher scores indicating greater intentions to return). Our rationale of obtaining *intentions* rather than

actual return rates pertains to the fact that individuals may dropout of sport; however, this dropout may be attributed to other determining factors (e.g., relocation, age restrictions, or financial situations). The intentions to return inventory was found to be reliable ($\alpha > .70$).

Procedure

After obtaining ethical approval from the lead investigator's research institution, individual sport teams were approached to request permission to introduce the project to athletes. Once participant assent and parental/guardian consent were obtained, interested athletes completed questionnaires either before or after practice, at two separate time-points over the course of the season. In order to provide sufficient time for relationships and group perceptions to develop, the first collection period took place during the early to middle stages of the teams' season. The second collection period followed the first by one month, and both sessions took approximately 15-20 minutes to complete.

Data analysis. The primary purpose of the study was to determine whether athlete preferences for the nature and extent of group involvement (i.e., collectivism) predicted enjoyment and intentions to return using a prospective observational design. *T*-tests and chi-square analyses were conducted to determine differences in psychological collectivism, enjoyment, and intentions to return between athletes who completed the questionnaires at both time-points and those who did not. There was no significant difference between groups (all *p*'s < .05). Initial bivariate correlations were examined, followed by the six main regressions that tested hypotheses pertaining to direct and moderating relationships and that featured moderation analyses using an SPSS macro (e.g., Hayes & Matthes, 2009). The first two regressions tested the extent that each dependent variable (i.e., enjoyment; intention to return) was predicted by collectiveness,

task interdependence, and the collectiveness X task interdependence interaction, with the task interdependence moderator coded dichotomously (i.e., teamwork required = 1; no teamwork required = 0). Similarly, the following four regressions were conducted using the same steps, but included either age or outcome interdependence as the moderator. All continuous predictor variables were centered prior to performing analyses. To interpret the meaning of these results, the interaction was decomposed by contrasting simple slopes for the relationship between collectivism and a dependent variable at different levels of each moderator (see Hayes & Matthes, 2009). For the task interdependence and the outcome interdependence moderations, we contrasted the relationship among athletes who reported the presence, or absence, of task/outcome interdependence. On the other hand, the contrasts involving age compared athletes who were relatively younger (one *SD* below the mean), at the mean for age, and older athletes (one *SD* above the mean).

Results

Descriptive Statistics

Means and standard deviations are provided in Table 1. In general, athletes reported high levels of enjoyment and intentions to return and moderately high levels of collectivism. In addition, the internal consistency values were acceptable for all subscales ($\alpha > .70$). A Shapiro-Wilk Test revealed that both dependent variables were positively skewed and, as a result, both variables were corrected using a reflect and logarithmic transformation. Regarding initial data preparation, statistical assumptions for multiple regressions were met (e.g., normality, subscale internal consistency, linear relationships, and homoscedasticity; Tabachnick & Fidell, 2013). Missing values were overcome using the harmonic mean of remaining items on the same subscale—an imputation approach

that was reasonable due to the availability of highly correlated subscale items (Osborne, 2013).

Main Analysis

Preliminary analyses were conducted to determine the means and bivariate correlations of key constructs (see Table 1). An inspection of the correlations revealed several significant relationships. Notably, psychological collectivism positively predicted both enjoyment and intentions to return, which were also directly related to one another. Task interdependence and age were generally unrelated with other study variables, whereas relationships were evident between outcome interdependence and enjoyment. Task interdependence and outcome interdependence were also significantly correlated.

We hypothesized that older athletes, those who belonged to teams with high levels of task interdependence, and those who belonged to teams with the presence of outcome interdependence would demonstrate stronger relationships between collectivism and the dependent variables. Table 2 presents the results from the regression models, and all four models revealed (a) significant direct prediction using collectiveness, (b) no direct prediction using the moderator variables, and (c) interactions that were significant (or nearing significance).

Regarding the first analysis using task interdependence as the moderator when predicting enjoyment, a significant interaction was revealed ($b = .14$, $t(137) = -1.90$, $p = .06$). Specifically, perceptions of collectiveness more strongly predicted enjoyment among athletes who were required to work directly with their teammates ($b = .23$, $t(137) = 4.08$, $p < .001$). In contrast, this relationship was weaker among athletes who did not work directly with teammates on a shared task ($b = .09$, $t(137) = -1.90$, $p = .06$).

Similarly, a significant interaction was found when predicting intention to return with task interdependence as the moderator ($b = -.17, t(137) = -2.07, p = .04$).

Specifically, perceptions of collectiveness more strongly predicted intentions to return among athletes who were required to work with their teammates ($b = .21, t(137) = 3.35, p = .001$), compared to those who did not work together on a shared task ($b = .04, t(137) = .76, p = .45$).

When using age as a moderator, a significant interaction was found for intention to return ($b = .05, t(138) = 2.04, p = .04$), with collectivism more strongly predicting intentions for older athletes ($b = .19, t(138) = 3.23, p < .001$) compared to athletes at the mean ($b = .10, t(138) = 2.59, p = .01$), or the younger age group ($b = .02, t(138) = .33, p < .74$). In contrast, when predicting athlete enjoyment, age did not significantly moderate this relationship ($b = .004, t(138) = .182, p = .86$).

Finally, when using outcome interdependence as a moderator, no significant interactions were found when predicating either enjoyment ($b = .06, t(138) = .86, p = .39$) or intentions to return ($b = .05, t(138) = .63, p = .53$).

Discussion

Sport is often viewed as a setting for young athletes to develop psychosocial competencies by interacting with peers and coaches within a collective group environment. Although individual sport has traditionally been characterized as an independent endeavor, participating athletes certainly have opportunities for social benefits, especially when teammates rely on one another through shared interdependence. The purpose of this study was to determine whether collectively oriented athletes had increased perceptions of enjoyment and intentions to return to their individual sport

teams. In addition, we hypothesized that this relationship would be stronger among older athletes and among those who worked directly with teammates.

A central finding was that collectively oriented athletes enjoyed their individual sport teams and held greater intentions to return in the future. This is consistent with research in organizational psychology, which has identified direct relationships between collectivism and employee outcomes such as affiliation (e.g., Hofstede, 1980; Triandis, 1989), work satisfaction (Roberts & Wasti, 2002), and decreased counterproductive and withdrawal behaviours (e.g., Jackson et al., 2006). Although individual sport rarely requires the extent of teammate interaction during competition that is evident in team sport, the current study coincides with previous research and supports the presence of interdependence structures, as well as their influence regarding affective experiences and participant adherence (e.g., Evans et al., 2012; Evans et al., 2013).

Several theoretical perspectives support the importance of collectivism for enjoying and returning to individual youth sport teams. The first pertains to the Belongingness Theory (BT), in which Baumeister and Leary (1995) suggest that humans (across the age spectrum) demonstrate the need to belong as being a fundamental human motivation. This basic instinct motivates individuals to seek stable and positive interpersonal relationships in various social contexts such as the workplace (Scott & Thau, 2013), marriage/intimate relationships (DeLongis, Folkman & Lazarus, 1988), and military groups (Elder & Clipp, 1988). In sport, the importance of the social environment and the desire to be accepted by peers has been supported extensively (e.g., Allen, 2003; Downward, Lera-López, & Rasciute, 2014). As several examples, social acceptance is associated with improved physical competence (Weiss & Duncan, 1992), self-esteem (Daniels & Leaper, 2006), and social identity (Crocker & Luhtanen, 1990).

A second theory that can shed light on the significance of prioritizing one's group in sport is the Social Identity Theory (SIT; Tajfel & Turner 1985). SIT suggests that individuals define themselves based on the groups to which they belong, and this social identification influences both emotions and behaviours. In particular, a collectively oriented individual's self-concept is more dependent on group affiliation, performance is viewed as a collective effort, and individual identity is strongly related to group goals (e.g., Hofstede, 1980; Triandis, 1989). Identifying with valued groups can, thus, bolster self-esteem and self-concept (e.g., Rubin & Hewstone, 1998), adherence to group norms and group membership (e.g., Spears, Doosje, Ellemers, 1999), and performance (e.g., Lembke & Wilson, 1998). Brewer (2001) defined this as "the extent to which the in-group has been incorporated into the sense of self, and at the same time, that the self is experienced as an integral part of the in-group" (p. 121). This is particularly relevant in sport, and in fact, has drawn support from the youth sport domain. Notably, young athletes who identified closely with their sport teams applied increased prosocial behaviours to both teammates and competitors (Bruner, Boardley, & Côté, 2014). Perhaps of more direct relevance to the current study, young athletes who held stronger perceptions of outcome interdependence with teammates also held stronger social identities with their teams (Bruner, Eys, Evans, & Wilson, 2015). Therefore, in considering the support for both the need to belong, and the tendency to define ourselves based on the groups to which we belong, it is perhaps not surprising to have demonstrated the significance of collective orientations within individual youth sport athletes.

When considering why collectively oriented athletes may be drawn to participate in individual sport, we must recognize the potential for these teams to feature numerous ways for teammates to rely on one another. As an example, although individual sport

teammates may compete directly against one another, they may also share collective outcomes as a team, be required to work together during competition, or even rely on one another to share resources during training and travel (e.g., Evans et al., 2012). In turn, these interdependencies may generate team environments that result in cohesive groups (e.g., Evans & Eys, 2015), which might be appealing to collectively oriented individuals. Our moderation results support this contention, as collectively oriented athletes in task interdependent situations reported greater enjoyment and intentions to return. With a cooperative structure, members are appraised and rewarded on the basis of shared achievements (e.g., Bartol & Durham, 2000), thus directing the focus to teamwork behaviors (e.g., LePine et al., 2000). According to the Social Interdependence Theory, as team members work together on a group task, they experience incentives to develop smooth interpersonal interactions, engage in mutual helping, and experience enhanced liking toward teammates (e.g., Bertucci, Johnson, Johnson, & Conte, 2011). Our results support this supposition, as those athletes involved in task interdependent activities were given the opportunities to work directly with teammates, thus satisfying their cooperative aspirations.

In relation to outcome interdependence (i.e., competing for a team championship), results did not indicate a significant moderation effect. This is an interesting finding considering both task and collective outcome interdependence are associated with prosocial motives, greater responsibility for others' work, and improved individual-level outcomes (DeDreu, 2007). An area worth discussing in relation to this finding is group management practices. Coaches and athlete leaders are often viewed as responsible for initiating certain strategies targeted toward improving the group environment (Evans et al., 2013). It is possible that coaches inadequately promoted the importance of existing

collective outcomes, and that the athletes did not view this as a significant factor, and therefore did not influence their enjoyment or adherence behaviours as strongly.

The second moderator variable of interest was age. Interestingly, as athletes' increased in age, so did the influence of their collective orientations, which by extension positively impacted their intentions to return. Although it is plausible that these findings are attributed to a compounding effect—whereby athletes who are not collectively minded will dropout at an earlier age resulting in teams composed of more collectively minded athletes—our results suggest that the desire to belong to groups holds greater weight in decision making towards sport, as athletes get older. The practical implications emanating from these results support the importance of the group environment. For example, intentionally emphasizing the group (e.g., connectedness, group goals) rather than the individual will have direct influences on sport enjoyment and adherence behaviours for older youth athletes. As such, those working with these athletes (e.g., parents, coaches) should consider structuring their teams to encourage cooperation and collaboration among members (e.g., incorporating a level of task interdependence). Specifically, coaches should focus on increasing teammate interaction when possible (e.g., travelling, training) in order to give athletes the opportunity to establish interpersonal relationships (e.g., Paradis & Martin, 2012). Another important by-product of promoting cooperative teammate relationships is positive youth development (Côté, Bruner, Strachan, Erickson, & Fraser-Thomas, 2010). Namely, Côté and colleagues (2010) proposed a 4Cs framework composed of competence, confidence, character, and connection. In regard to connection, these authors emphasize the importance of the bonds established between teammates for the development of thriving youth.

Based on the current findings, future research should further investigate the relevance of cooperative tasks within this domain, as there is certainly an opportunity to implement such protocols in training environments. In addition, future research should consider the use of the PCQ (Jackson et al., 2006) within sport specific domains. Through the application of this instrument, collectivism is represented as an individual psychological variable, which enables researchers to investigate potential relationships between a variety of group processes such as team performance or leadership roles (e.g., Dierdorff et al., 2011; Venus, Mao, Lanaj, & Johnson, 2012).

Despite the strengths of the current study, certain limitations must be acknowledged. The first relates to participant dropout. Although a large portion of athletes appeared to discontinue participation throughout the course of the study, this is not necessarily indicative of actual dropout, and may be attributed to practice attendance—which is largely influenced by parents/guardians in a youth population. In addition, our dropout rate (i.e., 69%) is similar to previous research with youth populations (e.g., 77%, Bruner et al., 2014). In acknowledging this trend, future research should strive to better understand the specific reasons for absences, thus creating a more holistic understanding regarding these deficiencies. A second limitation pertains to the sample size. Although our analyses revealed statistical significance, a larger sample would have allowed the application of a multilevel perspective enabling researchers to account for the variability within and between teams (Hox, 2010; Tabachnick & Fidell, 2013). The multilevel approach has important implications for future sport research as it eliminates potential confounding issues, thus providing a greater understanding of the observed relationships (Raudenbush & Bryk, 2002). Lastly, on average, athletes responded favorably for both the enjoyment and intentions to return scales, which may be

contributing to the observed relationships in the current study. Results may differ with a broader range of positive and negative sport experiences, and lower levels of collectivism.

Overall, this study represents a novel contribution to the group dynamics literature. It involved a prospective observational approach to the assessment of collective orientations in individual youth sport settings, and challenged past assumptions that failed to acknowledge the presence of group related influences in individual sport (e.g., Evans et al., 2012). In summary, the current study supports the presence of group processes (i.e., psychological collectivism and task interdependence) in individual sport, and indicates the subsequent influence on feelings of enjoyment and commitment intentions.

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Table 1

Descriptive statistics and bivariate correlations for study variables

Variables	Mean	SD	α	1	2	3	4	5
1. Psychological Collectivism	3.69	.54	.85	-				
2. Enjoyment	4.54	.72	.96	.32**	-			
3. Intentions to Return	4.40	.95	.93	.22**	.52**	-		
4. Task Interdependence	-	-	-	.01	-.10	.06	-	
5. Outcome Interdependence	-	-	-	-.02	-.22**	-.10	.23**	-
6. Age	-	-	-	-.10	.01	-.13	-.17*	-.18*

** $p < .001$, * $p < .05$

Note. Scale ranges: 1-4 for psychological collectivism and 1-5 for enjoyment and intentions to return. Higher scores reflect greater perceptions for all variables. T1 = Time 1, T2 = Time 2.

Table 2

Moderation regression results for primary analyses

Predictor	<i>B (SE)</i>	<i>P</i>
Task Interdependence Analyses		
DV: Enjoyment ($R^2 = .14, p < .001$)		
Collectiveness	.17 (.04)	< .001
Task Interdependence	.05 (.04)	.21
Collectiveness X Task Interdependence	.14 (.07)	.06
DV: Intention to Return ($R^2 = .08, p = .008$)		
Collectiveness	.13 (.04)	.002
Task Interdependence	-.03 (.04)	.51
Collectiveness X Task Interdependence	.17 (.08)	.04
Outcome Interdependence Analyses		
DV: Enjoyment ($R^2 = .15, p < .001$)		
Collectiveness	.15(.04)	< .001
Outcome Interdependence	.12 (.04)	.01
Collectiveness X Outcome Interdependence	.06 (.07)	.39
DV: Intention to Return ($R^2 = .06, p = .035$)		
Collectiveness	.12 (.04)	.01
Outcome Interdependence	.05 (.04)	.24
Collectiveness X Outcome Interdependence	.05 (.08)	.53
Age Analyses		
DV: Enjoyment ($R^2 = .10, p = .002$)		
Collectiveness	.15 (.04)	< .001
Age	.01 (.13)	.56
Collectiveness X Age	.004 (.02)	.86
DV: Intention to Return ($R^2 = .08, p = .008$)		
Collectiveness	.10 (.04)	.01
Age	-.01 (.01)	.42
Collectiveness X Age	.05 (.03)	.04

CHAPTER 3

SUMMARY, FUTURE DIRECTIONS, AND PRACTICAL IMPLICATIONS

Using a prospective observational design, the current study explored the significance of psychological collectivism with individual youth sport athletes. In general, individuals who were highly collectively oriented enjoyed their sport experience and held greater intentions to return in the future. To further explore this relationship, task interdependence, outcome interdependence, and age were assessed as potential moderator variables.

As a brief summary of these results, task interdependence was a significant moderator in the relationship between perceptions of collectiveness and enjoyment. Namely, perceptions of collectiveness more strongly predicted enjoyment among athletes who were required to work directly with their teammates. Similarly, a significant interaction was found when predicting intention to return with task interdependence as the moderator. Specifically, perceptions of collectiveness more strongly predicted intentions to return among athletes who were required to work with their teammates compared to those who did not work together on a shared task.

When using age as a moderator, a significant interaction was found for intention to return, with collectivism more strongly predicting intentions for older athletes compared to the average, and younger age groups. In contrast, when predicting athlete enjoyment, age did not significantly moderate this relationship. Finally, and in a similar fashion to this last result, we were unable to identify any significant interactions when outcome interdependence was introduced as a moderator variable.

In recognizing the wealth of information gleaned from these results, the following sections will (1) provide discussions pertaining to the theoretical and practical

implications of the current work, (2) acknowledge study limitations and advance suggestions for future research, and finally, (3) conclude with general closing thoughts.

Theoretical Implications

Not only are groups an essential component of the sport experience, but they also provide a source of social influence with regard to individual cognitions, emotions, and behaviours (e.g., Spink, 2016). In fact, the opportunity for interpersonal interaction and the development of social bonds instills a sense of importance and meaning for many athletes, which subsequently influence sport motivation and participation (Allen, 2003). Despite initial perceptions, researchers have identified the presence of group processes and interdependent structures within individual sport environments (i.e., use of team scores, interdependent training environments, emergence of team norms; Evans, Eys, & Wolf, 2013). Although perceptions of groupness (i.e., the degree to which athletes categorize their team as being a group) can vary amongst individual sport teams, qualitative research identifies that generally, athletes idealize teams with a strong sense of group categorization and interdependence (Evans et al., 2013). The results from the current study are aligned with previous research findings (e.g., Evans, Eys, & Bruner, 2012; Evans et al., 2013), and support the presence of interdependence structures, as well as their influence regarding affective experiences (e.g., enjoyment) and participant adherence (e.g., intentions to return).

From a broad theoretical perspective, psychological collectivism (i.e., collective orientation) was one avenue to assess the desire for group membership present within an individual youth sport population. Research that has been conducted based on other theoretical perspectives in varying populations certainly supports our findings pertaining to the influence of the social environment. One closely related concept is the

Belongingness Theory (BT; Baumeister & Leary, 1995), which suggests that humans (across the age spectrum) have a basic psychological need to feel closely connected with others. In a similar way that psychological collectivism is said to orient individuals toward group membership, BT describes an instinctual desire that drives individuals to seek positive interpersonal connections and establish meaningful relationships.

A second closely related concept that recognizes the significance of this need for membership is represented within the Self-Determination Theory (SDT; Deci, 1971; Ryan & Deci, 2000, 2007). Central to SDT, the basic psychological needs theory (BPNT) suggests individuals strive to demonstrate competence, autonomy, and relatedness. The competence and autonomy needs are less influenced by the social environment, and involve individual perceptions of mastery and achievement, as well as feelings of being in control. The relatedness need however, refers to the desire to seek meaningful authentic connections with others within an individual's environment (one example could be a sport team). The combination of our current results with those from previous literature that emphasize the desire for affiliation as being a fundamental human motivation (e.g., Baumeister & Leary, 1995) and/or a basic psychological need (e.g., Ryan & Deci, 2000) support the contention that despite context or age, being included and perceiving yourself as a member of a group can strongly influence motivation and behaviour.

Another concept that is closely aligned with psychological collectivism is the Social Identity Theory (SIT; Tajfel & Turner, 1985). Whereas the previous two theories reflect a motivation for group involvement, SIT highlights the tendency for individuals to construct their identities based on the groups to which they belong. Interestingly, this mode of definition and evaluation also has important implications for how individuals

feel about themselves, and how they behave. When referring to social identity, Tajfel (1981) defined it as “the part of an individual’s self-concept which derives from his/her knowledge of his/her membership of a social group (or groups) together with the value and emotional significance attached to that membership” (p. 255).

Although in agreement with this general belief, Cameron (2004) argues that social identity is not a uni-dimensional construct, but rather, is comprised of three related but distinct dimensions. The first involves in-group ties, which represents perceptions of similarity, bonding, and belongingness with other group members. The second is cognitive centrality, which highlights the importance that the individual ascribes to being a group member. Finally, the third is in-group affect, which represents the positive feelings associated with group membership. Interestingly, the psychological collectivism literature suggests that highly collective individuals will base their self-concept on group affiliation, their success (or lack thereof) from the perspective of the collective, and their individual identity on the total group goals (e.g., Hofstede, 1980; Triandis, 1989). Consequently, a collectivist environment prioritizes the group over the individual, and encourages social identity and group-oriented behaviour (Hogg & Reid, 2006).

Within the sport literature specifically, Bruner, Boardley, and Côté (2014) utilized Cameron’s (2004) conceptualization in order to assess the tendency for social identity to shape social development in youth sport. Findings revealed that adolescents who held greater perceptions of in-group affect with their sport teams were more likely to express prosocial behaviour (i.e., cooperation) towards teammates. Dr. Bruner lead a second study—one that is perhaps more relevant to the current thesis—involving both social identity and interdependence structures in youth sport (Bruner, Eys, Evans, & Wilson, 2015). Athletes who held greater perceptions of interdependence with teammates also

held stronger social identities based on their membership. Taken together, these findings suggest that identifying with a sport team can change our behaviours toward our teammates, and also that dependence on teammates can actually increase perceptions of social identity. Our results demonstrated similar outcomes, in that collectively oriented athletes who experienced greater task interdependence were more likely to enjoy, and return to the sport. Thus, wanting to be a part of a group, and being provided with the opportunity to do so, increased enjoyment and intentions in these athletes.

The need to belong, the desire for affiliation, and the tendency for people to evaluate themselves based on group membership all indicate that the social environment is certainly one that drives behaviour and influences emotion. Consequently, it is perhaps not surprising that despite previous belief, individual sport athletes are motivated, and subsequently influenced by a desire for group involvement. As such, our results have theoretical implications as they support this contention, and highlight that individual youth sport athletes do in fact prioritize ‘the group.’

Practical Implications

There are several practical implications that can be derived from the results of the current project. Although each advanced implication is certainly distinct from the others (e.g., friendships and social relations, positive youth development, and team building), the foundation for which each will be discussed emanates from the concept that social influences are present and can be utilized in individual youth sport settings.

Friendship is defined as the strong, positive, and affective bonds that exist between two persons and that are intended to facilitate the accomplishment of socio-emotional goals (Hartup & Stevens, 1997). Characterized by reciprocal liking, similarity, coordination, and cooperation, friendship is recognized as the quintessential form of peer

relationship (Bukowski, Motzoi, & Meyer, 2009). An implicit theme within the literature is that friendship facilitates experiences and opportunities that contribute both directly and indirectly to ones' development (Bukowski et al., 2009). In particular, the experience of reciprocity and exchange gives adolescents a sense of well-being and validation, which subsequently develops self-concept (Bukowski et al., 2009).

In the context of sport, research shows that adolescents involved in high quality friendships derive benefits in the form of positive affective responses (i.e., enjoyment, fun) and motivational outcomes (i.e., adherence behaviours; e.g., Knight & Holt, 2011; Scanlan, Carpenter, Schmidt, Simons, & Keeler, 1993). Interestingly, collectively oriented individuals are motivated by interdependence, and tend to provide greater emotional, informational, and appraisal support—all of which are foundational aspects of quality friendships—to others (e.g., Drach-Zahavy, 2004; Jackson, Colquitt, Wesson, & Zapata-Phelan, 2006). Accordingly, those working within individual sport environments (e.g., parents, coaches) should focus on encouraging the development of friendships, especially among older adolescents, to improve athlete sport enjoyment and adherence.

Intuitively, promoting the development of quality friendships may seem to be easier said than done; however, social bonds appear to form relatively quickly. One example involves a seminal project named the Robbers Cave study (Sherif, Harvey, White, Hood, & Sherif, 1961). Here, the researchers were able to demonstrate that previously unacquainted boys who were randomly assigned to groups developed strong loyalty and group identification in a short period of time. In addition, despite preliminary animosity between members of the different groups, the use of superordinate goals and the elimination of competition led to improved relations between groups. These findings reinforce the tendency for youth to develop relations with others in similar situations

(e.g., a sport team), and also that relations can be manipulated based on environmental factors.

The influence of environmental factors is supported in the individual sport literature, as elite athletes have described group structure as being an important factor that guides group member interactions (Evans et al., 2013). As such, and based on the findings from the current project, coaches and parents involved in individual youth sport should emphasize the group (e.g., group goals) rather than the individual. Structuring teams to encourage cooperation and collaboration among members (e.g., incorporating task interdependence) will provide a source of interdependence, serving to unite individuals, and to satisfy perceptions of collectiveness. Furthermore, coaches should focus on incorporating interpersonal interaction between teammates when possible (e.g., team travel, cooperative training) in order to give athletes the opportunity to establishing meaningful relationships (e.g., Paradis & Martin, 2012). In addition, our results suggest that coaches should also be aware of age related friendship expectations. For instance, just like individuals develop physically, intellectually, and emotionally over the course of the lifespan, so to do their friendship experiences. As individuals get older, they acquire new cognitions and emotional skills, allowing them to spend more time with friends, share deeper interests and beliefs, and display greater expression of self-awareness (e.g., Hartup & Stevens, 1997). Thus, older adolescents establish stronger connections with their peers in comparison to younger children (e.g., Harter, 1978; Horn & Weiss, 1991). As is demonstrated with the current study, social connections, friendships, and group prioritization become increasingly important for adherence behaviours (i.e., intentions to return) as athletes transition between younger to older adolescence. As such, targeted approaches to facilitating or enabling the development of such friendships in older

adolescent individual sport settings could be a viable way to enrich the sporting experience and by extension, maintain sport participation.

A second practical implication worth noting involves research interested in enriching the sport experience, with the intention of developing thriving youth. Namely, positive youth development (PYD) involves the use of sport programming as an intentional and pro-social approach to engaging adolescents in their communities and schools in a manner that is productive for enhancing individual strengths and abilities (Peterson, 2004). Hamilton, Hamilton, and Pittman (2004) suggest that this type of approach leads to optimal youth development, and that adolescents will be safe, healthy, happy, moral, fully engaged in life, and valuable contributors to society. Programs that aim to increase PYD are successful in promoting interpersonal skills, quality peer and adult relationships, self-control, problem solving, cognitive competences, self-efficacy, commitment to school, and academic achievement (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004). Accordingly, in the sport literature, the framework comprising the ‘4 Cs’—competence, confidence, connection, and character—has commonly been applied to conceptualize the developmental areas of focus for PYD programs (Côté, Bruner, Strachan, Erickson, & Fraser-Thomas, 2010). Involvement in structured programs that promote the growth of one or more of these ‘Cs’ has been found to produce positive developmental outcomes in youth (e.g., Catalano et al., 2004). With regard to connection specifically, Catalano and colleagues (2004) emphasize the importance of the bonds established between teammates. In fact, more recently, a sense of acceptance and belonging and cooperative team relationships have been identified as primary contributors to facilitating PYD (e.g., Côté et al., 2010; Strachan, Côté, & Deakin, 2011).

Researchers have emphasized that sport programs need to be consciously designed to ensure that youth are provided with positive experiences, enabling proper development (e.g., Fraser-Thomas, Côté, & Deakin, 2005). Often, this responsibility is assigned to the coach as they occupy a critical position in terms of providing developmentally appropriate programs (Côté & Gilbert, 2009; Fraser-Thomas et al., 2005). In addition to controlling the environment, coach characteristics such as optimism, encouragement, and openness also contribute to successful PYD (Peterson, 2004). Therefore, the extant literature informs us of the influence that proper sport programs can have on PYD, and that coach behaviours, and their decisions pertaining to the structure of the program can impact adolescent development. Based on our findings, collectively oriented athletes who were involved in interdependent individual sport settings experienced greater enjoyment and intentions to return. Indeed, coaches should be aware of the desires for group membership exhibited by their athletes, and take measures to satisfy those desires. By enabling perceptions of group membership through sport programming, coaches would be specifically developing one of the '4 Cs' (i.e., connection) of PYD in an individual sport environment that has predominantly been categorized as being void of interdependence.

A final, yet somewhat related, practical implication involves team building (TB). Generally speaking, TB activities are the most common and effective method for developing group functioning in a sport team (Yukelson, 1997), and have been defined as “a method of helping the group to (a) increase its effectiveness, (b) satisfy the needs of its members, and (c) improve work conditions” (Brawley & Paskevich, 1997, p. 13). In sport, TB programs have been implemented for the improvement of group processes such as cohesion (e.g., Stevens & Bloom, 2003), role understanding (e.g., Prapavessis, Carron,

& Spink, 1996), communication (e.g., Newin, Bloom, & Loughead, 2008), leadership (e.g., Smith & Smoll, 1997), satisfaction (e.g., Carron & Spink, 1993), and performance (e.g., Burton, 1989). However, with the exception of group goal setting strategies (Senécal, Loughead, & Bloom, 2008), few TB approaches have targeted teammate interdependence (Evans, 2014). Although interdependence is largely dictated by sport type, TB interventions could involve the manipulation of the sport environment to feature a source of interdependence.

In order to accomplish this task, the framework advanced by Carron and Spink (1993) for TB interventions could be implemented. Specifically, this framework is comprised of inputs, throughputs, and outputs. Coaches should target the inputs, which involve the team's environment and structure. With regard to the environment, this refers to such things as physical proximity and distinctiveness. By increasing the proximity of individual sport athletes, the coach will be facilitating communication and the development of relations, which should increase feelings of belonging. As for distinctiveness, the coach should focus on ensuring that athletes see themselves as 'a team,' which can be achieved by providing similar clothing or developing a team mantra or vision. In terms of team structure, this relates to established norms and an understanding of group roles. Here, the coach can provide norms for practice, in which all athletes (regardless of the interdependence level of their particular position) must work and train together. Similarly, the establishment of team roles (e.g., team captain, social convener) will increase the perceptions of 'we,' thus satisfying the fundamental desire for group affiliation.

The second phase in the framework involves throughputs, which refer to group processes. More specifically, group processes represent team goals and cooperation, as

two examples. Based on our findings, an effective TB throughput approach would involve the establishment of team goals (i.e., outcome interdependence), whereby all members of the individual sport team contribute to the total team goal. Interestingly, a coach could also promote cooperation by indicating that members must work together (i.e., task interdependence) in order to achieve the team objectives. A practical example of this could be a swimming team adding their individual swim times at a competition, with the goal of remaining below an established time. Similarly, during the training sessions leading up to the competition, athletes could work together in dyads to remain below combined swim times set by the coach. This simple strategy would satisfy both the team goal and cooperation components of the throughputs.

The final phase involves the outputs, which refer to the desired group outcomes that would have been previously established prior to implementing the TB intervention. Our results suggest that psychological collectivism predicts enjoyment and intentions to return, and that these relationships are moderated by task interdependence and age. As such, our outcomes of interest would likely be enjoyment and intentions to return, and we would attempt to increase perceptions of collectivism through proximity and distinctiveness (as described above), and could increase task interdependence through the establishment of team goals. Finally, in understanding that as athletes age, so too does the importance of collective orientations; these strategies should be augmented in older adolescent athletes.

Limitations and Future Directions

Due to the prospective observational approach of this study, a dominant challenge was participant dropout. Although a large portion of athletes appeared to withdraw from the study, this is not necessarily suggestive of actual dropout. Indeed, within the youth

population, athletes are heavily reliant on parents/guardians for transportation needs, and although the presence of teammates is certainly beneficial, practices can be altered to become more independent if attendance is lacking. Therefore, individual sport athletes may not feel obligated to attend a training session knowing that their attendance is not necessarily detrimental to their teammates' experiences. As a point of emphasis however, despite this acknowledgement, I would like to highlight that our dropout rate (69%) was similar to previous research with youth populations (77%; Bruner et al., 2014). Future research should investigate the reasons for absences, thus creating a more in-depth understanding regarding these deficiencies.

A second limitation pertains to sample size. Although our results were statistically significant, a larger sample would have allowed for multilevel analyses, enabling the opportunity to account for the variability within and between teams (Hox, 2010; Tabachnick & Fidell, 2013). Future sport research can benefit from the application of a multilevel approach, as it eliminates potential confounding issues, providing a more thorough understanding of the observed relationships (Raudenbush & Bryk, 2002). However, the rule of thumb proposed by Hox (2010) suggests that multilevel analyses should only be performed when there are at least 30 groups and 30 persons in each group (or 100 groups and 10 persons in each group). This requirement is particularly challenging for researchers studying individual youth sport, when considering the current downward trend in participation rates. For example, of the sport teams approached for the current study, none had 30 athletes enrolled in their current program, ultimately eliminating the opportunity for multilevel modeling. As we have discussed above, the coach largely determines the structure of the sport environment, and multilevel analyses

would allow us to determine differences in perceptions from athletes involved with different teams.

A third limitation involves favorable responses, whereby a large amount of participants provided the highest level of ratings pertaining to the enjoyment and intentions to return scales. These high responses may have contributed to the observed relationships, and purposely seeking out a sample with a broader range of positive and negative sport experiences, and lower levels of collectivism, may reveal different findings. Additionally, conducting similar research in different individual sport contexts (e.g., children sport, elite sport, masters level sport) would further reveal whether group influences such as collectivism and interdependent sources influence athlete's enjoyment and adherence behaviors in different environments.

Although the current study included specific items assessing the *actual* structure of the group environment (i.e., presence of task and outcome interdependence), the validity of athletes' responses were occasionally questioned. Specifically, although interdependence is based on the *actual* structure (i.e., the design of member interactions), its relevance may depend on the extent to which members *perceive* interdependence among teammates (e.g., Van der Vegt et al., 2001). Ultimately, variations in task and outcome interdependence may shape teammate relationships because they alter members' perceptions of whether they depend on one another or not (Evans & Eys, 2014). Empirically assessing athletes' responses (e.g., interview, open question response) would develop our theoretical understanding by distinguishing whether athletes' perceptions of interdependent structures are internalized as important or perceived in a more generalized way (Evans, 2014). For example, the current study revealed a non-significant moderation effect regarding outcome interdependence (i.e., competing for a team championship).

This is interesting considering that within other environments, both task and collective outcome interdependence are associated with pro-social motives, greater responsibility for others' work, and improved individual-level outcomes (DeDreu, 2007). Although athletes identified the presence of outcome interdependence within their sporting environment, we are not able to determine the degree of importance the athlete placed on this interdependence source. Therefore, validating athlete perceptions of interdependence sources will provide a more concrete understanding of the relationships with athlete affect and behaviour.

Whereas the current research discusses the human desire for collectiveness and belonging, we must recognize the alternative—individualism. Individualism is defined as a focus on rights above duties, a concern for oneself and immediate family, an emphasis on personal autonomy and self-fulfillment, and the basing of one's identity on one's personal accomplishments (Hofstede, 1980). Individual sport is unique, as it provides a variety of group environments ranging from completely independent to entirely interdependent. Therefore, individual sport can offer both collectively oriented and individually oriented persons the opportunity to satisfy their personal desires. Based on our findings, collectively oriented athletes who were involved in interdependent sport settings experienced greater enjoyment and intentions to return. Considering the profile of an individually oriented person, this relationship may not uphold with these particular athletes. For example, being part of a relay team and having accomplishments based on the sum of efforts from all members may not be satisfying for an individually oriented athlete who seeks personal autonomy. Coaches should be aware of the desires for group membership exhibited by their athletes, and structure their athletic environments accordingly. Future research should consider investigating how individually oriented

athletes integrate themselves into a group setting, and perhaps how the group influences their emotions and behaviours. In addition, future research could investigate the malleability of one's group orientation, and whether it is possible to shift athlete orientations from individualistic to collectivistic.

Final Thoughts

The desire for social connection and group affiliation is a fundamental human motivation, which is not overlooked or lost when one participates in an individual sport. As such, psychological collectivism provides a valuable perspective for understanding how individual sport athletes prioritize their group membership. In addition, age and sport structure (i.e., task interdependence) were both identified as influential determinants of enjoyment and commitment intentions. Overall, the current thesis challenged past assumptions that failed to acknowledge the presence of group related influences in individual sport, and identified the positive outcomes associated with being collectively oriented, and also having that collective orientation satisfied.

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Appendix A: Human Research Ethical Approval

Human Research Annual Report - Protocol #2013-076 (Donkers & Martin)



Inbox x



Entz, Susan <susan.entz@uleth.ca>

10/23/14 ☆



to me, Luc ▾

Hi Janice and Luc,

Your Protocol #2013-076 (The Effect of Social Belonging on Youth Individual Sport Participants) was approved for the period November 19/2013 – September 1/2015. I would appreciate an annual report detailing your progress to date, noting any changes to your protocol (e.g. procedures, participants), and confirming your termination date. There is an annual report template at <http://www.uleth.ca/research-services/research-ethics/human-subjects/forms> to facilitate submission of this report.

In accordance with the Tri-Council Policy Statement and University policy, a succinct annual status report should be submitted for on-going research and the Human Subject Research Committee should be promptly notified when the research is concluded. In the absence of substantial changes in community standards over the time period involved, approval of ongoing research will be pro forma.

Thanks, Susan

Susan Entz
Ethics Officer
Office of Research Ethics
B620, University Hall
University of Lethbridge
4401 University Drive
Lethbridge, Alberta T1K 3M4
Phone: [\(403\) 329-2747](tel:4033292747)
Fax: [\(403\) 382-7185](tel:4033827185)

Appendix B: Coach Contact Correspondence

Dear XXX,

My name is Janice Donkers and I am a Graduate Student at the University of Lethbridge. My area of research is sport psychology and I am currently recruiting individual youth (ages 12-17) sport teams for participation in a project that will be assessing their social influences with regard to personal experience(s) within their sport. I have attached a letter of information that would be distributed to the parents/guardians of your athletes to provide you with more information on the proposed project.

Essentially, should you agree to have your team participate, your athletes will be asked to complete a questionnaire package at 2 time points throughout your season. This should take approximately 15 minutes on each occasion and can be done either before or after practice at your convenience. As participants will be under the age of 18 and are unable to provide consent on their own, letters of information will be distributed to the parents/guardians that will be returned to yourself should they decide that their child may not participate. In addition, youth will be asked to sign an assent form before they may complete the questionnaires.

I would like to take this opportunity to thank you for the consideration of your team's involvement. Please do not hesitate to contact me if you have any questions or comments. In addition, if you have any concerns and would like to contact the University of Lethbridge Office of Research Services, they can be reached at (403) 329-2747 or Email at research.services@uleth.ca.

Thank you very much for your time, I look forward to hearing from you.

Best regards,

Appendix C: Letter of Information/Consent to Parents

Group Dynamics in Youth's Sport Study

February, 2013

Dear Parent/Guardian,

My name is Janice Donkers and I'm a Graduate Student at the University of Lethbridge. I am currently involved in a program of research that is designed to better understand social influences with regard to personal experience(s) within individual youth sport. Beginning in January/February 2013, we will be going in to your child's practice facility and we will be inviting them to complete a survey. In this survey, we will ask youth a series of questions about their experiences and attitudes towards their sport as well as their team. We will administer the same questionnaires again 1 month after the first time point.

On each of these occasions it will take students approximately 15 minutes to complete the surveys. None of the questions that we ask are of a delicate or intrusive nature and there are no known risks associated with youth's involvement in this study. Your child will not benefit directly from participation in this research. Participation is entirely voluntary, and even if students initially choose to take part in this study, they may subsequently withdraw at any time without having to give any reason and without experiencing any negative consequences.

The answers your child provides will be combined with those of other youth who are taking part in this research and any information they provide will remain completely confidential. All completed questionnaires will be kept in a locked cabinet at the University of Lethbridge and shall not be made available to anyone other than the researchers involved in this study.

If you **DO NOT** wish for your child to take part in this research, all we ask you to do is complete this form and return it to your child's coach. Alternatively, you can email or phone me (Janice Donkers) using the contact details identified below and we will ensure that your son/daughter does not take part in this study. Also, even if you have consented for your child to take part in this study, we also require his/her own consent as well before s/he can be invited to take part. If you have any questions or want further information about the study or the results of the study please contact Janice Donkers at (403) 332-5207. Alternatively, questions regarding your rights as a participant in this research may be addressed to the Office of Research Services, University of Lethbridge at (403) 329-2747 or Email at research.services@uleth.ca. They will be more than happy to answer any questions or concerns you may/ have.

SO, IF YOU **DO NOT** WANT YOUR CHILD TO TAKE PART PLEASE SIGN THIS FORM AND RETURN IT TO YOUR CHILD'S COACH:

I..... (PARENT'S NAME)

DO NOT wish for my child(CHILDS NAME) to take part

in the research investigating his/her team environment.

Signed.....

Date.....

Yours sincerely,

Janice Donkers (Principal Investigator)
Group Dynamics and Sport and Exercise Psychology Lab
Department of Kinesiology and Physical Education
University of Lethbridge
Contact Number: 403-332-5207
janice.donkers@uleth.ca

Luc Martin (Co-investigator)
Group Dynamics and Sport and Exercise Psychology Lab
Department of Kinesiology and Physical Education
University of Lethbridge
Contact Number: 403-332-4435
luc.martin@uleth.ca

Thank you for your time and interest,
your child's sport experience is of great importance
to us.

APPENDIX D: Participant Contact Letter

Social Environment in Individual Youth's Sport Study

Principal Investigator:
Janice L. Donkers
Department of Kinesiology and Physical Education
University of Lethbridge
Contact Number: 403-332-5207
janice.donkers@uleth.ca
2013

February,

(To be read to the participants by the lead investigator prior to distribution)

I am from the University of Lethbridge and am doing a study about what you think about your sport and your sports team. In January/February 2013 I will be coming to your practice and will invite you to complete a survey. This should take about 15 minutes of your time and will be done after your practice. The information you provide will help us understand what you think about your team and your sport.

We want to hear what you think because your opinion is important to us. Please know that your participation in this study is voluntary. What that means is that it's up to you if you want to take part or not. If for ANY reason, you do not want to take part in this study that's fine, you don't have to. If you decide to take part, you will also be free to withdraw at any time without having to give any reason. If you drop out you will not experience ANY negative consequences at all.

As well as completing the initial survey, we will repeat this process 1 month later. So, in short, we are asking you to complete two surveys. If you decide to take part, your answers will be kept private/confidential, and will not be shared with ANYONE else. That means your responses will be combined with those of other students, and no one will know how you will have answered the questions except you. All completed surveys will be kept in a locked cabinet at the University of Lethbridge. Your survey will not be made available to anyone other than the researchers involved in this study.

There are no known risks associated with participation in this study. If you have any questions about what is involved please contact Janice Donkers by email or phone. Her email addresses and phone number are at the top of this page. Alternatively, if you have any questions regarding your rights as a participant in this research, please contact the Office of Research Services, University of Lethbridge at (403) 329-2747 or Email at research.services@uleth.ca.

We would also like you to take the parental information letter that's attached to this letter and give it to one of your parents or legal guardians. Although this study does not involve any known risks we wish you to discuss your involvement with your parents/guardians. If for any reason they wish for you not to take part in this study they can let us know by phone or by email, or they can sign and return the attached letter.

We look forward to seeing you in a few weeks time.

Thank you for your help,

Janice Donkers, Graduate Student
University of Lethbridge

Appendix E: Participant Assent Form

Social Environment in Individual Youth's Sport Study

Principal Investigator:
Janice L. Donkers, Graduate Student
Department of Kinesiology and Physical Education
University of Lethbridge
Contact Number: 403-332-5207
janice.donkers@uleth.ca

February,

2013

Why am I here? I am a researcher from the University of Lethbridge. I want to see if you would like to be in a study. I am very interested in what you think about your sport as well as the team you play on. I want to hear your opinion on these issues.

What will happen to you? If you want to be in the study, you will answer questions about your sports team and the sport you play (15 minutes) on two occasions. The information you provide in this survey will help us understand what motivates you to play sport and also what you think about your team.

Will people know what my answers are? Only the researchers will know what your answers are. Your teammates, coaches, or parents will only know what you answer if you choose to tell them.

Where will the study take place? The study will take place at your practice area.

Will the study help me? No, not directly. But in the future it might help coaches better understand why you and your friends enjoy sport and want to keep playing sport.

What if you have questions? You can ask the research questions at any time, now or later. My contact information (Janice Donkers) is at the top of the page. You can also talk to your coach, your family, or anyone else. If you want, you can also contact the University Research Office at (403) 329-2747 or Email at research.services@uleth.ca.

Do you have to be in the study? No, you do not have to be in the study. No one will be angry with you if you do not want to do this. If you do not want to be in this study, just say so. Even if you say yes now, you can change your mind later. It's up to you.

Are there any risks? There are no known risks associated with participation in this study.

What are the benefits? Hearing how youth think about their sporting experiences will help us to understand how to improve the sporting environment for this age group.

Your participation is important to us. Thank you for your help.

The purpose of this form is to make sure that you are happy to take part in the research and that you know what is involved.

By signing this form, you are indicating that you have read and understood the research description provided, are aware of what will be asked of you and that you agree to take part in this study. Again, participation is strictly voluntary and you are free to end your involvement at any time and you may choose not to complete the measures without having to give a reason why without experiencing any negative consequences. Understand that all information will be entirely confidential and no individual will be identified at any time.

By signing this form you have consented to participate in this study.

SIGNED.....

NAME IN BLOCK
LETTERS.....

DATE.....

Appendix F: Demographic Questionnaire

Name (first and last): _____

Age (in years): _____

Gender:

Many of the following questions ask about your current sport team. When we ask you to comment on your team, we are referring to the group of athletes that you typically train and/or travel to events to compete with.

In what sport do you compete?:

Number of years having competed in this sport (total years):

Number of years on the current team: _____

Level of Competition (e.g., recreational, competitive, etc.):

Approximately how many people are on your team? _____

How many of your teammates compete in your event (e.g., 0-100)? _____

Appendix G: Interdependence Structure Questionnaire

Are you required to work with your teammates during competition (e.g., relays)?

Yes No

Does your team compete for a specific group objective (e.g., team championships, combined points)?

Yes No

If yes, ...

<i>How important is this objective for your team?</i>	<i>1</i> <i>Not at all important</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i> <i>Very important</i>
<i>Compared to your personal goals, how important is this team objective for you?</i>	<i>1</i> <i>Not at all important</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i> <i>Very important</i>
<i>How often do you train with your team?</i>	<i>1</i> <i>Never</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i> <i>Always</i>
<i>How often do you travel to events with your team?</i>	<i>1</i> <i>Never</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i> <i>Always</i>

Appendix H: Psychological Collectivism Questionnaire

Answer the following questions regarding the sport groups to which you currently belong, and have belonged to in the past.

- | | | | | | |
|---|---------------------------|---|---|---|------------------------|
| 1. I to work in those groups rather than working alone. | 1
Strongly
Disagree | 2 | 3 | 4 | 5
Strongly
Agree |
| 2. Working in those groups was better than working alone. | 1
Strongly
Disagree | 2 | 3 | 4 | 5
Strongly
Agree |
| 3. I wanted to work with those groups as opposed to working alone. | 1
Strongly
Disagree | 2 | 3 | 4 | 5
Strongly
Agree |
| 4. I felt comfortable counting on group members to do their part. | 1
Strongly
Disagree | 2 | 3 | 4 | 5
Strongly
Agree |
| 5. I was not bothered by the need to rely on group members. | 1
Strongly
Disagree | 2 | 3 | 4 | 5
Strongly
Agree |
| 6. I felt comfortable trusting group members to handle their tasks. | 1
Strongly
Disagree | 2 | 3 | 4 | 5
Strongly
Agree |
| 7. The health of those groups was important to me. | 1
Strongly
Disagree | 2 | 3 | 4 | 5
Strongly
Agree |
| 8. I cared about the well-being of those groups. | 1
Strongly
Disagree | 2 | 3 | 4 | 5
Strongly
Agree |
| 9. I was concerned about the needs of those groups. | 1
Strongly
Disagree | 2 | 3 | 4 | 5
Strongly
Agree |
| 10. I followed the norms of those groups. | 1
Strongly
Disagree | 2 | 3 | 4 | 5
Strongly
Agree |
| 11. I followed the procedures used by those groups. | 1
Strongly
Disagree | 2 | 3 | 4 | 5
Strongly
Agree |
| 12. I accepted the rules of those groups. | 1
Strongly
Disagree | 2 | 3 | 4 | 5
Strongly
Agree |
| 13. I cared more about the goals of those groups than my own goals. | 1
Strongly
Disagree | 2 | 3 | 4 | 5
Strongly
Agree |
| 14. I emphasized the goals of those groups more than my individual goals. | 1
Strongly
Disagree | 2 | 3 | 4 | 5
Strongly
Agree |
| 15. Group goals were more important to me than my personal goals. | 1
Strongly
Disagree | 2 | 3 | 4 | 5
Strongly
Agree |

Appendix I: Enjoyment Questionnaire

The following questions ask about how you **enjoy** playing your sport. Please **CIRCLE** a number from 1 to 5 to show how much you agree with each statement.

5. Do you enjoy playing this sport this season?

1	2	3	4	5
Not at all	A little	Sort of	Pretty much	Very much

6. Are you happy playing this sport this season?

1	2	3	4	5
Not at all	A little	Sort of	Pretty much	Very much

7. Do you have fun playing in this sport this season?

1	2	3	4	5
Not at all	A little	Sort of	Pretty much	Very much

8. Do you like playing in this sport this season?

1	2	3	4	5
Not at all	A little	Sort of	Pretty much	Very much

Appendix J: Intention to Return Questionnaire

The following questions ask about your **future participation** in this sport. Please **CIRCLE** a number from 1 to 5 to show how much you agree with each statement.

1. How likely are you to return to playing this sport next season?

1	2	3	4	5
Not at all	Not likely	Maybe	Likely	Very Likely

2. How likely are you to return to this particular team next season?

1	2	3	4	5
Not at all	Not likely	Maybe	Likely	Very Likely

3. How likely are you to return to this level of competition?

1	2	3	4	5
Not at all	Not likely	Maybe	Likely	Very Likely

4. How likely are you to return to this coach next season?

1	2	3	4	5
Not at all	Not likely	Maybe	Likely	Very Likely

Appendix K: Personal Reflection

My curiosities and fascinations have always revolved around athletics, specifically individual sport. At an early age, figure skating quickly became my prominent sport of interest. Beginning my skating career, I was enrolled in the CanSkate program at my local arena, which was designed to teach young children fundamental skating skills. This program was hierarchically structured with lessons given in a group format. Skaters' progressed through the stages of the program at their own pace, as they learned and mastered new skills and techniques. Although this program was designed for individual achievement, coaches often structured their sessions to promote the group environment through the use of relays, games, and partner work. This group environment fostered the development of social relationships, and I soon began to acquire new "best friends."

Unfortunately, the design of the CanSkate program soon became a double-edged sword. I began to progress through the stages at a faster rate than my new friends. I quickly reached the final stage of the program, and was now enrolled in the competitive circuit. This competitive program consisted of all new skaters, most of which were now older than myself. Group classes were replaced with private lessons, and coaches began to emphasize individual performance. I began to find it difficult to socially engage with other skaters, and did not find the coaches particularly helpful at integrating me into the group.

I continued skating until the age of 14, competing at a competitive level. My motivation for continuing with the sport was derived from my parents and coaches praising me for my athletic success. Rather than having a collective group environment, I perceived practice sessions as competitive and independent. With limited social support from my fellow skaters, practices became grueling, and I soon lost enjoyment for the sport.

Reflecting on my own personal experience, my individual sport performance was greatly influenced by the group environment. The individualistic situation challenged my motivation and self-esteem, ultimately leading me to no longer enjoy the sport. The desire for social connection and group affiliation is a fundamental human motivation, which should not be overlooked or lost when one decides to participate in an individual sport. It is my hope that the current research sparks the continuation of group dynamics research within individual sport environments.