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Peer Relationships, Social Identity, And Motivational Experiences in Youth Sport

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PEER RELATIONSHIPS, SOCIAL IDENTITY, AND MOTIVATIONAL EXPERIENCES IN YOUTH SPORT

by

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ABSTRACT

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by

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Organized sport provides youth with the opportunity to form interpersonal relationships and derive part of their identity from membership in their sport team (i.e., athlete social identity). Though identities are formed within the context of interpersonal relationships, little research has examined how peer relationships may associate with athletes' social identity and downstream sport motivation. The purpose of this three-study dissertation was to examine the contribution of peer relationships and athlete social identity as tied to youth athletes' motivational experiences. A scoping review of literature was conducted in study one to identify possible antecedents of athlete social identity. Seven antecedent categories were identified across 60 studies including leadership factors, environmental factors, personal factors, team factors, interventions, moral factors, and interpersonal factors. Less than a third of studies were conducted in youth sport and interpersonal factors were one of the least represented categories featured in the review. To enhance knowledge in this area, study two was conducted to examine if

positive peer relationships predicted adaptive features of sport motivation by way of athlete social identity. Results showed friendship quality and peer acceptance to be uniquely indirectly associated with enthusiastic sport commitment, sport enjoyment, and autonomous motivation by way of athlete social identity dimensions, cognitive centrality and ingroup affect. Study three was conducted to examine if negative peer relationships predicted maladaptive motivation by way of athlete social identity. Results showed peer rejection to be directly and positively linked with controlled motivation and athlete burnout. Peer rejection was also indirectly linked with maladaptive sport motivation through one athlete social identity dimension, ingroup affect. This work situates sport as an important context in which youth athletes' peer relationships and social identity concurrently link with their motivational experiences. Attending to the formation and maintenance of high-quality teammate relationships may be a way to foster athletes' social identity, and in turn, promote positive youth sport experiences and healthy youth development.

(216 pages)

PUBLIC ABSTRACT

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Justin T. Worley

Organized sport is a setting in which youth can make friends and explore their identity. Teammate relationships may make important contributions to athletes' social identity (i.e., their psychological connection to their sport team) and their motivation for sport. This idea was tested across three studies. A review of literature was conducted in study one to identify factors that may contribute to athlete social identity. Seven categories were identified across 60 studies including leadership factors, environmental factors, personal factors, team factors, interventions, moral factors, and interpersonal factors. Less than a third of these studies were conducted with youth athletes and interpersonal factors were one of the least represented categories. To increase knowledge in this area, study two was conducted to examine if positive peer relationships tied with athletes' psychological connection to their team and, in turn, high quality sport motivation. Results showed that those with a quality best friendship and those feeling accepted by teammates felt more connected to their team and had more adaptive motivation, such as stronger enjoyment of their sport. Study three was conducted to examine if negative peer relationships associated with less psychological connection to their team for athletes and lower quality sport motivation. Results showed that feeling rejected by teammates was associated with feeling less connected to the team and more maladaptive motivation, such as stronger burnout perceptions. Enhancing the quality of

athletes' teammate relationships appears to be an important way to promote positive sport and developmental experiences.

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CHAPTER 1

INTRODUCTION

Given widespread youth sport participation, organized sport is regarded as an important developmental context for children and adolescents (Weiss & Stuntz, 2004). The predominance of research conducted in youth sport contexts has focused on the role of adults, such as coaches and parents, in facilitating athlete experiences (Smith, 2019). This work generally shows that coaches and parents are key socializing agents with potential to foster important motivational and developmental experiences of youth athletes (Jowett, 2017; Knight et al., 2017). Yet, adults represent just a slice of the broader social context of sport. The developmental significance of peer relationships also should be carefully considered. There is a more equitable balance of power among peers than between peers and adults and peer relationships serve as unique sources of support for psychosocial growth (Rubin et al., 2006; Sullivan, 1953). While comparatively less research has focused on the role of peers in youth sport, literature has consistently demonstrated that peers meaningfully contribute to athletes' sport experiences, particularly as agents of motivation (Smith & Ullrich-French, 2020; Weiss & Williams, 2004). Accordingly, there is value in research efforts that address experiences with peer relationships in sport.

Beyond the personal benefits and challenges that stem from interpersonal peer relationships, organized sport is a context in which athletes can derive part of their sense of self (i.e., athlete social identity) though team membership (Bruner, Sutcliffe, et al., 2020). Though social identities are theorized to form within the context of interpersonal

relationships and social interactions (Postmes, Spears, et al., 2005), little empirical work has examined how peer relationships may associate with athletes' social identity, and in turn, sport motivation. The aim of this three-study dissertation was to examine peer relationships and athlete social identity as tied to motivational experiences of youth athletes.

It is important to distinguish between *peers* and *peer relationships* when addressing the role of peer relationships in sport. Peers are characterized as nonfamilial agemates who hold relatively equal standing on characteristics such as rank or ability (Rubin et al., 2015). Sport researchers typically constitute an athlete's teammates as their peers given that sport is structured based on shared demographic criteria including age, gender, or competence to ensure fair competition (Smith & Ullrich-French, 2020). Peers are important socializing agents in that they can serve as observational models and provide social comparative information pertaining to one's ability in sport (Smith, 2019). Peer relationships are distinct from the broader label of peers in that they capture an array of direct and indirect experiences that individuals have with their peers due to ongoing social exchanges (Rubin et al., 2015). The formation and maintenance of peer relationships are assumed to offer distinct developmental opportunities for young people depending on their nature and quality. Because there is considerable variability in the types of peer relationships studied in the developmental literature, various theoretical perspectives have been used to inform peer-focused research.

The study of peer relationships has historically been grounded in seminal theories of developmental psychology, such as psychoanalytic, cognitive, and social learning

perspectives (Rubin et al., 2015). Harry Stack Sullivan is a particularly influential figure in the developmental study of interpersonal relationships because his theorizing devoted specific attention to the importance of peer relationships to personality development and psychological function in childhood and adolescence (Evans, 1996; Sullivan, 1953). Sullivan's interpersonal theory of psychiatry posits that interpersonal relationships are important for meeting developmental needs at various life stages ranging from infancy to later life. Early childhood is situated as a period sensitive to acceptance within the broader peer group, which serves to shape youths' perceptions of cooperation, competition, and views toward authority figures like parents and teachers. Progressing through middle to late childhood, the formation and maintenance of dyadic friendships or "*chumships*" serve important developmental functions, such as fulfilling personal needs for intimacy and self-validation. More adaptive peer relationships (e.g., friendship quality, peer acceptance) are theorized to contribute to positive psychological adjustment and well-being of developing youth, whereas less adaptive peer relationships (e.g., friendship conflict, peer rejection) are expected to contribute to forms of maladjustment and psychological ill-being.

The application of contemporary peer frameworks also underscores the importance of conceptualizing peer experiences at varying levels of social complexity (Rubin et al., 2006, 2015), which include personal characteristics, peer interactions, peer relationships, and peer groups. At a foundational level, individuals bring relatively stable personal dispositions, such as temperament, and social orientations into exchanges with other peers. Individual characteristics inform the simplest level of social complexity, *peer*

interactions, which reflect short-term behavioral exchanges between two individuals. *Peer relationships* constitute a longer-term degree of interaction and incorporate shared meanings and emotions within relationships. Relationships are embedded within a larger *peer group*, such as an organized sport team, which are characterized by a collection of individuals that mutually influence one another in a larger social system. As opposed to viewing peer experiences at each level as distinct and independent, they are more accurately represented as interdependent processes (Rubin et al., 2015). In line with this perspective, sport researchers have ascribed importance to examining athlete perceptions of multiple interpersonal experiences to capture socially complex sport environments (Holt et al., 2008; Smith & McDonough, 2008).

Sport researchers who have drawn from developmental perspectives have predominantly targeted perceptions of specific friendships and peer acceptance as tied to the motivation of youth athletes (Smith & Ullrich-French, 2020). More adaptive perceptions of friendship quality with a best friend (on one's sport team), along with being liked and accepted by their broader group of teammates, have been associated with adaptive motivational experiences such as task goal orientation (Ommundsen et al., 2005), higher sport enjoyment and commitment (Garn, 2016; McDonough & Crocker, 2005; Weiss & Smith, 2002), sport continuation (Ullrich-French & Smith, 2009), and more self-determined forms of motivation (Riley & Smith, 2011; Ullrich-French & Smith, 2006; Weiss & Smith, 2002). Sport scholars have also used profile analytic methods to capture how constellations of peer experiences (characterized by combinations of positive friendship quality, friendship conflict, and peer acceptance)

differentially relate to athlete motivation. For example, peer profiles characterized by more adaptive perceptions of social relationships with teammates have been associated with greater sport competence and more self-determined motivation (Smith et al., 2006). Altogether, this line of research illustrates consistent links between adaptive peer relationships and adaptive youth sport motivation.

Relatively less research has examined how perceptions of negative peer relationships may predict athletes' sport motivation (Smith & Ullrich-French, 2020). However, negative peer relationships, such as peer conflict and bullying, have been reported within sport teams (e.g., Evans et al., 2016; Partridge & Knapp, 2016) and hold potential to undermine athletes' sport motivation. For example, greater friendship conflict with a best sport friend has been linked with maladaptive perfectionism (Ommundsen et al., 2005) and higher intra-team conflict perceptions have been positively associated with athlete burnout (i.e., emotional exhaustion, devaluation, and reduced sense of accomplishment; Smith et al., 2010). A recent examination of negative peer relationships also demonstrated that when adolescent athletes reported higher peer rejection and co-rumination with close friends, they also reported higher levels of loneliness and, in turn, higher sport burnout and lower sport engagement (Pacewicz & Smith, 2022). These findings align with broader developmental perspectives linking adverse forms of peer relationships with maladaptive psychological functioning during adolescent development (Sullivan, 1953). Expanding lines of youth sport research to include negative peer relationship constructs represents one avenue to meaningfully contribute to the sport psychology literature.

Grounding peer-focused research within complementary theoretical frameworks may also elucidate ways in which perceptions of peer relationships contribute to motivational sport experiences (Smith & Ullrich-French, 2020). One theoretical framework that has conceptual ties with peer relationships is social identity theory (Tajfel, 1981; Tajfel & Turner, 1979). Social identity is formally defined as "that part of an individual's self-concept which derives from [their] knowledge of [their] membership of a social group (or groups) together with the value and emotional significance attached to that membership" (Tajfel, 1981, p. 255). This definition emanated from experimental work exploring the minimal conditions under which group members would discriminate in favor of one's ingroup compared to outgroups (Tajfel et al., 1971). Participants were randomly assigned to an ingroup, which they were led to believe was based on arbitrary criteria, such as preference for abstract artwork (i.e., being a Klee or Kandinsky) or one's tendency to over- or underestimate the number of dots on a screen. The participants were then instructed to allocate resources, such as small amounts of money, to anonymous ingroup or outgroup members without any other information besides their novel category label. Importantly, the allocation of resources was not zero-sum, and participants could not personally earn money from the task. Results from this study demonstrated that merely being categorized within an ingroup was sufficient for participants to consistently show ingroup favoritism by allocating more resources toward ingroup versus outgroup members. Social identity theory was conceptualized to make sense of the minimal group paradigm and assumed ingroup bias was a motivated process to maintain a positive and distinct sense of self through favorably differentiating one's ingroup from other

outgroups (Tajfel & Turner, 1979).

Building from social identity theory, self-categorization theory (Turner et al., 1987, 1994) aimed to describe the cognitive process that occurs when an individual identifies as a group member, along with the attitudinal and behavioral consequences of identification. This perspective suggests that when individuals identify as a group member, they engage in a process of self-stereotyping which entails a cognitive shift from a personal to a shared social identity. That is, when a social identity is contextually relevant, individuals shift from thinking and acting in terms of their unique sense of self (i.e., I and me) and come to think and act in relation to their self as an interchangeable group member (i.e., we and us). It follows that categorizing as a group member underlies the psychological connection with other ingroup members and facilitates the coordination of attitudes and behaviors to achieve collective group outcomes. Together, social identity theory (Tajfel & Turner, 1979) and self-categorization theory (Turner et al., 1987) comprise the social identity approach (Haslam et al., 2020), which has been adapted to various psychological disciplines to better understand ways in which individual perceptions are structured within group contexts.

The social identity approach has emerged as an important theoretical framework to understand how social identity relates to the motivational experiences of youth athletes (Bruner, Martin, et al., 2020; Haslam et al., 2020). Theoretically, social identities that underpin team membership provide a motivational basis for athletes to advance the shared interests and collective goals of the group (Greenaway et al., 2020). Research has supported this notion and has shown positive associations between perceptions of

athletes' social identity and adaptive motivational experiences such as autonomous motivation and physical self-concept (Murray et al., 2022), effort and commitment to one's sport team (Martin et al., 2018), and sport enjoyment (Murray & Sabiston, 2022), as well as negative associations with athlete burnout (Fransen et al., 2020). Sport researchers have also demonstrated that athlete social identity may amplify the associations between motivation and mental health. For example, self-determined motivation has been positively associated with psychological well-being and negatively associated with psychological distress at moderate to high levels, but not low levels, of social identification among adolescent athletes (Vella et al., 2020). Like the motivationally salient role of peer relationships, social identity has important implications for motivational experiences of youth athletes.

Although peer relationships and social identity both incorporate elements of social connection between ingroup members, the integration of these areas has received little attention (Brewer, 2008). Much of the early research on social identity processes were examined in groups where interpersonal relationships were uncommon or unnecessary, such as in minimal group paradigms (e.g., Tajfel et al., 1971) or perceptions of larger category memberships (e.g., political party, ethnic group; Hogg et al., 2004). Social identity processes were argued to be less relevant within interpersonal groups because when individuals self-categorize as a group member they are proposed to operate within the bounds of their self-concept as an interchangeable group member (their social identity) as opposed to their sense of self as a unique individual (their personal identity; Hogg et al., 2004; Turner et al., 1994). In other words, interpersonal relationships and

group identities are proposed to represent the self in distinct ways and, accordingly, should have different identity properties and motivational concerns (Brewer, 2008; Brewer & Gardner, 1996). However, more recent research has illustrated that social identities can be fostered through the interpersonal relationships between ingroup members (Jans et al., 2011; Postmes, Spears, et al., 2005). From this perspective, social identities are shaped through aspects of interpersonal relationships including perceptions of social validation, observing the behaviors of other group members, and communication about ingroup norms (Postmes, Haslam, et al., 2005). Considering that youth sport represents a context where positive and negative interpersonal relationships can meaningfully contribute to athlete experiences (Smith, 2019), peer relationships may therefore be important to consider relative to athletes' social identity and downstream motivational experiences.

Drawing from tenets of the social identity approach (Haslam et al., 2020), an individual should be more likely to embrace a social identity to the extent that group membership provides the grounds for a positive and distinct sense of self (Tajfel & Turner, 1979). Presumably groups in which athletes perceive more adaptive peer relationships, such as stronger friendship quality and peer acceptance, may provide the basis for a positive and distinct social identity derived from their team membership. Perceptions of negative peer relationships, including friendship conflict and peer rejection, would ostensibly serve a weaker functional role in maintaining a positive and distinct social identity. Furthermore, because peer relationships provide opportunities for social comparison and serve as important sources of social validation (Harter, 2006;

Sullivan, 1953), teammate relationships are likely to contribute to athlete self-perceptions as a group member. For example, researchers leveraging social network methodology have shown that athletes who self-reported more friendship ties within their college club sport team also reported stronger athlete social identity (Graupensperger et al., 2020). Positive peer relationships may affirm an athlete as a central and socially validated group member (i.e., being "one of us"), leading to stronger athlete social identity, whereas negative peer relationships may lead the athlete to identify less strongly with the team. Deeper examination of how positive and negative peer constructs relate to athlete social identity may elucidate potential pathways through which peer relationships contribute to athletes' motivational experiences.

In the interest of drawing theoretical and empirical links between peer relationship constructs and social identity in organized sport, a first step for this dissertation was to take inventory of what constructs have been examined in investigations of athletes' social identity. Specifically, the purpose of study one was to identify antecedents of social identity in youth sport by conducting a scoping review of literature. A scoping review is a form of systematic knowledge synthesis that focuses on mapping key concepts, shedding light on complex issues, and identifying research gaps underpinning a defined body of literature (Arksey & O'Malley, 2005). This systematic approach afforded the opportunity to document empirical trends related to the examination of antecedents of social identity in sport, as well as to elucidate trends in the conceptualization and measurement of social identity. Study one served to contextualize studies two and three, which were constructed to uniquely add to the empirical database

on factors that may contribute to athletes' social identity and, in turn, their sport motivation.

Study two was designed to examine whether athlete social identity mediated the associations between positive peer relationships and adaptive motivational experiences. This investigation afforded a deeper understanding of pathways through which peer relationships link with motivational experiences in youth athletes. Specifically, the purpose of study two was to test whether perceptions of positive peer relationships (i.e., positive friendship quality, peer acceptance) predicted markers of adaptive sport motivation (i.e., autonomous motivation, enthusiastic commitment, sport enjoyment) by way of athlete social identity. It was hypothesized that positive friendship quality and peer acceptance would be directly and positively associated with autonomous motivation, enthusiastic commitment, and sport enjoyment. It was also hypothesized that these associations would be mediated by athlete social identity.

The examination of positive peer relationships and adaptive motivation constructs in study two is complemented, in this dissertation, by examining how negative forms of peer relationships may be tied to athletes' social identity and maladaptive sport motivation. Study three was developed to examine negative peer constructs in association with athlete social identity and motivation, addressing recent calls to examine a broader array of peer constructs in their link to athletes' motivational experiences (Smith & Ullrich-French, 2020). The purpose of study three was to test whether perceptions of negative peer relationships (i.e., friendship conflict, friendship victimization, peer rejection) predicted maladaptive sport motivation (i.e., athlete burnout, controlled

motivation, constrained commitment) by way of athlete social identity. It was hypothesized that friendship conflict, friendship victimization, and peer rejection would be directly and positively associated with athlete burnout, controlled motivation, and constrained commitment. It was also hypothesized that these associations would be mediated by athlete social identity.

Collectively, this set of studies was designed to enhance the understanding of how different features of peer relationships are associated with athletes' social identity and sport motivation. The results from this dissertation make meaningful contributions to sport-psychology literature. The formation of peer relationships and construction of identity are central concerns that relate to adolescents' psychosocial development (e.g., Erikson, 1963). The current work situates organized sport as an important behavioral context in which adolescents' perceptions of peer relationships and their social identity concurrently link with salient psychosocial experiences. Such research may appeal to a broader audience interested in how specific social contexts like sport teams relate to adolescents' psychosocial development, particularly as it relates to the nature of peer relationships and engagement within the broader peer group.

Pertaining to sport psychology scholarship, a notable omission from this research area is the theoretical integration of interpersonal relationships and social identity processes (Brewer, 2008). There is conceptual value in studying how peer relationships may link with social identity considering their shared emphasis on belonging and embeddedness within social groups. Addressing how specific features of positive and negative peer relationships are tied to athletes' social identity is an important step toward

understanding the role of teammates in cultivating athletes' psychological connection to their sport team and, in turn, adaptive and maladaptive motivational aspects of their sport experience. The findings also hold practical significance to youth sport stakeholders, such as coaches, who have a vested interest in promoting developmentally appropriate sport environments (e.g., Camiré et al., 2014). Considering social identity has been linked with several developmental benefits in youth athletes, attending to the formation and maintenance of positive peer relationships may be a means through which coaches can foster athletes' social identity, and in turn, adaptive motivation for their sport.

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CHAPTER 2

STUDY ONE: A SCOPING REVIEW OF ANTECEDENTS OF SOCIAL IDENTITY IN YOUTH SPORT[1]

Organized sport is a context in which athletes can derive part of their sense of self through their team membership (Bruner, Sutcliffe, et al., 2020). Athlete social identity has been conceptualized as a multidimensional aspect of an individual's self-concept that includes the subjective importance of membership in one's sport team (cognitive centrality), positive emotions related to sport team membership (ingroup affect), and the psychological ties binding the self to the team (ingroup ties; Bruner & Benson, 2018; Cameron, 2004). Several lines of research have identified athlete social identity as a contributor to adaptive youth sport experiences such as motivation, positive youth development, and prosocial behavior (Bruner, Balish, et al., 2017; Bruner et al., 2014; Martin, et al., 2018). Given that adolescence is a salient period for identity formation (e.g., Erikson, 1963), understanding factors that may promote or diminish youth athletes' social identity is a promising avenue for researchers to explore and for practitioners to foster developmentally appropriate youth sport environments (Bruner, Sutcliffe, et al., 2020). This study was designed to advance these efforts by (1) identifying possible antecedents of athlete social identity from the extant research literature, (2) documenting the theoretical perspectives and measurement tools used to guide this research, and (3)

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forwarding theoretically and empirically informed directions for future social identity research in youth sport.

Research on athlete social identity has been primarily grounded within social identity (Tajfel & Turner, 1979) and self-categorization (Turner et al., 1987) theory. Social identity is formally defined as "that part of an individual's self-concept which derives from [their] knowledge of [their] membership of a social group (or groups) together with the value and emotional significance attached to that membership" (Tajfel, 1981, p. 255). This definition emanated from experimental work by Tajfel et al. (1971) showing that the novel assignment of individuals to an ingroup was sufficient for intergroup discrimination to occur (e.g., by allocating points toward one's ingroup versus outgroups). This was theorized to maintain a positive and distinct sense of self, achieved through positively differentiating one's ingroup from outgroups. Subsequent work by Turner et al. (1987) posited a cognitive process that occurs when individuals self-categorize as a group member. According to self-categorization theory (Turner et al., 1987, 1994) the extent to which an individual categorizes themselves and others based on a shared set of contextually important attributes (e.g., age, skill level) should shape the individual's perception of normative group behavior and their attraction to and engagement in the group context. Together, social identity theory and self-categorization theory constitute the social identity approach (Haslam, Fransen, & Boen, 2020), which has been useful in examining youth athletes' sport experiences.

Early social identity in sport researchers explored whether the salience of a team identity, as opposed to subgroup or individual identification, was associated with team

performance in high school American football athletes (Murrell & Gaertner, 1992). The results demonstrated that athletes on winning teams (defined as having a performance record above .500) reported higher perceptions of a team identity compared to athletes on losing teams (defined by a performance record below .500). Building from this early work, Bruner et al. (2014) examined how athlete social identity was associated with cohesion and self-reported moral behavior across a competitive high school season. Ingroup affect was positively linked with prosocial behavior toward teammates and was negatively related to antisocial behavior toward teammates through task cohesion. In addition, perceived ingroup ties positively related to prosocial behavior toward teammates, and negatively related to antisocial behavior toward teammates through task cohesion. Extensions to this work have linked stronger athlete social identity with a range of adaptive youth sport experiences including greater autonomous motivation (Murray et al., 2022), sport commitment and effort (Martin et al., 2018), and perceived development of personal and social skills (Bruner, Balish, et al., 2017). Accordingly, sport researchers are working to identify potential factors that are tied to athlete social identity.

Leadership is among the factors that have been examined within organized sport settings. From the social identity theoretical perspective, effective leaders can craft and maintain a team social identity by engaging in identity leadership behaviors (Haslam, Fransen, & Boen, 2020). That is, leaders can strengthen athletes' social identity based on their ability to (1) represent a prototypical group member, (2) act in ways that advance the groups' shared interests, (3) construct values that mobilize the group toward collective action, and (4) embed those values to enact behaviors aligned with the group

identity (Stevens et al., 2021). Perceptions of identity leadership by athletes and coaches have been tied to stronger athlete social identity in organized sport. For example, stronger perceptions of identity leadership by athlete leaders on one's sport team at the beginning of a competitive season predicted higher social identity at the end of the season (Fransen et al., 2022). Also, perceptions of coach identity leadership were positively associated with athlete social identity, which in turn were tied to greater perceived team effort (Krug et al., 2021). Such work shows the potential importance of leadership as tied to athlete social identity of team members within the sport context.

Given the inherently social nature of sport environments, sport researchers have also examined how social interactions with various agents (e.g., teammates, coaches) link to athlete social identity. Teammates engage extensively with one another in sport and have received research attention on their role in shaping athlete social identity strength. For example, using stimulated recall methodology, Bruner, Boardley, et al. (2017) demonstrated that teammate prosocial behaviors were uniformly described as an important factor for increasing athlete social identity on youth hockey teams. On the other hand, antisocial behaviors from teammates were typically described as a form of social interaction that detracted from athlete social identity. These findings were corroborated in a 10-day diary study wherein higher levels of daily reported prosocial teammate behavior were positively associated with social identity strength, while higher frequencies of antisocial teammate behaviors were negatively associated with social identity strength (Benson & Bruner, 2018). Considered in parallel with studies that have found social identity to also predict athlete moral behavior toward teammates and

opponents (Bruner et al., 2014), there may be bi-directional associations between social identity and its possible predictors.

Recognizing the significance of the coaching role in sport, recent work has explored how coach behaviors may influence athlete social identity. For example, Herbison et al. (2020) conducted semistructured interviews with youth ice hockey coaches to examine their perceptions of social identity among their athletes and the ways in which coaches actively developed their team social identity. Emergent themes in the data illustrated that coaches recognized the importance of cognitive and affective components of athlete social identity and engaged in personal behaviors, such as reinforcing the team's norms and values, to actively shape team social identity. In a follow-up study, Herbison et al. (2022) used an electronic recorder to capture how head coaches' sport-related conversations mapped onto identity leadership behaviors during a three-day hockey tournament. The coaches' interactions with ingroup members (e.g., athletes in their team) and outgroup members (e.g., opponents) reflected both positive and negative identity leadership behaviors which hold potential to promote, as well as detract from, athlete social identity.

Athlete perceptions of the sport environment beyond leadership factors and social interactions also may link with athlete social identity. For example, reliance on team members to achieve collective performance outcomes (i.e., outcome interdependence), but not task interdependence, predicted athlete social identity (Bruner et al., 2015). Similarly, athletes' perceptions of groupness, or the belief that their sport team represented a "group," was positively associated with their social identity (Martin et al.,

2017). Within these studies, effects held for both individual and team levels and held for each athlete social identity dimension. This suggests that perceptions of the sport environment beyond leadership factors and social interactions make important contributions to athlete social identity strength.

Collectively, this body of literature shows great potential for deepening understanding of youth sport experiences and identity formation processes. Youth sport is an important developmental context and addressing key knowledge gaps has much potential for addressing the well-being of young people (Smith et al., 2019). Work on social identity in young athletes is in an early stage, making an exploration of research identifying possible antecedents of athlete social identity valuable in foregrounding where knowledge is limited and where opportunities exist to better coordinate efforts in this research area. As social identity research in sport gains momentum, it is important to systematically document factors that may be positively or negatively associated with athlete social identity. Moreover, identifying trends in theory and measurement in the current literature base will inform avenues for future social identity research in sport. The conceptualization of social identity in sport has been primarily grounded in tenets of the social identity approach (Haslam, Fransen, & Boen, 2020; Tajfel & Turner, 1979; Turner et al., 1987). It is unknown to what extent other theoretical perspectives of identity, such as psychosocial theory (Erikson, 1963) or identity theory (Burke & Stets, 2009), have been integrated in athlete social identity research. There is also multiple measurement tools designed to assess athlete social identity. For example, researchers have utilized a single-item scale (e.g., Postmes et al., 2013), amalgams of items from different social

identity scales (e.g., Thomas et al., 2017), and a multidimensional scale adapted to youth sport (Bruner & Benson, 2018), as well as qualitative tools (Herbison et al., 2022), to measure athlete social identity. Taking inventory of the theoretical perspectives and measurement tools used in athlete social identity research is a necessary step in forming generalizable conclusions in this research area. It also can direct scholars to conceptually promising avenues for future study.

The purpose of this study was to advance understanding of possible antecedents of athlete social identity in youth sport. To this end, we conducted a scoping review to (1) identify possible antecedents of social identity, (2) document the theoretical perspectives and measurement tools used to guide extant research, and (3) forward theoretically and empirically informed directions for future social identity research in youth sport. A scoping review is a form of systematic knowledge synthesis that focus on mapping key concepts, shedding light on complex issues, and identifying research gaps underpinning a defined body of literature (Arksey & O'Malley, 2005). Compared to other literature review methods, such as systematic reviews or meta-analyses, scoping reviews offer considerable flexibility in including various types of research evidence (Peters et al., 2020). This is advantageous for the present study, which is designed to summarize and critically review the landscape of an emerging research area, highlight methodological and conceptual trends, and identify avenues for future study.

Method

Established criteria for conducting scoping reviews (Arksey & O'Malley, 2005;

Levac et al., 2010) and Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR; Tricco et al., 2018) guidelines were used for this study. Guided by these criteria, an eight-step process was conducted: (1) identifying the research objectives, (2) consulting with an expert group, (3) generating search criteria, (4) creating and registering a protocol, (5) selecting and screening studies, (6) charting the data, (7) collating and summarizing the results, and (8) re-consulting experts and considering implications of the work.

(1) Identifying the Research Objectives

Emerging research in sport and exercise psychology has shown athlete social identity holds great potential for deepening understanding of youth sport experiences and identity formation processes. Considering early work showing athlete social identity to be associated with important youth sport experiences and outcomes, there was interest in capturing the current understanding of contributors to athlete social identity and how the knowledge base can be advanced. Accordingly, the objectives of this review were to (a) identify possible antecedents of social identity, (b) document the theoretical perspectives and measurement tools used to guide this research, and (c) forward theoretically and empirically informed directions for future social identity research in youth sport.

(2) Consulting with an Expert Group

Refinement of the research process, including search criteria and inclusion and exclusion criteria, was conducted through formal discussions with experts in sport and exercise psychology (n = 3) and adolescent development (n = 2) as well as a university

librarian (n = 1). These individuals were identified given their accessibility to the primary researcher, multidisciplinary expertise in sport and exercise psychology and human development scholarship, and experience with conducting systematic reviews. Specifically, this group reviewed and provided suggestions for the framing of the research question, list of search terms, and inclusion and exclusion criteria that were created by the primary researcher.

(3) Generating Search Criteria

Specific inclusion and exclusion criteria were generated to guide the article retrieval process. First, both quantitative and qualitative studies were included if they examined at least one construct conceived as an antecedent to athlete social identity. Antecedent constructs were self-identified by the research team. Second, studies using different social identity scales were included on the basis that they tapped perceptions of athlete social identity. Athlete social identity refers to the part of an individual's self-concept that derives from membership in their sport team (Bruner, Sutcliffe, et al., 2020). Other conceptually similar forms of social identity, such an individual's sense of self as an athlete (i.e., athletic identity; B. W. Brewer et al., 1993) or as a physical activity group member (i.e., exercise group identity; Stevens et al., 2017) were omitted from this review. Third, articles examining non-athlete perceptions of athlete social identity (e.g., a coach rating their athletes) were omitted. Fourth, article retrieval was delimited to studies including organized sport participants to ensure consistency across the type of social context. Organized sport is broadly characterized as "competitive physical activities characterized by athleticism and/or physical skill…particularly when governed by rules

and conventions to ensure fair competition and reasonably clear and consistent determinations of competitive outcomes" (Eklund & Tenenbaum, 2013, p. xxiii). Studies that included participants in other contexts, such as exercise, physical activity, and physical education settings were omitted. In the interest of understanding the broad landscape of social identity research in organized sport, studies were included regardless of age of participants, sport type, and competition level. However, the results for youth sport studies were summarized in each section to delineate trends specific to youth-focused sport research. Given the absence of strict criteria for defining youth sport, criteria used in previous youth sport reviews was adopted (e.g., Evans et al., 2017). Studies were classified as conducted in youth sport if the sample was primarily between the ages of 7 and 17 and there were no participants older than 20 years of age. Fifth, theses and dissertations were included within the scope of this review. Finally, articles included in this review were delimited to those published in English.

(4) Creating and Registering a Protocol

A protocol was generated in accordance with recommendations from PRISMA-ScR guidelines. The protocol specifies the study objectives and analysis plan including an overview of the search process, eligibility criteria, study selection and extraction process, and data analysis approaches. The protocol was then uploaded to the Open Science Framework: https://doi.org/10.17605/OSF.IO/A43W6.

(5) Selecting and Screening Studies

An initial pilot search was conducted in two databases (PsycINFO and

SPORTDiscus) to refine the search criteria. The search string was amended to exclude studies focused on alternative forms of social identity (e.g., organizational identity, spectator identity) and an additional index term for self-categorization was added. Following this pilot work, four online databases were identified (ProQuest Dissertation and Theses Global, PsycINFO via EBSCOhost, Scopus, SPORTDiscus) and keyword searches were conducted in each database in January 2024. Specific search strings used in each database are presented in Table 2.1. Next, reference lists from articles included in the current review were manually searched to identify additional sources. Then, using Google Scholar, forward searches of studies citing the articles included in this review were conducted. Finally, Google Scholar profiles of social identity scholars in sport were examined. These individuals were identified through a recently published textbook outlining the adaptation of the social identity approach to sport and exercise psychology research (Haslam, Fransen, & Boen, 2020).

Table 2.1

Search String by Database

Database	Search string
ProQuest (Dissertation and Theses Global) *n* = 146	(summary("social identi*" OR "team identi*" OR "group identi*" OR "self-categoriz*") AND summary(athlete* OR sport*) NOT summary(spectator* OR fan* OR employ*) AND la.exact("English"))
PsycINFO (via EBSCOhost) *n* = 688	("social identi*" OR "team identi*" OR "group identi*" OR "self-categoriz*") AND (athlete* OR sport*) NOT (spectator* OR fan* OR employ*)
Scopus *n* = 763	TITLE-ABS-KEY (("social identi*" OR "team identi*" OR "group identi*" OR "self-categoriz*") AND (athlete* OR sport*) AND NOT (spectator* OR fan* OR employ*)) AND (LIMIT-TO (LANGUAGE , "English"))
SPORTDiscus *n* = 562	("social identi*" OR "team identi*" OR "group identi*" OR "self-categoriz*") AND (athlete* OR sport*) NOT (spectator* OR fan* OR employ*)

Note. Database search was conducted on January 10th, 2024. A cumulative total of 2,159 articles were identified from the database search.

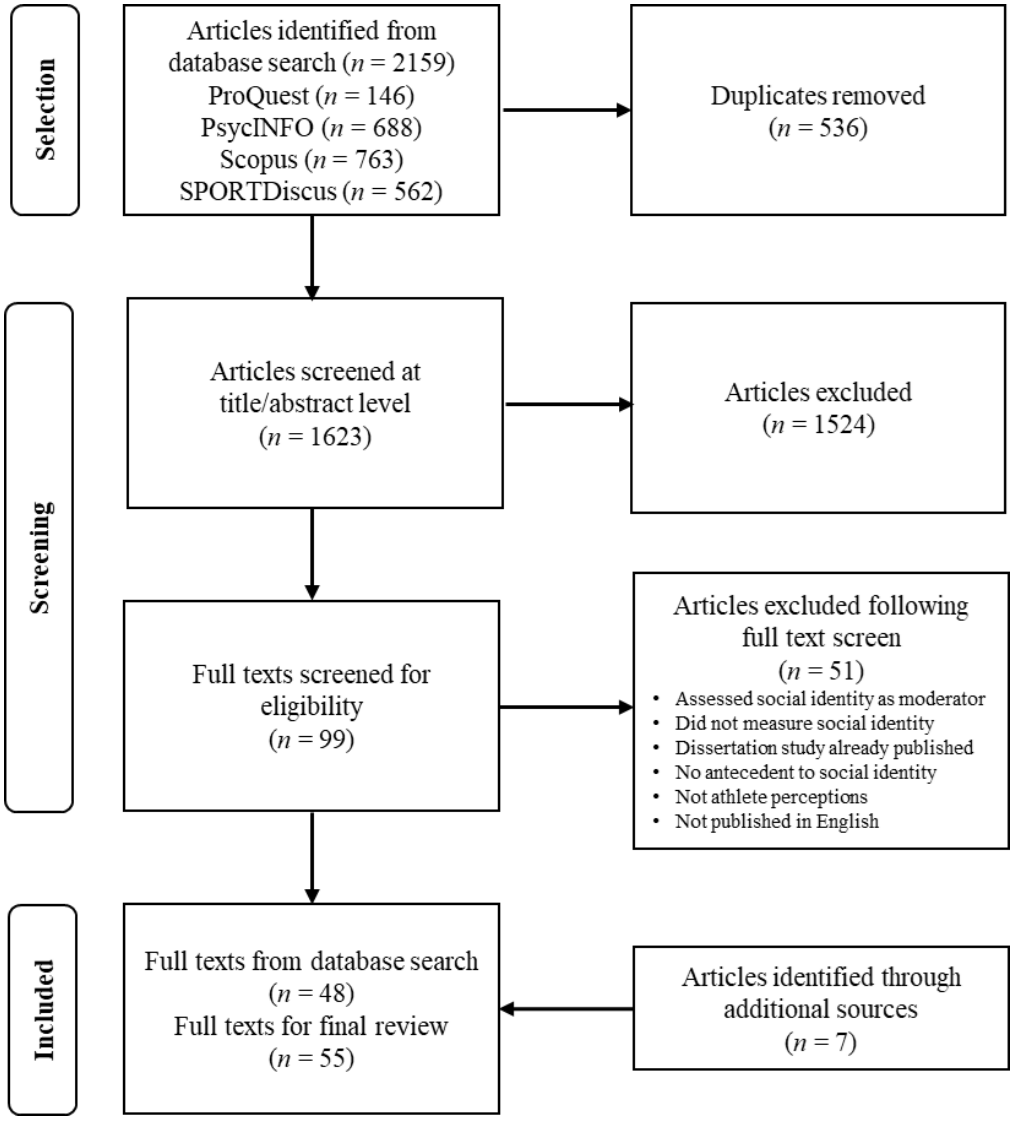
Studies selected from this identification process were imported into Zotero Version 6.0.30 (Roy Rosenzweig Center for History and New Media, 2016), which is an open-source reference management software. The complete list of studies was then imported into Covidence (Veritas Health Innovation, 2015), an online review management software, and duplicates were automatically removed based on title, year, volume, and author. Titles and abstracts were then reviewed based on the set of inclusion and exclusion criteria. Articles identified for eligibility in the review were subsequently screened at the full text level. The article identification and screening processes were conducted by the first author. See Figure 2.1 for a flow diagram of these research steps.

(6) Charting the Data

The first author extracted 10 categories of data from each article that was included in the final review and organized the data within a Microsoft Excel spreadsheet. These categories included: (a) article reference, (b) study aim, (c) study type (e.g., mixed methods) and design (e.g., cross-sectional), (d) sample characteristics (i.e., sample size, age range, mean age, developmental age, gender), (e) sport type, (f) competition level, (g) theoretical framework, (h) antecedent construct and, when applicable, antecedent measure, (i) athlete social identity measure and scale range/labels, and (j) a brief overview of key findings. In addition, a Mixed Method Appraisal Tool (MMAT; Hong et al., 2018) was utilized as a descriptive assessment of study quality. The MMAT is a critical appraisal rubric designed to assess the methodological quality of quantitative, qualitative, mixed-methods, and randomized/non-randomized controlled studies based on criteria such as the sample being representative of the population, the appropriateness of

Figure 2.1

Article Selection and Screening



data collection methods to address the research question, and interpretation of the results being sufficiently substantiated by the data. Each study category on the MMAT contained five evaluation criteria, which were scored by the primary researcher using a "yes," "no," or "can't tell" coding scheme. The total number of "yes" ratings for each study were

summed and used to provide an overall score for study quality. The critical appraisal tool was used to qualify the results that are presented in the thematic analysis.

(7) Collating and Summarizing the Results

Two recommended forms of analyzing data for scoping reviews were performed including a descriptive numerical summary and a qualitative thematic analysis. For the descriptive summary, a flow diagram depicting the article identification and screening process was created based on PRISMA guidelines (see Figure 2.1). Descriptive statistics were then calculated, and presented in tabular format, to summarize the main information extracted from studies included in the review (e.g., sample characteristics, study design). For the thematic analysis, the data were organized thematically and discussed with respect to the primary research objectives, which included (1) possible antecedents of athlete social identity, (2) conceptualization and measurement of athlete social identity, and (3) research gaps and future directions.

(8) Re-Consulting Experts and Considering Implications of the Work

The librarian and team of experts were re-consulted at the end of the review process to obtain feedback on the review findings and potential implications of the work. Given the multidisciplinary expertise of the team of experts, the results and potential contribution of the research are informed by both the sport psychology and the human development knowledge base.

Results

Study Selection

The initial database search yielded 2,159 articles which were imported into Zotero. Articles were then imported to Covidence, and 536 duplicates were removed prior to initial screening. A total of 1,623 articles were screened at the title and abstract level and 99 were deemed eligible for full text review. Following full text review, 48 articles were included for extraction from the database search. Specific reasons for exclusion were examining athlete social identity as a moderator, not measuring athlete social identity, theses and dissertations that were already published in peer-reviewed outlets, not including an antecedent to athlete social identity, not examining athlete perceptions of social identity, and articles not published in English. An additional seven articles were identified for extraction through manual searches. In sum, 55 articles detailing 60 total studies were included in the final scoping review. A summary of the study selection and screening process is in Figure 2.1.

Study Characteristics

Data from 13,288 participants were reported across 55 articles. Note that this total does not account for researchers publishing multiple articles from the same dataset. We signaled this occurrence using matching alphabetic superscripts following the study aim in the coding sheet. These articles were identified when authors reported the use of common participants across studies or when sample characteristics were identical to other studies included in the review. There were 11,833 unique participants when accounting for instances of overlap.

Eighteen studies included data from youth sport participants, 29 studies sampled from adult participants, and 13 sampled from both youth and adults. Studies were predominantly quantitative (n = 50), followed by qualitative (n = 6) and mixed method (n = 4) approaches. Cross-sectional (n = 35) and longitudinal surveys (n = 13) were the most common research designs. Others included quasi-experimental (n = 8), ecological momentary assessment (n = 3), and experimental (n = 1) designs. When studies sampled from only one sport, interdependent team sports (n = 32) were more frequent compared to individual sports (n = 2). However, it was common that studies sampled from multiple sport types (n = 25), which were typically comprised of both team and individual sport participants. One study did not report sport type. A summary of study characteristics for the full sample is in Table 2.2.

Pertaining to the subset of studies conducted within youth sport, most studies were quantitative (n = 13), followed by mixed-methods (n = 3) and qualitative (n = 2). Studies were characterized by cross-sectional (n = 8), quasi-experimental (n = 6), longitudinal (n = 3), and ecological momentary assessment (n = 1) research designs. Studies were more likely to sample from competitive youth sport (n = 13) compared to elite (n = 4) and mixed competitive levels (n = 1). Most youth sport studies sampled from interdependent team sports (n = 14), while four studies sampled from multiple sport types. Study characteristics for youth sport studies are summarized in Table 2.3.

Antecedents of Athlete Social Identity

A descriptive thematic analysis was conducted to categorize key content areas and summarize the research in each respective category. Seven primary themes were

Table 2.2

Overview of Study Characteristics for Full Sample (N = 60)

Study Characteristics	*n*	%
Study Type		
Mixed Method	4	6.7
Qualitative	6	10.0
Quantitative	50	83.3
Study Design		
Cross-Sectional Survey	35	58.3
Ecological Momentary Assessment	3	5.0
Experimental	1	1.7
Longitudinal Survey	13	21.7
Quasi-Experimental	8	13.3
Participant Age		
Adult	29	48.3
Youth	18	30.0
Mixed	13	21.7
Participant Gender		
All Male	17	28.3
All Female	5	8.3
Mixed Male and Female	31	51.7
Breakdown Not Reported	7	11.7
Sport Type		
American Football	1	1.7
Australian Football	1	1.7
Basketball	4	6.7
Cricket	1	1.7
Cycling	1	1.7
Handball	3	5.0
Ice Hockey	6	10.0
Jiu-Jitsu	1	1.7
Multiple Sports	25	41.7
Rugby	3	5.0
Soccer	11	18.3
Volleyball	2	3.3
Not Reported	1	1.7
Skill Level		
Collegiate	5	8.3
Competitive	20	33.3
Elite	21	35.0
Multiple	14	23.3

Table 2.3

Overview of Study Characteristics for Youth Sport (n = 18)

Study Characteristics	*n*	%
Study Type		
Mixed Method	3	16.7
Qualitative	2	11.1
Quantitative	13	72.2
Study Design		
Cross-Sectional Survey	8	44.4
Ecological Momentary Assessment	1	5.6
Longitudinal Survey	3	16.7
Quasi-Experimental	6	33.3
Participant Gender		
All Male	9	50.0
Mixed Male and Female	9	50.0
Sport Type		
American Football	1	5.6
Basketball	2	11.1
Cricket	1	5.6
Ice Hockey	5	27.8
Soccer	5	27.8
Multiple	4	22.2
Skill Level		
Competitive	13	72.2
Elite	4	22.2
Multiple	1	5.6

Note. Percentages for the Sport Type category slightly exceeds a sum of 100% because of rounding.

identified and are presented in descending order based on the frequency of studies in each category. These included leadership factors, environmental factors, personal factors, team factors, interventions, moral factors, and interpersonal factors. Some studies included constructs that were represented in multiple categories. A summary and description of antecedent themes are in Table 2.4.

Table 2.4

Summary of Antecedents of Athlete Social Identity

Category	Subtheme	Description	Antecedent construct(s)
(A) Leadership factors	(a) Leadership styles	Perceived engagement in specific leadership behaviors	Identity leadership, Servant leadership, Transformational leadership, Coach need support, Coach feedback style/humor
	(b) Leadership quality	Degree to which leaders fulfilled their roles and were perceived to have confidence in the team	Athlete leadership quality, Perceived leader confidence
(B) Environmental factors	(a) Time	Stability or change of social identity over time	Autoregressive effects, Time
	(b) Performance	Individual, team, and objective performance	Individual/team/actual performance
	(c) Team size	Size of the sport team	Team size
(C) Personal factors	(a) Age and gender	Self-reported age and gender	Self-reported gender (male, female)
	(b) Tenure	Self-reported tenure on one's team	Individual/team-level tenure
	(c) Psychological factors	Self-perception of one's involvement in the sport team	Personal identity, Identity motives, Perceived fit
	(d) Status	Self-reported leadership and competition status	Self-reported leadership status, Competition status
	(e) Position & ability	Coach-reported position and skill level	Position (i.e., back, forward), Ability (i.e., top 10, bottom 10)
(D) Team factors	(a) Group processes	Athlete perceptions of processes within the group environment	Interdependence, Groupness, Motivational climate, Team drinking occasions
	(b) Socialization processes	Perceived attitudes and behaviors toward new team members and a team merger	Socialization tactics, Factors surrounding a team merger
(E) Interventions	(a) Leadership	Interventions that targeted shared leadership processes	5R Shared Leadership Program
	(b) Team building	Interventions that targeted group dynamics	Personal-disclosure mutual-sharing, Mental health literacy, and Team-building interventions
(F) Moral factors	(a) Prosocial & antisocial behaviors	Self-reported teammate engagement in prosocial and antisocial behaviors	Teammate prosocial and antisocial behaviors
	(b) Coach fairness	Perceived fairness of coaches' evaluation, treatment, and procedures	Coach fairness, Procedural and distributive justice
(G) Interpersonal factors	(a) Social support	Degree to which athletes feel supported by other social agents	Social support profiles, Perceived available social support
	(b) Social Ties	Social ties with other group members	Friendship ties, social interaction ties, Match-communication ties, Informational support ties, Receiving social identity behaviors

Leadership Factors

The most prominent possible antecedent of athlete social identity was leadership of coaches and teammates, which was delineated into two subthemes: leadership styles (*n* = 14) and leadership quality (*n* = 8). Whereas leadership styles reflected the perceived engagement of the coach and/or athletes in specific leadership behaviors, leadership quality captured the degree to which leaders fulfilled their roles and were perceived to have confidence in the team. In total, five studies examining leadership factors sampled from youth sport athletes.[2]

Leadership Styles. A consistent trend across several studies was that higher identity leadership from coaches and formal captains positively predicted athlete social identity, both cross-sectionally and longitudinally (Figgins et al., 2024, study 1 & 2; Krug et al., 2021; Miller et al., 2020, study 1 & 2; Stevens et al., 2018, 2020). It is noteworthy that identity leadership from coaches, formal captains, and informal leaders each made unique contributions to athlete social identity (Fransen et al., 2020). Broader teammate identity leadership networks were also positively associated with athlete social identity networks over time (Bruner et al., 2022), which was most pronounced for the ingroup ties dimension.

Researchers have also explored how other leadership styles were associated with athlete social identity. For example, athletes who perceived higher servant leadership behaviors from their leaders (humility, service, and trust/inclusion) also reported stronger social identity (Wang et al., 2021; Worley et al., 2020). Similarly, elite cyclists'

[2] Studies reporting on data from youth sport participants are denoted by †.

perceptions of formal captain transformational leadership positively predicted athlete social identity (De Cuyper et al., 2016). When parsing out transformational leadership subscales, positive associations were only significant for the leader's ability to act as a role model (idealized influence; De Cuyper et al., 2016). Specific coach behaviors including perceived engagement in need-supportive behaviors, positive/instructive feedback styles, and use of humor have also been positively linked to athlete social identity (De Backer et al., 2011, study 1; Høigaard et al., 2017†).

Leadership Quality. Leadership quality was assessed through a nomination technique developed by Fransen et al. (2014). Participants rated their teammates according to four leadership dimensions (i.e., task, social, motivational, external) and responses were then used to create a composite or dimensional score for the quality of leadership from teammates. Stronger global athlete leadership quality was consistently linked with greater athlete social identity in youth and adult athletes (Fransen et al., 2014, 2016, 2020; López-Gajardo et al., 2021, study 1†; López-Gajardo et al., 2022). However, there was equivocal support when examining the contribution of specific athlete leadership quality dimensions (task and social leadership quality; López-Gajardo et al., 2021, study 2†). Additionally, two quasi-experimental studies randomly assigned athletes to compete in small groups, each with a confederate team captain trained to express high, neutral, or low competence and encouragement during a basketball free-throw or soccer performance task. Across both studies, athletes reporting higher perceived confidence of the leader in the team also reported higher social identity scores following the performance task (Fransen et al., 2015†; Fransen et al., 2016†).

Youth Sport Summary. While leadership factors were most frequently studied for the sample overall, only one youth sport study examined leadership style as an antecedent of social identity in youth sport. Comparatively more research examined athlete leadership quality and used cross-sectional, longitudinal, and quasi-experimental research designs. These studies consistently support that stronger athlete leadership quality is positively associated with athlete social identity.

Environmental Factors

Fourteen studies included environmental factors which captured situations or features tied to the sport team. Specific subthemes included time (n = 10), performance (n = 5), and team size (n = 1). Four studies that examined environmental factors were conducted within youth sport.

Time. Herbison et al. (2021†) tested the effect of time on athletes' engagement in social identity behaviors across a 3-day hockey tournament and found that athlete behaviors indicative of cognitive centrality, but not ingroup affect or ingroup ties, increased as the tournament progressed. Other researchers have found no effect of time on athlete social identity at between-person and/or between-team levels with young adult samples (Evans et al., 2023; McIntyre, 2022). Significant autoregressive effects of athlete social identity were reported in seven studies (Campo et al., 2018; Fransen et al., 2022; López-Gajardo et al., 2022, study 2†; Stevens et al., 2020; Thomas et al., 2017, 2019), while one study tested but did not report autoregressive effects (Figgens et al., 2024, study 2).

Performance. In a four-wave longitudinal study, researchers did not find any

significant associations between individual, team, nor objective performance and athlete social identity (Thomas et al., 2019). Other research has shown that performance record can differentiate athlete social identity scores. Youth athletes classified as belonging to a winning team (i.e., performance record above .500) reported higher athlete social identity compared to athletes on losing teams (i.e., performance record below .500; Murrell & Gaertner, 1992†). Two studies employed a qualitative conversational analysis to explore how performance contexts linked with athlete social identity within a professional soccer team (Zucchermaglio, 2005; Zucchermaglio & Albany, 2011). Following a pregame, post-victory, and post-defeat technical meeting, conversations were coded based on pronouns used by team members and athlete social identity was inferred through the frequency of collective pronouns (e.g., "we," "us"). Following defeat, team members were more likely to use individual pronouns and subgroup-referring expressions (e.g., defenders) to attribute blame for the loss to others. On the other hand, following a victory, team members used less subgroup-referring expressions and more collective pronouns referring to the team as a whole. Finally, one study found athlete social identity dimension scores did not differ by performance context in youth sport (i.e., intergroup competition, practice, or social event with team; Benson & Bruner, 2018).

Team Size. Team size was included as a covariate of social identity in one study and a non-significant association with athlete social identity was observed after accounting for gender, tenure, and network ties with teammates (Graupensperger, Panza, & Evans, 2020).

Youth Sport Summary. Time and performance were the primary environmental

factors explored concerning athlete social identity. The available literature in this area showed that athlete social identity may increase, or show stability, over time. However, measurement intervals and the operationalization of time, performance, and athlete social identity varied between youth sport studies, which prevents a clear interpretation of how time or performance may link with athlete social identity.

Personal Factors

Personal factors were included in 11 studies and represented athletes' self-perceptions about their involvement in the sport team, along with personal demographic characteristics. Specific subthemes included participant age and gender (n = 4), tenure (n = 4), psychological factors (n = 3), status (n = 2), and position and ability (n = 1). Three studies examining personal factors were conducted within youth sport.

Age and Gender. Participant age was included as a covariate in two studies. Age did not significantly predict global athlete social identity (Høigaard et al., 2017†), but significantly negatively predicted cognitive centrality (Benson & Bruner, 2018†). In addition, participant gender (i.e., male, female) was incorporated as a covariate in regression-based analyses in four studies (Benson & Bruner, 2018†; Graupensperger, Panza, Budziszewski, & Evans, 2020; Graupensperger, Panza, & Evans, 2020; Høigaard et al., 2017†). Most associations were not significant apart from gender positively predicting ingroup affect in youth hockey players (Benson & Bruner, 2018†). In this study, male players reported higher ingroup affect compared to female players.

Tenure. Athletes' tenure on college club sport teams was positively associated with global athlete social identity (Graupensperger, Panza, Budziszewski, & Evans,

2020), along with stronger cognitive centrality, ingroup affect, and ingroup ties (Graupensperger Panza, & Evans, 2020). Teams with longer tenure on average also reported higher global social identity scores than teams with lower tenure (Graupensperger, Panza, Budziszewski, & Evans, 2020). Other researchers have observed non-significant associations between tenure and social identity (Rodrigues et al., 2019; Shah et al., 2023).

Psychological Factors. Thomas et al. (2017) explored individual, social, and collective motives for athletes' identification with their sport team. The study identified four personal identity motives (self-esteem, distinctiveness, meaning, and efficacy), three social identity motives (belonging, meaning, continuity), and one collective identity motive (i.e., group distinctiveness) which were positively associated with athlete social identity. Also, Zepp and Kleinert (2015) examined the association between perceived symmetric fit (similarity between athlete and their team) and complementary fit (how athletes complement their team) based on norms/values, communication, and team spirit with athlete social identity. Results showed higher perceived fit, but not complementary fit, was positively associated with athlete social identity. Another study examined the interplay of personal and social identity by having participants watch a video of themselves playing in a recent competition and rating whether they experienced competitive emotions as an individual or as a group member (Campo et al., 2018). Personal identity, operationalized as experiencing emotions as an individual, was negatively associated with athlete social identity, operationalized as experiencing emotions as a group member.

Status. Martin et al. (2017†) explored whether self-reported leadership status (i.e., leader versus non-leader, informal versus formal leader) predicted athlete social identity in high school athletes. Results indicated that athletes who were classified as formal or informal leaders reported significantly higher cognitive centrality, ingroup affect, and ingroup ties compared to non-leaders. However, formal and informal leaders did not significantly differ from one another on social identity scores. Rodrigues et al. (2019) also showed higher competition status (i.e., athletes who engaged in competitions outside of the training facility versus those who competed recreationally within the club) positively predicted athlete social identity in a Jiu Jitsu club, while belt status (i.e., high, low) was not significantly associated with athlete social identity.

Position and Ability. Dimundo et al. (2022) explored whether playing position and player ranking in an English Premiership rugby academy differentiated social identity scores. Academy coaches classified thirty rugby athletes by position (forward or back) and playing ability (top 10 and bottom 10) and the groupings were compared by athlete-reported social identity scores. No significant differences were observed by playing position or ability on athlete social identity.

Youth Sport Summary. Two studies examined the association of age with athlete social identity and one study examined self-reported leadership status. There were mixed associations between age and athlete social identity. These studies used different measurement tools for athlete social identity—one modeling athlete social identity as a unidimensional construct and one as a multidimensional construct. Age may be important to consider when examining specific athlete social identity dimensions, such as cognitive

centrality. Youth athletes' leadership status may also be important across different social identity dimensions.

Team Factors

Eight studies examined the association between team factors and athlete social identity. Team factors were represented by two subthemes characterized by athletes' perceptions of group processes (n = 6) and socialization processes (n = 2). Four of these studies were conducted in youth sport.

Group Processes. Higher perceptions of outcome interdependence, which captures the degree to which teammates influence personal and collective outcomes, and groupness, indicating the extent to which the sport team represented a group, positively predicted cognitive centrality, ingroup affect, and ingroup ties at both individual and team levels (Bruner et al., 2015†; Martin et al., 2017†). In addition, athletes' perceptions of a mastery motivational climate were positively associated with athlete social identity (De Backer et al., 2015, study 1 & 2), whereas a performance motivational climate was negatively associated with athlete social identity in one of two studies (De Backer et al., 2015, study 1) and not associated in the other (De Backer et al., 2015, study 2). Moreover, elite hockey players who perceived more strongly that their team had established a shared mental model regarding their team attack pattern exhibited stronger athlete social identity (Giske et al., 2017). In a qualitative study exploring the interplay between group processes surrounding college student-athlete drinking behavior and their social identity (Zhou & Heim, 2016), athletes described the use of team drinking occasions as a vehicle to foster social ties within the sport team, to uphold and regulate

social standards that aligned with the shared group identity, and to signal and accentuate group differentiation.

Socialization Processes. Boen et al. (2008†) examined factors that predicted athlete social identity with a merged youth basketball team. They found that athletes' pre-merger club social identity was the strongest positive predictor of their merged club social identity. The perceived necessity, success, and satisfaction of the merger process also played a significant role in positively shaping athlete social identity following the merger. Moreover, higher perceptions that their coaches provided new players with individualized role information upon group entry (i.e., coach-initiated role communication tactics) positively predicted social identity change scores over an approximately 3-month period in youth athletes (Chamberlain et al., 2021†). On the other hand, the degree to which veterans shared information and coordinated activities for newcomers (i.e., serial tactics and social inclusionary tactics) did not predict social identity change scores.

Youth Sport Summary. Half of the studies examining team factors were examined within youth sport. Features of group structure (i.e., interdependence, group boundaries) were positively associated with athlete social identity at individual and team levels. Also, factors around an athlete's transition to a new team, along with how new members are socialized, were both important for their social identity.

Interventions

Seven studies tested intervention programs designed to enhance athlete social identity within competitive sport teams. Three of the studies focused on a leadership-

based intervention and were exclusively applied to elite athlete samples comprised of young adults. Four of the studies, all conducted with youth sport athletes, assessed team-building interventions.

Leadership. Three studies evaluated the effectiveness of the 5R Shared Leadership Program (5Rs), a program that teaches the implementation of identity leadership principles to sport team leaders. Both quantitative and qualitative data suggest that the 5Rs program is an effective means to enhance athlete social identity relative to control groups (Fransen et al., 2020; Mertens et al., 2020, 2021). This pattern was consistent for male and female athletes, groups participating in earlier and lagged time points, and at a third follow-up measurement point (Mertens et al., 2021).

Team-Building. Four youth sport studies examined if team-building interventions designed to target group dynamics were able to foster athlete social identity. Two studies examined the impact of a Personal-Disclosure Mutual-Sharing (PDMS) intervention, which involves the public disclosure of personal stories previously unknown to other team members. Barker et al. (2014†) conducted two PDMS sessions with an elite youth cricket team and found that athlete social identity increased from baseline to post first session (Cohen's $d = .79$), but not from the midpoint to post second session. Similar work with an elite youth soccer team found no significant differences between athlete social identity at baseline, post intervention, follow-up, or a maintenance time-point (Evans et al., 2013†). Panza et al. (2022†) tested a brief workshop-based intervention (Team Talk) aimed at increasing adolescent athletes' mental health literacy while connecting the intervention content to athlete social identity processes. Athletes reported a modest

increase in social identity scores from baseline to post-intervention (Cohen's d = .35). Finally, Tassi et al. (2023†) implemented an 8-week team-building intervention within a professional youth soccer club, which was integrated into teams' technical-tactical training tasks. Intervention content was designed to target the team environment (e.g., togetherness), team structures (e.g., role clarity), and team processes (e.g., communication). Relative to a control group, the experimental group showed a significant increase in athlete social identity scores from a pretest to posttest and from the pretest to a follow-up.

Youth Sport Summary. A prevalent theme across team-building interventions was relationship-oriented strategies to promote team unity, such as generating social support between team members and establishing distinct team norms and values. In addition, studies examining athlete social identity at more than two time points showed evidence of a maintenance effect following an initial increase in athlete social identity scores. That is, after an initial significant increase in athlete social identity scores from baseline to time two, scores did not significantly differ between time two and subsequent time points (Barker et al., 2014; Tassi et al., 2023).

Moral Factors

Six studies examined features of moral behavior in the sport environment. This category was represented by subthemes of perceived prosocial and antisocial moral behaviors (n = 3) and perceived fairness of the coach (n = 3). Three studies examining moral factors were conducted within youth sport contexts and focused exclusively on prosocial and antisocial teammate behaviors.

Prosocial and Antisocial Behaviors. Two studies qualitatively examined the interplay between prosocial and antisocial teammate behaviors with athlete social identity. Using stimulated recall interviews, one study illustrated that prosocial interactions with teammates uniformly enhanced athlete social identity, while the link between antisocial behavior and social identity was contingent on antisocial behavior frequency (Bruner, Boardley, Allan, Root, et al., 2017). Whereas low-to-median frequencies of antisocial teammate behaviors typically detracted from athlete social identity, this link was not found among teams with high frequencies of antisocial behavior. Another study used a narrative interview approach to parse out how different moral climates were associated with athlete social identity (Bruner, Boardley, Allan, Forest, et al., 2017†). The authors identified three primary climates including: (1) a family-oriented climate characterized by high prosocial and low antisocial behavior, which associated with high social identity, (2) a performance-oriented climate characterized by moral behavior and social identity contingent on team success, and (3) a dominance-oriented climate characterized by high antisocial, low prosocial behaviors, and low social identity. In line with this pattern of results, a quantitative examination illustrated that athletes reported higher scores on each social identity dimension (i.e., cognitive centrality, ingroup affect, ingroup ties) on days when they experienced a higher frequency of prosocial behaviors (Benson & Bruner, 2018†). Meanwhile, athletes reported lower ingroup affect and ingroup ties on days with a higher frequency of antisocial behaviors.

Coach Fairness. Perceived moral behavior from coaches also uniquely predicted

athlete social identity. Global perceived fairness of the coach was positively associated with athlete social identity (De Backer et al., 2011, study 1; De Backer et al., 2022). When parsing coach fairness into individual dimensions, distributive justice (perceived fairness for distributing playing time) positively predicted athlete social identity, while procedural justice (perceived fairness of outcomes for the group as a whole) was not significantly related to athlete social identity (De Backer et al., 2011, study 2).

Youth Sport Summary. Prosocial and antisocial teammate behaviors were the most studied moral factor concerning youth athletes' social identity. Qualitative and quantitative studies show that prosocial teammate behaviors were important for promoting athlete social identity. The association between antisocial teammate behavior and athlete social identity was less consistent in these studies and may depend on contextual features of the sport environment (e.g., team performance).

Interpersonal Factors

Interpersonal factors were assessed in six of the studies. Subthemes included perceived social support (n = 2) and social ties with other agents in the sport environment (n = 4). Two studies examining interpersonal factors were conducted within youth sport contexts.

Social Support. Bruner et al. (2021†) investigated how the co-occurrence of social support from coaches, family, and friends (teammates and non-teammates) was associated with global athlete social identity. Latent profiles characterized by higher social support corresponded with higher social identity scores compared to average, diminished, and lower support profiles (Cohen's $d \geq .67$). Also, emotional support and

esteem support has been positively associated with athlete social identity, while null effects were observed for informational support and tangible support (Akgül & Karafil, 2022).

Social Ties. Three studies used social network analysis to examine how the frequency of ties among team members was linked with athlete social identity at individual and group levels. More frequent friendship and social interaction ties (outdegree centrality, indegree centrality, team density) in college club sport teams and a Jiu Jitsu club were positively associated with athlete social identity (Graupensperger, Panza, & Evans, 2020; Rodrigues et al., 2019). However, the nature of these associations differed among social identity dimensions. In addition, athletes with more reciprocal teammate ties pertaining to match communication also reported higher global social identity, whereas ties pertaining to performance support were unrelated to athlete social identity (Shah et al., 2023).

Researchers also considered social interactions with other agents in the sport environment including coaches and parents. Herbison et al. (2021†) examined associations between athletes' reception of behaviors indicative of social identity (from teammates, coaches, and parents) and engaging in social identity behaviors during a 3-day youth hockey tournament. Results showed higher received cognitive centrality behaviors predicted athletes' engagement in cognitive centrality and ingroup affect behaviors, while higher received ingroup affect behaviors predicted athletes' cognitive centrality and ingroup affect behaviors.

Youth Sport Summary. The interpersonal factors category featured the lowest

frequency of youth sport studies compared to other antecedent categories. The limited research in this area showcases an opportunity to increase empirical understanding of how social interactions and relationships with teammates, coaches, and parents may be tied to athlete social identity. However, the relative contribution of each social agent, or the combination of interactions with various social agents, to athlete social identity was not distinguished in these studies.

Overview of Theoretical Frameworks

Most studies identified a theoretical or conceptual framework that informed the study rationale. Studies were predominantly grounded in social identity theory (*n* = 27; Tajfel & Turner, 1979), self-categorization theory (*n* = 13; Turner et al., 1987), and/or the social identity approach (*n* = 31; Haslam, Fransen, & Boen, 2020), which is a metatheory incorporating social identity and self-categorization theories. Cameron's (2004) model of social identity was also cited frequently (*n* = 11). There was an array of other supporting theoretical perspectives which were used infrequently and often in combination with social identity theory or the social identity approach. Theories included on multiple occasions included organizational justice theory (*n* = 5; Greenberg, 1990), Carron's model of cohesion (*n* = 5; Carron, 1982; Carron et al., 1985), and the group engagement model (*n* = 4; Tyler & Blader, 2003). Achievement goal theory (Ames, 1992), grounded theory of inspirational coach leadership (Figgins et al., 2019), self-determination theory (Deci & Ryan, 2000), social cognitive theory (Bandura, 1991), and the theory of challenge and threat states (Jones et al., 2009) were each cited twice. Remaining theories were cited only once. Two studies did not report a theoretical or conceptual framework.

Specific to youth sport studies, social identity theory (n = 10), Cameron's (2004) model of social identity (n = 6), and the social identity approach (n = 5) were the most frequently cited theoretical frameworks. For theories that were cited in both youth and adult/mixed samples, Cameron's model of social identity was the only theory cited more often in youth sport compared to adult/mixed sport samples. See Table 2.5 for a breakdown of theoretical frameworks cited by studies for adult/mixed and youth samples.

Table 2.5

Frequency of Theoretical Frameworks

Theoretical framework	Adult/mixed	Youth
Achievement goal theory	2	-
Cameron's model of social identity	5	6
Carron and spink's model for team building	-	1
Carron's model of cohesion	4	1
Ecological dynamics approach	1	-
Functional leadership theory	1	-
Grounded theory of inspirational coach leadership	2	-
Group engagement model	4	-
Ingroup identity model	-	1
Intergroup emotion theory	1	-
Interpersonal sense making theory	-	1
Jorm's mental health literacy framework	-	1
Motivated identity construction theory	1	-
Organizational justice theory	5	-
Referent informational influence theory	1	-
Self-categorization theory	10	3
Self-determination theory	2	-
Self-efficacy theory	-	1
Social cognitive theory	-	2
Social identity approach	26	5
Social identity model of collective action	1	-
Social identity theory	17	10
Social network theory	1	-
Social norms approach to behavior change	-	1
Steiner's model of group effectiveness	1	-
Theory of challenge and threat states	2	-
Transformational leadership approach	1	-
No theory reported	1	1

Athlete Social Identity Measurement

Operationalization of Athlete Social Identity

Athlete social identity was operationalized using different approaches and measurement tools (see Table 2.6). The most common way to assess athlete social identity in adults or mixed participant samples was through a Likert scale using adapted items from previous social identity measures (n = 20; e.g., Boen et al., 2008; Doosje et al., 1995). In these cases, researchers modeled athlete social identity as a unidimensional construct. The next most prevalent approach (n = 11) was using the Social Identity Questionnaire for Sport (SIQS; Bruner & Benson, 2018), which is a multidimensional social identity scale adapted to sport based on Cameron's (2004) social identity framework. Studies used 3-item, 9-item, and 12-item versions of this measure. Studies using the SIQS modeled athlete social identity as both a unidimensional and multidimensional construct. Other Likert scales used to assess athlete social identity included the Single Item Social Identification scale (n = 3; Postmes et al., 2013), Four Item Social Identification scale (n = 2; Postmes et al., 2013), and self-created to fit the context of the study (n = 2; Boen et al., 2008; Murrell & Gaertner, 1992). Specific to youth sport studies, researchers most commonly used the SIQS (n = 6) or an amalgam of items adapted from previous research (n = 5).

Researchers leveraged several other approaches to capture athlete social identity. Two studies used conversational analysis to assess markers of social identity through athletes' use of collective pronouns (Zucchermaglio, 2005; Zucchermaglio & Alby, 2011). One youth sport study assessed athlete social identity by coding behaviors

Table 2.6

Overview of Social Identity Operationalization and Measurement Tools

Study characteristics	Adult/mixed	Youth
Social identity operationalization		
Collective pronoun use	2	-
Created for study	-	2
Engagement in social identity behaviors	-	1
Items adapted from previous scales	20	5
Four Item Social Identification (FISI) Scale	2	-
Nomination technique	1	-
Rating collective emotions	1	-
Single Item Social Identification (SISI) Scale	3	2
Social Identity Questionnaire for Sport (SIQS)	11	6
Not applicable	2	2
Social identity scale range		
-3 to 3	4	2
0 to 6	2	-
0 to 10	1	-
1 to 5	4	2
1 to 7	23	10
Discrepancy in manuscript	1	-
Not applicable	4	3
Not reported	3	1
Scale anchor points		
Completely disagree - completely agree	2	1
Disagree completely - agree completely	1	1
Do not agree at all - agree completely	2	1
Do not agree at all - completely agree	2	1
Fully disagree - fully agree	2	-
I do not agree at all - fully agree	1	-
Not at all - very much	1	-
Not at all true - very true	2	-
Strongly disagree - strongly agree	23	10
Totally disagree - totally agree	1	-
Discrepancy in manuscript	1	-
Not applicable	4	3
Not reported	3	1

indicative of social identity dimensions (i.e., cognitive centrality, ingroup affect, ingroup ties) using an electronic recorder (Herbison et al., 2021†). Another study assessed athlete social identity through a sociometric technique where participants rated the extent to which they perceived each teammate to identify with their sport team (Bruner et al., 2022). Responses were subsequently used to create average team-level scores for the three social identity dimensions. Finally, Campo et al. (2018) assessed social identity by instructing participants in their study to watch a video of themselves playing in a volleyball match (within four days of a competition) and to rate the extent to which they experienced their emotions as a team member.

Scale Ranges and Anchor Points

Researchers who employed Likert scales varied in the use of scale ranges and anchor points. Pertaining to scale ranges used for adult or mixed samples, athlete social identity was predominantly measured on a 1 to 7 scale (n = 23). However, studies also used 1 to 5 (n = 4), -3 to 3 (n = 4), 0 to 6 (n = 2), and 0 to 10 scale ranges (n = 1). The use of anchor points was also variable across studies. The most common anchor points were *strongly disagree-strongly agree* (n = 23), followed by *do not agree at all-agree completely* (n = 2), *do not agree at all-completely agree* (n = 2), *completely disagree-completely agree* (n = 2), *fully disagree-fully agree* (n = 2), and *not at all true-very true* (n = 2). Other variations are reported in Table 2.6. Two studies reported using an intermediary scale label, while all other studies reported using scale labels only for each pole. Three studies did not report the scale range or anchor points. One study reported conflicting scale information such that the scale range did not map onto the anchor points

identified in the manuscript. In youth sport studies, most studies assessed athlete social identity on a 1 to 7 scale (n = 10) with anchor points ranging from *strongly disagree-strongly agree* (n = 10). A summary of the scale information delineated by adult/mixed and youth sport samples is in Table 2.6.

Assessment of Study Quality

Overall study quality for the 60 studies in this review was 4.6 out of 5.0 indicating that most studies had moderate- to high-quality reporting practices. Seventeen studies (28%) had a score of 4 out of 5. The most common limitation across studies was potential for non-response bias such as in a coach refusing participation due to heavy team workloads or participant attrition in longitudinal studies. The exclusion of such participants could presumably reduce meaningful variation in athlete social identity scores. Four studies (7%) had a score of 3 or lower, which was primarily due to inadequate reporting of participant or analysis characteristics.

Discussion

The purpose of this study was to advance understanding of athlete social identity in youth sport by identifying possible antecedents, documenting the theoretical underpinnings and measurement tools used in this research, and forwarding theoretically and empirically informed future research directions. A total of 55 articles detailing 60 studies were included, 18 of which were conducted within youth sport. Possible antecedents of athlete social identity were organized into seven categories including leadership factors, environmental factors, personal factors, team factors, interventions,

moral factors, and interpersonal factors. Theories primarily used in this research were social identity theory and self-categorization theory (Tajfel & Turner, 1979; Turner et al., 1987). Complementary theories were used with less frequency and consistency. Results also showed cross-sectional survey-based studies were the most common study design, which employed varying measurement practices for athlete social identity. This scoping review describes the current state of literature for examining possible antecedents to athlete social identity in organized sport.

Possible Antecedents of Athlete Social Identity

Despite youth-focused research being featured in each antecedent category, the overall proportion of youth studies to adult or mixed-age studies was consistently small. Leadership factors were the most frequently studied antecedent of athlete social identity in both youth and adult/mixed-aged samples. This could be due to the advancement of the social identity approach to leadership (Haslam, Reicher, & Platow, 2020), which has been an increasingly popular lens to study the importance of athlete social identity in organized sport (Stevens et al., 2021). Most youth studies examined leadership quality rather than leadership style, perhaps due to the lack of measurement tools apt for use with youth athletes. A recent study adapted a widely used measure of identity leadership to better suit young athlete populations (Butalia et al., 2024), which is likely an important step to generate more youth-focused research on how leadership styles contribute to athlete social identity. Ensuring that theory and measurement tools can be appropriately generalized to youth populations, along with grounding theory and measurement development within youth populations, could be important to stimulate continued work

on social identity with young athletes.

Environmental factors and personal factors were also prominent antecedent categories, particularly for adult and mixed-aged samples. Youth sport research in these areas was comparatively less common and tended to conceptualize environmental (e.g., performance) and personal (e.g., athlete age) variables as covariates in the study design. Measurement practices also varied which prohibited a clear comparison of how environmental and personal factors may link with youth athletes' social identity across studies. A stronger integration of environmental and personal factors in youth sport study designs would meaningfully contribute to the empirical understanding of athlete social identity. Building from the work in this area to date, researchers could attend to environmental factors, such as performance, and examine potential fluctuations in youth athletes' social identity following short-term (i.e., after a win versus a loss) or long-term (e.g., team record over a competitive season) performance outcomes. Given the role of personal factors such as age and gender in shaping youths' self-perceptions, sport researchers could examine age- and gender- related variation in social identity among youth athletes. Collectively, youth-focused research would benefit from a more systematic examination of how environmental and personal factors contribute to athletes' social identity.

It is notable that interpersonal factors category had the lowest frequency of studies for both youth and adult and mixed-aged samples when other antecedent categories featured relationship-oriented strategies or constructs designed to enhance athletes' social identity. For instance, interventions designed to foster youth athletes' social identity

employed team-building strategies, such as generating social support and creating shared norms and values among team members (Barker et al., 2014; Panza et al., 2022). Moreover, youth sport studies within the team factors and moral factors categories illustrated the important contribution of social interactions in the sport environment, such as coaches' communication tactics with new team members or the receipt of prosocial and antisocial teammate behaviors, to athletes' social identity (Benson & Bruner, 2018; Chamberlain et al., 2021). Yet, minimal attention was devoted to the quality of athletes' relationships with their teammates, coaches, or parents as possible antecedents. Given that identity development occurs within the context of interpersonal relationships (Branje et al., 2021), these efforts would shed light on how aspects of the social sport environment impact athletes' social identity in youth sport.

Theoretical Frameworks

Social identity theory and self-categorization theory, broadly referred to as the social identity approach, were the most utilized theoretical frameworks in this review (Haslam, Fransen, & Boen, 2020; Tajfel & Turner, 1979; Turner et al., 1987). This is understandable considering these theories explain how individuals define part of their self-concept through group membership. The social identity approach also outlines specific leader behaviors that foster social identity (Haslam, Fransen, & Boen, 2020), supporting why leadership factors were the most prominently studied possible antecedents across studies in this review. Moreover, Cameron's (2004) multidimensional model of social identity was also popular in youth sport studies and reflected a tendency for youth sport researchers to assess athlete social identity as a multidimensional

construct. While additional complementary frameworks were used to justify the selection of possible antecedent constructs, they were infrequently and inconsistently applied across studies.

It was surprising that few other identity-related theories informed antecedent selection in youth sport studies. Theories from social psychological literature offer insight into why individuals identify more strongly with some groups and are well-suited to guiding future work in this area. For instance, optimal distinctiveness theory (Brewer, 2012) posits that social identification is driven by the balance and satisfaction of two opposing needs within group settings, inclusion and distinctiveness. From this perspective, an athlete should identify more strongly with their sport team to the extent that their team membership satisfies the need for inclusion within the group and the need for distinctiveness from one's own, or other, teams. Similarly, motivated identity constructions theory (Vignoles, 2011) argues that individuals strive for identities that satisfy motives for self-esteem (seeing oneself positively), distinctiveness (being distinct from others), continuity (connecting past, present, and future selves), meaning (gives life meaning), efficacy (being competent), and belonging (feeling accepted by others). Inclusion and belonging are central to both theories and offer testable hypotheses that could inform future research on sparsely examined categories in this review, such as interpersonal factors. Integrating a broader array of identity-related theories alongside social identity and self-categorization theories could provide a more comprehensive understanding of the complex factors involved in athletes' social identity development.

Measurement Tools

Measurement tools assessing athlete social identity varied across studies in this review. Studies often included items that were adapted from previous social identity scales, which were originally designed by researchers to meet specific needs of previous research (e.g., Boen et al., 2008). Researchers using this approach conceptualized athlete social identity as a unidimensional construct. While these adapted measures generally displayed acceptable psychometric properties, including adequate internal consistency reliability and predictive validity, they lack rigorous psychometric testing with athlete populations. Psychometric testing of sport social identity scales is important to ensure that such measures accurately capture unique aspects of the sport environment and assess the intended construct of interest. In studies using Likert scales, inconsistencies occurred in scale ranges (e.g., -3 to 3, 1 to 7) and anchor points (e.g., strongly disagree-strongly agree, completely disagree-completely agree). Such variability poses a challenge to generalizing research findings across studies as scale format characteristics can affect response styles for Likert scale data in social science research (e.g., Weijters et al., 2010).

In youth sport research, the measurement of athlete social identity was more consistent with most studies using the Social Identity Questionnaire for Sport (Bruner & Benson, 2018). The SIQS is based on Cameron's (2004) multidimensional framework of social identity and assesses athlete social identity along three dimensions (i.e., cognitive centrality, ingroup affect, ingroup ties). Accordingly, researchers conceptualized athlete social identity both as a unidimensional (when examining overall athlete social identity strength) and a multidimensional construct (when examining individual dimensions).

While it is important to align the conceptualization of athlete social identity with the research aim (Bruner, Sutcliffe, et al., 2020), a multidimensional approach seems valuable given antecedents in this review predicted athlete social identity dimensions differently (e.g., Benson & Bruner, 2018; Bruner et al., 2022). Regardless of the measurement approach, researchers should carefully consider scale selection and characteristics so that findings can be appropriately compared across studies.

Another important observation regarding athlete social identity conceptualization and measurement was inconsistent terminology used to describe the same underlying construct. Terms such as 'social identity,' 'team identity,' and 'group identity' were used interchangeably, often within the same study. While this is common in social science literature (e.g., Ashmore et al., 2004), using these terms interchangeably may lead to confusion about whether researchers are referring to the same underlying construct and could hinder coordinated efforts to advance the knowledge in this field. The use of consistent terminology is also important to distinguish athlete social identity from other conceptually similar forms of identity studied in the sport context. For example, athletic identity is a construct in the sport psychology literature that captures the degree to which an individual identifies with the athlete role (B. W. Brewer et al., 1993). Also, in the sport management literature, team identification refers to the degree to which a fan/spectator identifies with a sport team (Wann, 2006). Considered together, sport psychology researchers have an opportunity to enhance the conceptual clarity of athlete social identity research by converging on and employing consistent terminology.

Theoretically and Empirically Informed Future Directions

The knowledge base on athlete social identity is burgeoning and there are important opportunities to advance our understanding in this area. Thoughtful consideration of key knowledge gaps will help coordinate future efforts on promising areas of study. Outlined below are future research directions that may help further our understanding of athlete social identity in youth sport.

Testing Social Identity and Self-Categorization Theory Propositions

Despite conceptual and empirical advances in athlete social identity research, there are core principles from social identity theory and self-categorization theory which remain untested in sport teams (Tajfel & Turner, 1979; Turner et al., 1987). If athlete social identity literature is currently predominantly grounded in these theories, it makes sense that researchers should rigorously test their utility and explanatory power. These avenues may have been overlooked thus far because sport psychology researchers have prioritized intragroup dynamics (e.g., leadership factors) over ingroup-outgroup comparisons central to social identity and self-categorization theories (Tajfel & Turner, 1979). Nonetheless, organized sport offers a rich social context for intergroup behavior and explicitly testing theories could enrich our understanding of factors that predict, or are less relevant for, athletes' social identity.

A key principle of social identity theory posits that individuals strive to achieve or maintain a distinct and positive self-esteem by positively differentiating their ingroup (e.g., an athlete's team) from relevant outgroups (e.g., opponent teams). Researchers

could test these assumptions by examining if positive distinctiveness of one's sport team contributes to youth athletes' social identity. Presumably positive distinctiveness would provide athletes with a unique social identity and promote stronger identification with their team. Similarly, testing how self-categorization processes may promote athlete social identity would be a fruitful area of study. Self-categorization theory posits a cognitive process of self-stereotyping in which an individual's sense of self becomes interchangeable with other group members. Although this process is implicitly assumed, it is seldom tested in sport research (Stephen et al., 2023). Researchers could explicitly test these theoretical assumptions by examining if self-stereotyping or perceived homogeneity of group members is linked to athlete social identity. Collectively, these efforts would deepen the understanding of intergroup factors that promote athlete social identity in organized youth sport.

Incorporating Developmental Perspectives

Identity exploration and formation are key developmental tasks in late childhood and adolescence. However, there was little integration of developmental theory in youth athlete social identity research. Integrating theoretical frameworks and research designs that capture age-related variation in athlete social identity is important for understanding the dynamic nature of identity-related processes. Alongside existing calls for longitudinal research (Bruner, Sutcliffe, et al., 2020), researchers could compare age groups (e.g., early, mid, late adolescents) who are believed to differ on specific cognitive, physical, or social criteria. For example, researchers could explore how athlete social identity varies as a function of normative age-related changes in cognitive development. From a

cognitive perspective, young people undergo a series of broad qualitative transformations in their cognitive ability, which become more complex as they transition from childhood through adolescence (Galván, 2021; Harter, 2006). Developmental literature suggests that normative age-related changes in cognitive ability are important to consider specific to social identity processes (Amiot et al., 2007). It is likely the acquisition of more complex cognitive capacities (e.g., differentiation of the self, increase in abstract reasoning) would correspond to differences in athlete social identity within and between developmental age ranges, especially for the cognitive dimension (i.e., cognitive centrality; Bruner & Benson, 2018). Similar developmentally informed approaches could be adopted for physical and/or social variables of interest. This would provide a welcome developmental view of athlete social identity in young athlete populations.

Expanding the Study of Interpersonal Relationships

Although interpersonal relationships and social identity share conceptual similarity in the emphasis on social connections between group members, their integration in the social psychological literature is understudied (M. B. Brewer, 2008). This review also showcased a lack of research on how athletes' interpersonal relationships might contribute to their social identity. Examining associations between the nature and quality of interpersonal relationships and athlete social identity holds promise to enhance the understanding of social identity processes in sport. Developmental literature suggests that supportive interpersonal relationships with figures such as parents and friends are important for youths' identity exploration and formation

(Branje et al., 2021). Youth sport research has also illustrated the role of social agents, including teammates, coaches, and parents, in shaping affective, social, and cognitive aspects of the sport experience (Bruner, Eys, & Martin, 2020). Adaptive interpersonal relationships in the team/sport context could promote social identity by validating an athlete's sense of self as a group member and offering a safe environment for identity exploration. Understanding youth athletes' social identity development could be expanded by considering both the independent and combined impact of such relationships on youth well-being.

Examining Factors that Diminish Athlete Social Identity

Most studies in this scoping review explored factors believed to foster stronger athlete social identity. This emphasis is warranted given emerging evidence of developmental benefits that stem from athletes' social identity (Bruner, Sutcliffe, et al., 2020) and the desire to realize these benefits. However, a stronger consideration of negative factors in the sport environment is fundamental if researchers are to develop a fuller understanding of how athletes' social identity is shaped. Few studies in this review examined factors that potentially could detract from athlete social identity. Among few exceptions, maladaptive constructs such as antisocial behavior from teammates (Benson & Bruner, 2018; Bruner, Boardley, Allan, Forest, et al., 2017; Bruner, Boardley, Allan Root et al., 2017) and performance-oriented motivational climate perceptions (e.g., De Backer et al., 2015) were associated with lower athlete social identity. Continued research on factors inversely linked to athlete social identity would address maladaptive

aspects of the youth sport experience. The antecedent categories in this review could guide such work. For instance, researchers could examine how negative leadership factors (e.g., controlling coach behavior) or interpersonal factors (e.g., peer rejection) associate with athletes' social identity. Such work would meaningfully expand the understanding of complex factors that serve to shape social identity within the sport context.

Limitations

There are limitations of this study that warrant consideration when interpreting the results. Given that scoping reviews strike a balance between breadth and depth in mapping a literature base (Peters et al., 2020), relevant articles may have been omitted during the selection and screening process. Reasons for potential omission include restricting our search to four databases, including only unpublished theses and dissertations as gray literature, including only articles published in English, and variation in terminology used to describe athlete social identity. We attempted to mitigate these shortcomings by aligning databases with the area of study, consulting an interdisciplinary team of experts before conducting the review, conducting forward and backward searches, and crafting search terms to capture common variation of athlete social identity terminology. In addition, although we assessed methodological rigor using the MMAT, we did not exclude articles based on low study quality. Low study quality can impact the generalizability and reproducibility of research findings. Despite high reporting quality for most studies in this review, common methodological limitations included a reliance on cross-sectional research designs, lack of inclusion of theoretically or empirically

relevant covariates, nonresponse bias, and underreporting of measurement and/or analysis information. Such limitations to study quality should be carefully considered when interpreting the results in this review. Finally, although the primary purpose of this study was to identify possible antecedents of athlete social identity, the limited number of longitudinal studies prohibits the inference of causal attributions. That is, possible antecedent variables in this review may also represent downstream consequences of athlete social identity. For instance, while teammate moral behaviors predict athlete social identity (Benson & Bruner, 2018), athlete social identity has also been found to predict moral behavior toward teammates and opponents (Bruner et al., 2014). Results in this study should be interpreted with this limitation in mind.

Conclusion

Because research on athlete social identity is in an early stage, exploring possible antecedents is a valuable endeavor to identify areas of limited knowledge and promise for future work. This study advanced knowledge accordingly, providing a summary of possible athlete social identity antecedents, outlining prevailing theoretical frameworks, and taking stock of measurement tools used in athlete social identity research. This review highlights findings tied to youth-based work, where there is particularly strong potential for social identity research to offer knowledge that benefits the quality of young peoples' sport experiences and healthy psychosocial development. Initial research represented by the 60 studies in this review has laid a strong foundation for understanding factors that are tied to athletes' social identity. Grounding future research in theoretically and developmentally informed frameworks, as well as enhancing scientific rigor in study

design, are crucial for expanding this knowledge base. Continued research in this field holds promise in addressing the well-being of young people by fostering understanding of identity construction processes in youth sport.

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CHAPTER 3

STUDY TWO: POSITIVE PEER RELATIONSHIPS, SOCIAL IDENTITY, AND ADAPTIVE SPORT MOTIVATION IN YOUTH ATHLETES[4]

Organized sport is a developmental context in which youth athletes are afforded the opportunity to cultivate and maintain interpersonal relationships with their peers. Early descriptive work has highlighted the importance of peer relationships in this context by showing social affiliation and competing with friends to be among the prominent reasons for youth sport involvement (Weiss & Petlichkoff, 1989; Weiss & Williams, 2004). Researchers have built from this early work and found support for peers as critical socializing agents given their proximity, ability to fulfill relational needs, and their functional role as sources of social comparison (Smith & Ullrich-French, 2020). Sport psychology researchers have therefore devoted attention to understanding how peer relationships link with motivational processes within the organized sport environment (Smith & Ullrich-French, 2020). Given the complex nature of peer relationships, and their interconnection with other aspects of the social sport environment (Dorsch et al., 2022), it is important to explore potential underlying mechanisms that may link perceptions of peer relationships with young athletes' motivation.

Sullivan's (1953) interpersonal theory of psychiatry is a prominent perspective that has guided the study of peer relationships in youth sport research. According to Sullivan, peer group acceptance and quality friendships serve conceptually similar but

[4] Data from this study were presented in June 2023 at the North American Society for the Psychology of Sport and Physical Activity (NASPSPA) annual meeting in Toronto, CA and June 2024 at the NASPSPA annual meeting in New Orleans, USA.

distinct functional roles for psychosocial growth during different developmental periods. In early to middle childhood, youth are sensitive to acceptance within the peer group as their relationships typically revolve around shared activities and interests. Successful engagement within peer group settings is important for moving children beyond egocentric thought, shaping views on cooperation and competition, and providing a sense of belonging (Sullivan, 1953). As youth approach the end of childhood, cultivating specific dyadic friendships, or chumships, with a same-sex peer becomes important to meet social needs, such as interpersonal security, intimacy, and self-validation. Because peer acceptance and quality friendships serve common but distinct developmental functions, they are often studied together in peer-focused research (Rubin et al., 2006, 2015; Smith & Ullrich-French, 2020; Weiss & Stuntz, 2004).

Peer acceptance constitutes a group-oriented perception of being liked and accepted by others in the peer group (Rubin et al., 2006). The developmental literature suggests that being accepted by one's peers is important for social and emotional adjustment, positive self-perceptions, and more effective social exchanges with peers (Rubin et al., 2006, 2015; Weiss & Stuntz, 2004). A similar pattern of findings in youth sport research has linked higher perceived peer acceptance with more adaptive forms of sport motivation, such as greater perceived sport competence, sport enjoyment, and self-determined motivation, along with lower sport stress (Garn, 2016; Ullrich-French & Smith, 2006). Moreover, higher peer acceptance is associated with more adaptive goal orientation profiles and has been shown to partially mediate a positive relationship between sport participation and global self-esteem (Daniels & Leaper, 2006; Smith,

Balaguer, & Duda, 2006). Together, studies have shown that stronger perceptions of peer acceptance from teammates are related to more favorable motivational experiences in their sport.

Whereas peer acceptance ties to the broader peer group, sport friendship quality is a property of a close, mutual dyadic relationship with a specific teammate. Weiss et al. (1996) interviewed youth athletes to understand the nature of sport friendships and identified twelve positive dimensions (e.g., companionship, self-esteem enhancement) and four negative (e.g., betrayal, conflict) dimensions which aligned with friendship functions outlined in the developmental psychology literature (Hartup, 1996; Sullivan, 1953, Weiss & Stuntz, 2004). Follow up work refined and validated a measurement tool to examine friendship quality in sport through five positive dimensions (companionship and pleasant play, self-esteem enhancement, loyalty and intimacy, things in common, conflict resolution) and one negative dimension of friendship conflict (Weiss & Smith, 1999). Research has shown that positive friendship quality dimensions are linked to higher sport enjoyment and commitment (Weiss & Smith, 2002), stronger task goal orientation, and weaker maladaptive perfectionism (Ommundsen et al., 2005). As a global construct, stronger friendship quality is also associated with greater self-determined motivation (Riley & Smith, 2011) and higher self-esteem and positive affect by way of perceived relatedness with teammates and sport competence (Kipp & Weiss, 2013). Taken together, extant research underscores the importance of assessing perceptions of both group-oriented and dyadic peer relationships in their association with athletes' sport motivation.

Though peer acceptance and quality friendships are important to athlete motivation, less research has examined potential mediating pathways between peer relationships and motivational constructs. Because peer relationships are embedded within the broader peer group, an important area for future research is to integrate the study of peer relationships with peer group dynamics in sport (Smith et al., 2019). Social identity theory is one group dynamics framework that has conceptual ties with peer relationships research because of the focus on social connections between group members. A primary tenet of social identity theory (Tajfel & Turner, 1979) is that individuals can define and evaluate a part of their self through social group membership, such as in a sport team. More specifically, social identity represents the part of an individual's self-concept that is derived from the knowledge, value, and emotional significance of their self as a group member (Tajfel, 1981). In line with this definition, athlete social identity has been conceptualized as a multidimensional aspect of an individual's self-concept which captures the subjective importance of being a group member (cognitive centrality), an emotional evaluation of oneself as a group member (ingroup affect), and bonding and similarity with other group members (ingroup ties; Bruner & Benson, 2018; Cameron, 2004). Tying together peer relationships and social identity research holds potential to enrich our understanding of social dynamics and motivation in sport contexts.

Social identity theory has emerged as an important theoretical framework to understand how athletes' team-based social identity relates to motivational processes in youth sport (Bruner, Martin, et al., 2020; Haslam et al., 2020). From this lens, the social

identity that underpins team membership should furnish the athlete with a positive sense of self and elicit a psychological connection with the group that provides the motivational basis for athletes to exert effort and advance the collective goals of the team (Greenaway et al., 2020; Van Knippenberg, 2000). For instance, research has shown that stronger athlete social identity perceptions are associated with greater autonomous motivation and physical self-concept (Murray et al., 2022), sport enjoyment (Murray & Sabiston, 2022), and effort and commitment to one's sport team (Martin et al., 2018). Altogether, stronger athlete social identity has been tied to more adaptive sport motivation. However, less research has examined potential antecedents of youth athlete social identity perceptions, and in turn, their sport motivation. Pursuing understanding of this is important to elucidate avenues through which social experiences link with athletes' adaptive sport motivation.

From the perspective of social identity theory, group structure and ties between group members are important for identification with a social group (Hogg et al., 2004). Therefore, peer relationships may be important to consider relative to athletes' identification with their sport team. With respect to peers, sport research has focused on how the frequency of interactions and social ties between teammates link with athletes' social identity. Rodrigues et al. (2019) assessed whether the frequency of peer interactions during training sessions was associated with the social identity of Brazilian Jujitsu club members. Higher frequencies of teammate interactions were associated with ingroup ties, a dimension of social identity reflecting bonding and similarity with other teammates. Furthermore, Graupensperger et al. (2020) examined how the group structure

of college club sport teams related to athletes' team social identity. They found higher frequencies of self-reported friendship ties with teammates to be positively associated with athletes' social identity (i.e., cognitive centrality, ingroup affect, ingroup ties). While this research suggests that athletes with more social ties with teammates report stronger social identification with their team, less is known about how the quality of peer relationships may be important for athletes' social identity. In this regard, drawing on extant peer relationships literature can be helpful.

Considering the developmental significance of peer relationships for youth athletes, peer acceptance and friendship quality may play an important role in shaping athletes' social identity. Athletes who perceive more adaptive peer relationships may view themselves, and be viewed by others, as holding more central positions as members on their sport team. For instance, high school soccer players who perceived stronger peer acceptance and friendship quality also reported personal engagement in more frequent leadership behaviors (Moran & Weiss, 2006). Moreover, athletes reporting stronger perceived peer acceptance are also seen by their teammates as displaying more instrumental leadership behaviors (Moran & Weiss, 2006; Price & Weiss, 2011). Presumably, positive peer relationships may affirm that an athlete is a central and socially validated group member thereby promoting stronger athlete social identity. Given the role of dyadic friendships in fulfilling interpersonal needs (e.g., intimacy, self-validation), having a high-quality friendship may also furnish athletes with positive views of themselves as a group member. However, research has yet to investigate how positive peer relationships, reflected in peer acceptance and friendship quality, may be associated

with athletes' social identity and contribute to downstream motivational experiences. The present study was designed to begin addressing this research need.

The purpose of this study was to examine the degree to which positive peer relationships (i.e., peer acceptance, friendship quality) predicted adaptive sport motivation (i.e., enthusiastic sport commitment, sport enjoyment, autonomous motivation) by way of athlete social identity (i.e., cognitive centrality, ingroup affect). Based on the motivational salience of adaptive peer relationships (e.g., Ullrich-French & Smith, 2006) and athlete social identity (e.g., Martin et al., 2018), we expected the peer relationships and social identity variables to predict adaptive sport motivation positively and directly. In line with social identity theory and prior empirical research (Graupensperger et al., 2020; Hogg et al., 2004), we expected perceived peer acceptance and friendship quality to be positively linked with athletes' social identity. Finally, we hypothesized that peer acceptance and friendship quality would be indirectly linked with adaptive sport motivation by way of athlete social identity. The conceptual model depicting these associations is shown in Figure 3.1.

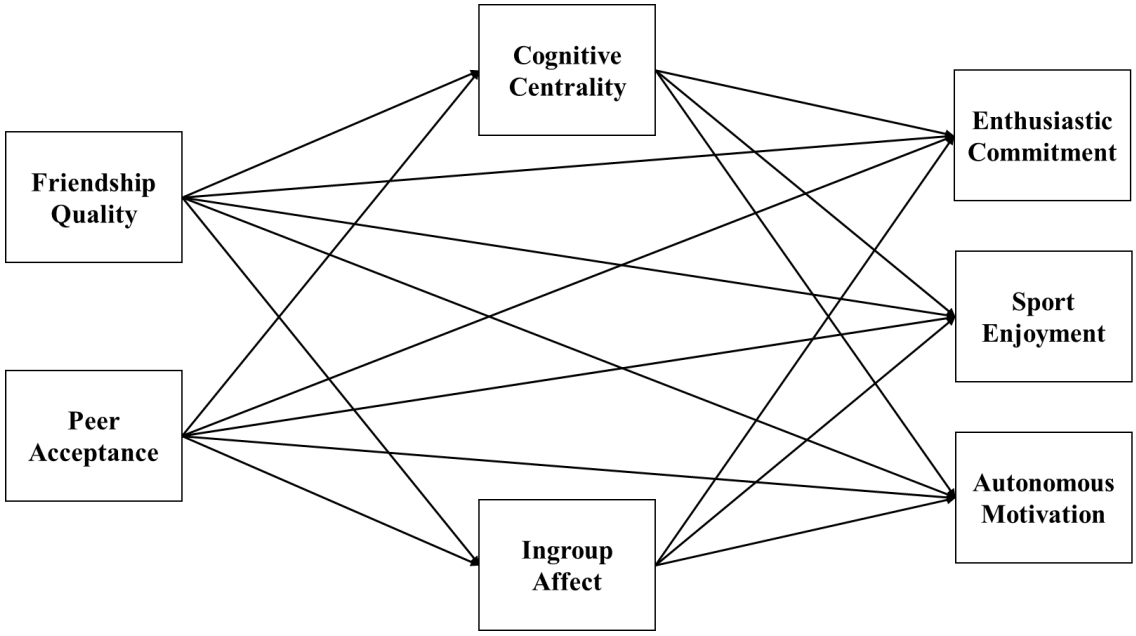
Method

Participants

Data were collected from 202 high school athletes (boys = 80, girls = 121, non-binary = 1) in the Western U.S. who ranged in age from 13 to 18 years (M = 16.1, SD = 1.3). Participants self-identified as White (88.1%), More than one race (3.0%), Black/African American (2.5%), Native Hawaiian/Pacific Islander (2.5%), Other (2.0%), and did not report (2.0%). Hispanic/Latino ethnicity was reported by 6.4% of

Figure 3.1

Study Two: Hypothesized Path Model



Note. Solid lines denote hypothesized positive associations.

participants. Participants were drawn from 13 high school sport teams (eight girls' teams) including lacrosse (57.9%), basketball (30.2%), softball (8.9%), and soccer (3.0%). One hundred and twenty-four participants self-identified as a starter on their team, 68 self-identified as a non-starter, and 10 participants did not report starting status. At the time of data collection, all sport teams had been actively competing in their regular season. Teams reported their competition status as preseason (k = 1), the beginning of the season (k = 4), midseason (k = 5), and end of season (k = 3).

Procedure

Ethical approval was obtained by the Utah State University institutional review

board (IRB; see Appendix A). High school sport coaches were contacted directly via email to assess interest in study participation and seek permission to visit with their sport team (see Appendix B). Upon receiving permission, two research visits were scheduled with each team either before or after a practice session. During the first visit, the researcher explained the purpose of the study, answered relevant questions from participants and coaches, and distributed parent consent forms to participants under 18 years old. During the second visit, the researcher collected parent consent forms and distributed youth assent forms (see Appendix C). Participants with parent consent and who offered their assent (or consent if 18 years old) were administered pen and paper surveys (questionnaire available upon request). At the beginning of the survey, the researcher explained that the survey would ask questions related to their sport experience. Participants were informed that their involvement in the study was voluntary and that their responses would be confidential and used only for research purposes. After providing assent, participants were instructed to turn to the first page of the questionnaire battery. The researcher provided verbal instructions for the peer acceptance measure and completed a sample item with participants. Participants were then directed to continue with the remainder of the questionnaire. The full questionnaire took approximately 20 minutes to complete.

Measures

Demographics

Participants were asked to identify their age, gender, race, and ethnicity. They also reported on their stage of season, position, starting status, tenure on their sport team,

and the length of time they have played their sport.

Perceived Friendship Quality

The Sport Friendship Quality Scale (SFQS; Weiss & Smith, 1999) was used to measure perceived friendship quality with a best friend on the respondent's sport team. The instruction set reinforces responses for a single person by asking the participant to write the first initial of their best friend on their team at the top of the questionnaire. The SFQS includes 22-items that span six dimensions: self-esteem enhancement and supportiveness (e.g., "My friend and I praise each other for doing sports well"), loyalty and intimacy (e.g., "My friend and I stick up for each other in sports"), things in common (e.g., "My friend and I do similar things"), companionship and pleasant play (e.g., "I like to play with my friend"), conflict resolution (e.g., "My friend and I try to work things out when we disagree"), and conflict (e.g., "My friend and I get mad at each other"). Responses are measured on a scale ranging from 1 (*not true at all*) to 5 (*really true*). Responses to items from the five positive dimensions were averaged to create a global score for positive friendship quality. Adequate internal consistency reliability and construct validity of scores have been demonstrated in samples of youth athletes (e.g., Weiss & Smith, 1999). In the current study, internal consistency reliability of scores for the global friendship quality measure was satisfactory ($\alpha = .88$).

Perceived Peer Acceptance

The social competence subscale from Harter's (2012) Self-Perception Profile for Adolescents, adapted to sport, was used to assess perceived peer acceptance. The

subscale includes 5-items in a structured alternative format that described two types of adolescents (e.g., "Some teenagers understand how to get peers to accept them in their sport BUT Other teenagers don't understand how to get peers to accept them in their sport"). After reading each statement, participants first determine which type of teenager most closely resembles themselves and then whether the description is "*really true*" or "*sort of true*." Responses are scored on a 1 to 4 scale with higher scores indicating higher perceived peer acceptance. Responses to the five items were averaged to create a global score for perceived peer acceptance. Adequate internal consistency reliability and predictive validity of scores have been supported by similar adaptations of the scale to sport contexts (e.g., Ullrich-French & Smith, 2006). In the current study, internal consistency reliability of scores on the peer acceptance measure was marginal ($\alpha = .69$) but was retained for analyses given the focal interest to the current study.

Athlete Social Identity

The Social Identity Questionnaire for Sport (SIQS; Bruner & Benson, 2018) was used to assess athletes' social identity. The SIQS includes 9-items that span three subscales: cognitive centrality ("In general, being a member of this team is an important part of my self-image"), ingroup affect (e.g., "Generally, I feel good when I think about myself as a member of this team"), and ingroup ties (e.g., "I feel a sense of being 'connected' with other members in this team"). Responses are measured on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Individual items were averaged within the respective subscales to create subscale scores. Previous research has demonstrated adequate internal consistency reliability and construct validity of scores for

the SIQS in youth sport (Bruner & Benson, 2018). Internal consistency reliability of scores for the cognitive centrality (α = .79), ingroup affect (α = .91), and ingroup ties (α = .90) scales were satisfactory in the present study. A conceptually informed decision was made to only include the cognitive centrality and ingroup affect subscales in the main analyses. Although the ingroup ties dimension is proposed to represent an individual's psychological bonds that bind the self to the group, the subscale items reflect potential conceptual overlap with the peer relationship measures that were of primary theoretical interest. The ingroup ties dimension was therefore included in the descriptive analysis, but not in the formal path model.

Enthusiastic Sport Commitment

The sport commitment subscale from the Sport Commitment Questionnaire-2 (SCQ-2; Scanlan et al., 2016) was used to assess athletes' enthusiastic sport commitment. The commitment subscale included 6-items that assessed enthusiastic commitment (e.g., "I will overcome any obstacle to keep playing this sport") and 5-items that assessed constrained commitment (e.g., "I feel trapped in my sport"). Only the enthusiastic commitment subscale was used for this study. Responses measured on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The six items were averaged to create an overall score for enthusiastic sport commitment. Previous research has demonstrated support for internal consistency reliability and construct validity of scores on this commitment subscale (Scanlan et al., 2016). Internal consistency reliability of scores for the enthusiastic sport commitment scale in the present study was satisfactory (α = .92).

Sport Enjoyment

The sport enjoyment subscale from the SCQ-2 (Scanlan et al., 2016) was used to assess athletes' perceived enjoyment of their sport. The sport enjoyment subscale includes 5-items (e.g., "Playing this sport is fun") with responses measured on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The five items were averaged to create an overall score for sport enjoyment. Previous research has demonstrated adequate internal consistency reliability and construct validity for scores on the sport enjoyment subscale (e.g., Scanlan et al., 2016). Internal consistency reliability of scores was satisfactory for the sport enjoyment scale in this study ($\alpha = .90$).

Autonomous Motivation

The Behavioral Regulation in Sport Questionnaire (BRSQ-6; Lonsdale et al., 2008) was used to assess athletes' autonomous motivation for participating in their sport. The BRSQ begins with the stem "I participate in my sport…" and includes 24-items that span six dimensions: intrinsic motivation (e.g., "Because I find it pleasurable"), integrated regulation (e.g., "Because it is a part of who I am"), identified regulation (e.g., "Because I value the benefits of my sport"), introjected regulation (e.g., "Because I would feel ashamed if I quit"), external regulation (e.g., Because I feel pressure to play from other people"), and amotivation (e.g., "But I question why I am putting myself through this"). Responses are measured on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Consistent with previous research (e.g., O'Neil & Hodge, 2020), individual items were averaged within the intrinsic motivation, integrated regulation, and identified regulation subscales. An index for autonomous motivation was

then calculated using the formula: 2* intrinsic motivation + integrated regulation + identified regulation. Internal consistency reliability and factorial validity for scores on the BRSQ have been supported in previous youth sport research (Lonsdale et al., 2008). Scores on separate motivation subscales showed acceptable internal consistency reliability (α = .86-.93), along with combined scores across the three subscales (α = .91).

Data Analysis

Data screening was conducted in SPSS Version 29 to assess missing data, normality assumptions, and outliers (Tabachnick & Fidell, 2013). Potential missing data patterns were assessed using Little's missing completely at random (MCAR) test (Little, 1988). Normality assumptions were inspected through skewness and kurtosis values. Univariate outliers were identified through the inspection of standardized subscale scores (± 3.29) and multivariate outliers were assessed through Mahalanobis distance ($p < .001$; Tabachnick & Fidell, 2013). Descriptive statistics were calculated including means, standard deviations, and bivariate correlations between the study variables. Three one-way multivariate analyses of variance (MANOVA) were conducted to examine if boys and girls differed on the peer relationships, social identity, and motivation variables, respectively. Observed variable path modeling using maximum likelihood with robust Huber-White standard errors (MLR) estimation was performed using the lavaan package in R (Rosseel, 2012). Participant age and gender were included as control variables for each endogenous dependent variable in the path analysis. Age was modeled as a continuous predictor and gender was dummy coded (boys = 0, girls =1). Indirect effects were assessed using 5,000 bootstrapped resamples. Bootstrapping was conducted with

maximum likelihood estimation as MLR estimation is not available when conducting these tests in R. Significant indirect effects were inferred if the confidence interval did not span zero (Preacher & Hayes, 2008). This approach is preferred to using *p* values as bootstrapping does not make distributional assumptions of the indirect effect.

Results

Preliminary Data Screening

Univariate skewness (-1.97 to -0.33) and kurtosis (-0.82 and 3.60) values showed slight deviations from normality. Less than 0.01% of individual scale items were missing across all participants and the data were missing completely at random, X^2 (2383) = 2247.79, p = .98. Missing data were handled with full information maximum likelihood estimation, which uses all available information to estimate the model parameters. Because athletes were nested within sport teams, intraclass correlation coefficients were examined to assess assumptions for nonindependence. Intraclass correlation coefficients values were between .010 and .045 suggesting a lack of team-level variation in the study variables (Maas & Hox, 2005). Therefore, multilevel modeling was not conducted. Standardized subscale scores were inspected to screen for univariate outliers and multivariate outliers. One univariate outlier case and one multivariate outlier case were identified. Group difference tests and formal path analyses were conducted with and without outlier cases. Interpretation of results for the group differences test did not change with the removal of outlier cases. However, because path coefficients changed with removal of the two outlier cases, they were excluded from the path analysis. In sum, group difference tests were conducted with 202 participants and formal path analysis was

conducted with 200 participants.

Descriptive Statistics

Relative to the response set options, participants reported high positive friendship quality and moderate-to-high peer acceptance. Participants reported moderate-to-high cognitive centrality and ingroup ties, along with high scores on ingroup affect. Also, participants reported high enthusiastic sport commitment and sport enjoyment and moderate-to-high autonomous motivation. The magnitude of bivariate correlations was examined for the continuous variables (small = 0.10, medium = 0.30, large = 0.50; Cohen, 1988). Friendship quality was moderate-to-strongly correlated with the social identity variables and weak-to-moderately correlated with the motivation variables. Peer acceptance was weakly correlated with sport enjoyment and autonomous motivation and moderately correlated with ingroup affect and ingroup ties. The social identity variables were moderate-to-strongly correlated with the motivation variables. The pattern of correlations was largely in line with theoretical expectations and values reported in previous empirical studies. A summary of descriptive statistics is shown in Table 3.1.

Three one-way MANOVAs were conducted to examine if boys and girls differed on the peer relationships, social identity, and motivation variables, respectively. Analyses were conducted with and without outlier cases. Because the interpretation did not change with the removal of outlier cases, group difference tests were conducted using the full sample. There was a significant multivariate test statistic for the peer relationship variables, Pillai's Trace = 0.08; $F(2, 193) = 7.91$, $p < .001$, $\eta^2 = .08$. A follow-up univariate *F* test revealed significant differences on friendship quality between boys and

Table 3.1

Descriptive Statistics for the Study Variables (N = 202)

Variable		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1.	Friendship Quality	-									
2.	Peer Acceptance	.37**	-								
3.	Cognitive Centrality	.25**	.05	-							
4.	Ingroup Affect	.24**	.32**	.32**	-						
5.	Ingroup Ties	.55**	.49**	.41**	.54**	-					
6.	Enthusiastic Commitment	.20*	.12	.38**	.50**	.34**	-				
7.	Sport Enjoyment	.20**	.18*	.29**	.63**	.38**	.71**	-			
8.	Autonomous Motivation	.31**	.25**	.43**	.61**	.43**	.75**	.78**	-		
9.	Age	.07	.16**	-.11	-.01	.07	-.11	-.07	-.04	-	
10.	Gender	.23**	-.05	.07	.00	.04	-.04	.02	.08	-.10	-
	Scale Range	1-5	1-4	1-7	1-7	1-7	1-5	1-5	1-7	-	-
	α	.88	.69	.79	.91	.90	.92	.90	.91	-	-
	Mean	4.48	3.31	5.55	6.35	5.92	4.38	4.67	24.67	16.17	-
	Standard Deviation	0.43	0.51	1.20	0.97	1.10	0.77	0.55	3.60	1.32	-
	Skewness	-1.13	-0.33	-0.68	-1.90	-1.35	-1.10	-1.97	-1.36	-	-
	Kurtosis	1.07	-0.71	-0.35	3.52	1.95	1.45	3.60	1.48	-	-

Note. α = Cronbach's alpha coefficient. Gender coded *boys* = 0, *girls* = 1.

* $p < .05$, ** $p < .01$.

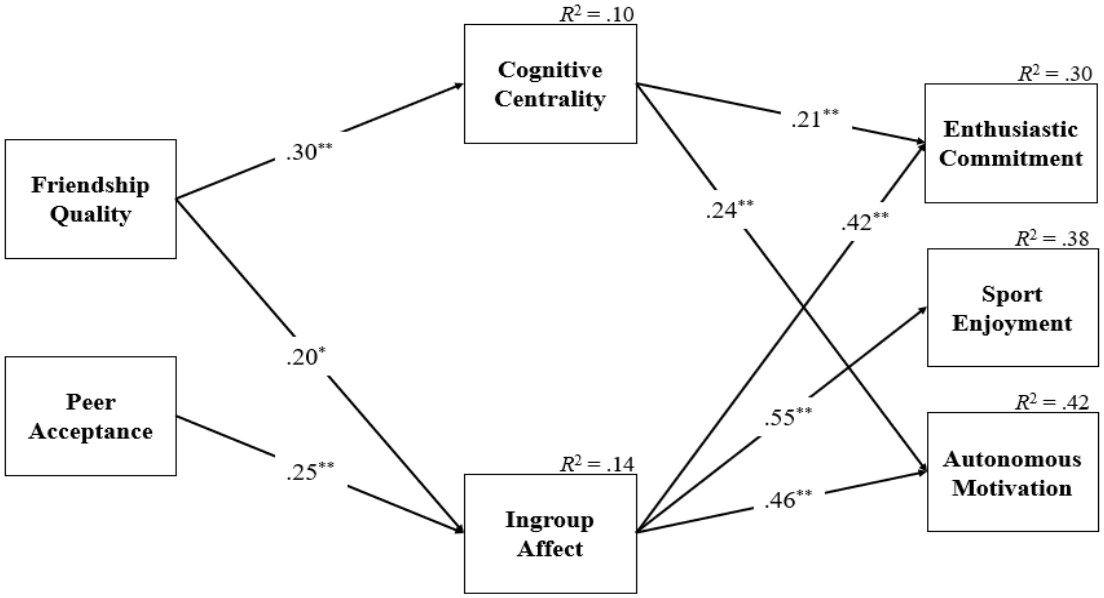
girls, $F(1, 194) = 11.27$, $p < .001$, $\eta^2 = .06$. On average, girls ($M = 4.57$, $SD = 0.38$) reported higher global friendship quality compared to boys ($M = 4.36$, $SD = 0.49$), which is consistent with previous literature (e.g., Hartup, 1989; Weiss & Smith, 2002). There were no significant gender differences for the social identity or motivation variables. Three additional one-way MANOVAs were conducted to examine if younger (13-15 years) and older adolescents (16-18 years) differed on the peer relationships, social identity, and motivation variables. There were no significant differences between younger and older adolescents on any of the primary study variables.

Path Model

Observed variable path analysis was used to test the proposed conceptual model. Age and gender were included as control variables. Neither friendship quality nor peer acceptance was directly associated with enthusiastic sport commitment, sport enjoyment, or autonomous motivation. However, friendship quality was positively associated with cognitive centrality ($\beta = 0.30$, $p < .001$) and ingroup affect ($\beta = 0.20$, $p = .009$), and peer acceptance was positively associated with ingroup affect ($\beta = 0.25$, $p < .001$). In turn, cognitive centrality was positively associated with enthusiastic sport commitment ($\beta = 0.21$, $p = .004$) and autonomous motivation ($\beta = 0.24$, $p < .001$). Ingroup affect was positively associated with enthusiastic sport commitment ($\beta = 0.42$, $p < .001$), sport enjoyment ($\beta = 0.55$, $p < .001$), and autonomous motivation ($\beta = 0.46$, $p < .001$). Age was negatively associated with cognitive centrality ($\beta = -0.14$, $p = .033$) while gender was not significantly associated with any of the study variables. A summary of direct effects is depicted visually in Figure 3.2.

Figure 3.2

Study 2: Path Model (N = 200)



Note. Only significant paths are shown and covariances are omitted for simplicity. Regression coefficients are standardized. Age and gender included as control variables. Age was negatively associated with cognitive centrality (β = -.14). R^2 = variance explained.

*p < .01, **p < .001.

Indirect effects were assessed using 5,000 bootstrapped resamples. Friendship quality was indirectly related to enthusiastic sport commitment (β = 0.06) and autonomous motivation (β = 0.07) through cognitive centrality. Moreover, friendship quality was indirectly related to enthusiastic sport commitment (β = 0.08), sport enjoyment (β = 0.11), and autonomous motivation (β = .09) through ingroup affect. Peer acceptance was indirectly related to enthusiastic sport commitment (β = 0.10), sport enjoyment (β = 0.14), and autonomous motivation (β = .12) through ingroup affect. The observed path analysis explained approximately 10% of variance for cognitive centrality, 14% for ingroup affect, 30% for enthusiastic sport commitment, 38% for sport

enjoyment, and 42% for autonomous motivation. The path analysis results are summarized in Table 3.2.

Table 3.2

Standardized Direct and Indirect Effects from the Path Analysis (N = 200)

Variable paths	Direct effect	(*SE*)	Indirect effect	(*SE*)	95% CI	
Cognitive centrality						
Friendship quality	0.30**	(.07)	-	-	-	
Peer acceptance	-0.05	(.08)	-	-	-	
Ingroup affect						
Friendship quality	0.20*	(.08)	-	-	-	
Peer acceptance	0.25**	(.07)	-	-	-	
Enthusiastic sport commitment						
Friendship quality	0.07	(.06)	-	-	-	
Peer acceptance	-0.06	(.07)	-	-	-	
Cognitive centrality	0.21**	(.07)		-	-	
Ingroup affect	0.42**	(.08)		-	-	
Friendship quality → cognitive centrality	-	-	0.06	(.03)	[0.02	0.13]
Friendship quality → ingroup affect	-	-	0.08	(.04)	[0.02	0.16]
Peer acceptance → cognitive centrality	-	-	-0.01	(.02)	[-0.05	0.03]
Peer acceptance → ingroup affect	-	-	0.10	(.03)	[0.05	0.18]
Sport enjoyment						
Friendship quality	0.08	(.06)	-	-	-	
Peer acceptance	-0.04	(.06)	-	-	-	
Cognitive centrality	0.09	(.06)	-	-	-	
Ingroup affect	0.55**	(.08)		-	-	
Friendship quality → cognitive centrality	-	-	0.03	(.02)	[-0.01	0.08]
Friendship quality → ingroup affect	-	-	0.11	(.05)	[0.02	0.21]
Peer acceptance → cognitive centrality	-	-	-0.00	(.01)	[-0.02	0.01]
Peer acceptance → ingroup affect	-	-	0.14	(.04)	[0.06	0.23]
Autonomous motivation						
Friendship quality	0.10	(.06)	-	-	-	
Peer acceptance	0.05	(.06)	-	-	-	
Cognitive centrality	0.24**	(.06)		-	-	
Ingroup affect	0.46**	(.07)		-	-	
Friendship quality → cognitive centrality	-	-	0.07	(.03)	[0.03	0.13]
Friendship quality → ingroup affect	-	-	0.09	(.04)	[0.02	0.18]
Peer acceptance → cognitive centrality	-	-	-0.01	(.02)	[-0.05	0.03]
Peer acceptance → ingroup affect	-	-	0.12	(.04)	[0.05	0.19]

Note. Age and gender were included as control variables. Indirect effects based on 5,000 bias-corrected bootstrapped samples. Significant indirect effects are underlined for ease of interpretation.

*$p < .01$, **$p < .001$.

Discussion

This study was designed to examine whether friendship quality and peer acceptance were tied to adaptive sport motivation by way of their associations with athlete social identity. It was hypothesized that friendship quality and peer acceptance would be positively associated with athlete social identity, and in turn, adaptive sport motivation. The hypotheses in the present study were partially supported. Results illustrated that neither friendship quality nor peer acceptance was directly associated with the motivation constructs. However, friendship quality was positively associated with cognitive centrality and ingroup affect whereas peer acceptance was only positively associated with ingroup affect. In turn, cognitive centrality was positively associated with enthusiastic sport commitment and enjoyment, and ingroup affect was positively associated with enthusiastic sport commitment, sport enjoyment, and autonomous motivation. Indirect effects showed friendship quality linked with enthusiastic sport commitment and autonomous motivation through cognitive centrality, and linked with enthusiastic sport commitment, sport enjoyment, and autonomous motivation through ingroup affect. Meanwhile, peer acceptance was associated with enthusiastic commitment, sport enjoyment, and autonomous motivation through ingroup affect. The findings suggest that peer relationships make important contributions to athletes' social identity and indirectly contribute to forms of adaptive sport motivation.

While extant research has typically examined the contribution of social identity to athletes' developmental and motivational experiences (Bruner, Sutcliffe, et al., 2020), this study provides important insight into potential antecedents of athletes' social identity.

Results showed friendship quality to be positively associated with the subjective importance of team membership (cognitive centrality) and positive feelings associated with one's team membership (ingroup affect). These findings support and extend previous research. Prior work has found that more friendship ties with teammates on college club sport teams was associated with higher scores on each of the three social identity dimensions (i.e., cognitive centrality, ingroup affect, ingroup ties; Graupensperger et al., 2020). In addition to the frequency of social connections, stronger friendship quality in reference to a specific teammate appears to play an important role in fostering athlete social identity. The developmental literature has emphasized the functional role of close friendships in serving as important sources of intimacy and validation, especially in the transition from late childhood to adolescence (Hartup, 1996; Newcomb & Bagwell, 1995; Sullivan, 1953). The provision of friendship qualities from a best friend on one's sport team may fulfill interpersonal needs that enhance the importance of being a group member and the positive feelings associated with one's membership. It is worthy of mention that we only assessed athletes' perceived friendship quality tied to a self-selected member on their sport team. Future work addressing additional aspects of friendship quality, such as whether the reported friendship is reciprocated, could add valuable insight as to how close friends matter for shaping athletes' social identity.

In comparison to friendship quality being linked to both social identity dimensions, peer acceptance was only associated with positive feelings associated with one's group membership. This pattern of results is noteworthy considering Sullivan's

(1953) proposition that friendship quality and peer acceptance make conceptually similar, but distinct, contributions to youths' psychosocial development. The positive association between peer acceptance and ingroup affect aligns broadly with previous work that has linked stronger acceptance with more positive affective sport experiences such as sport enjoyment and self-esteem (Daniels & Leaper, 2006; Garn, 2016; Ullrich-French & Smith, 2006). However, the absence of association between peer acceptance and cognitive centrality was somewhat surprising given that both constructs reflect group-oriented perceptions, and the sample comprised of team sport athletes where the structure typically revolves around collective outcomes. Peer acceptance as operationalized in the current study reflects the self-perception that one can make friends and understands what it takes to be liked by other teammates in their sport. It is possible that the active provision of social support from teammates is more salient to athletes' subjective importance of group membership as compared to peer acceptance as assessed in this study. For example, the provision of social support from teammates could signal that an athlete is part of "us" and important to the mutual goals of the group. This perspective aligns with tenets of the social identity approach, which outlines the functional role of group member social support for subsequent identification with the group (Haslam et al., 2012).

In line with expectations, athlete social identity meaningfully linked with adaptive markers of sport motivation. Ingroup affect was positively associated with enthusiastic sport commitment, sport enjoyment, and autonomous motivation while cognitive centrality was positively associated with sport commitment and autonomous motivation.

This corroborates previous research showing greater global social identity to be associated with greater autonomous motivation (Murray et al., 2022), along with higher sport enjoyment and lower dropout (Murray & Sabiston, 2022). Youth sport researchers have also assessed dimensional examinations of social identity and motivation, which has shown ingroup affect at the beginning of youth athletes' sport season to predict higher commitment to sport approximately one month later (Martin et al., 2018). Our findings complement this work by examining the contribution of multiple social identity dimensions (i.e., cognitive centrality, ingroup affect) to distinct markers of youth athletes' adaptive sport motivation. The results also provide support for the social identity approach to understanding athletes' sport motivation (Greenway et al., 2020). From this perspective, when individuals share a psychologically meaningful group membership, they should become more intrinsically motivated to coordinate behaviors relevant to that identity and participate in group behavior for more autonomous motives (Greenway et al., 2020).

The decision to exclude the ingroup ties measure from the conceptual model in this study warrants attention. The ingroup ties dimension is adapted from Cameron's (2004) multidimensional model of social identity and is proposed to represent psychological ties that bind the self to the group, which is reflected in an athletes' perception of similarity, bonding, and belongingness with other group members (Bruner & Benson, 2018). However, when measured at the individual level of analysis, the ingroup ties dimension has potential to be confounded with other conceptually similar social constructs that incorporate elements of interpersonal relationships or belonging

within sport teams, such as social cohesion (Carron et al., 1985) and relatedness (Ryan & Deci, 2000). Such overlap has potential to create conceptual and methodological challenges for researchers as the ingroup ties measure may conflate with constructs that assess broader perceptions of belonging and capture unique variance explained by specific types of relationships. In the current study, friendship quality and peer acceptance showed stronger bivariate correlations with ingroup ties (*r*s = .49-.55) compared to cognitive centrality (*r*s = .05-.25) and ingroup affect (*r*s = .24-.22). Evaluation of the discriminatory power between ingroup ties and other interpersonal constructs is a worthy area of future investigation that could inform future research efforts on social relationships and athlete social identity.

One of the more unexpected findings was that neither friendship quality nor peer acceptance was significantly directly associated with enthusiastic sport commitment, sport enjoyment, or autonomous motivation. This runs contrary to previous empirical research (Ullrich-French & Smith, 2006; Weiss & Smith, 2002) showing direct associations between more adaptive perceptions of friendship quality and peer acceptance with more adaptive motivational experiences in youth athletes. However, inspection of the bivariate correlations shows consistent small-to-moderate associations between the peer relationship and motivation constructs (*r*s = .12-.31). This pattern of results may suggest that peer relationships are important to athlete motivation, but link with motivational experiences through indirect avenues. An alternative way to consider the importance of peer relationships is that they may exert stronger effects on motivation in combination as opposed to independent pathways as assessed in the present study. That

is, youth athletes may reconcile different forms of peer relationships in unique ways that are not captured through methods examining independent linear associations. In line with other sport research using idiographic approaches to modeling peer relationships (e.g., Smith, Ullrich-French, et al., 2006), profiling methodologies might better capture how the broader web of an athletes' peer relationships may have meaningful differences for their sport motivation.

Although neither friendship quality nor peer acceptance were directly linked with the motivation variables, peer relationships indirectly predicted athletes' sport motivation by way of social identity. This suggests that teammate relationships may link with athletes' social identity in ways that are of motivational significance to youth athletes. From a conceptual standpoint, the findings complement the social identity-affiliation and influence model (SI-AIM; Bruner, Martin et al., 2020), which is a recent framework underscoring social identity as a critical component of youth athletes' positive sport experiences. Broadly, this model suggests that an array of antecedents (e.g., contextual and team factors) should be tied to athletes' identification with their sport team and, in turn, foster adaptive motivational and developmental experiences that meaningful group life offers. Although our findings position teammate relationships as a meaningful component of this developmental model, it is notable that the peer relationships variables explained a modest amount of variance in cognitive centrality (10%) and ingroup affect (14%).

There are important limitations that should be considered when interpreting the findings from the present study. The cross-sectional nature of this study prohibits firm

conclusions about the directional, or potential bi-directional, associations between the study constructs. For example, youth athletes who strongly identify with their sport team could potentially be more likely to seek out and cultivate stronger social connections with teammates. Future longitudinal research is needed to examine the potential interplay between teammate relationships and social identity in youth sport. In addition, youths' perceptions of their peer relationships and social identity were assessed at the individual level of analysis. Although this work is useful in understanding youth athletes' self-perceptions, a valuable direction for future work is to assess other levels of social analysis, such as dyadic or group perceptions of peer relationships and social identity (Holt et al., 2008; Rubin et al., 2006). For instance, researchers could use network methodologies (e.g., sociometric ratings, social network analysis) to capture the broader structure and density of social connections within the sport team (Graupensperger et al., 2020). Finally, negative interpersonal relationships are a naturally occurring feature in sport (Holt et al., 2012) and there is value in studying the darker side of relationships. A compelling avenue to offer a broader picture of social dynamics in youth sport is to examine how negative peer relationships (e.g., friendship conflict, peer rejection) may associate with athletes' social identity and maladaptive motivational sport experiences.

Acknowledging these limitations, a primary contribution of this work is integrating and finding meaningful connections between the study of interpersonal relationships and social identity within small group contexts. Both friendship quality and peer acceptance made meaningful contributions to athletes' adaptive sport motivation by way of their social identity. The present study expands the understanding of how peer and

group dynamics in the social sport environment are tied to youth athletes' sport motivation.

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CHAPTER 4

STUDY THREE: NEGATIVE PEER RELATIONSHIPS, SOCIAL IDENTITY, AND MALADAPTIVE SPORT MOTIVATION IN YOUTH ATHLETES[5]

Sport psychology researchers have devoted attention to understanding how aspects of the social context may shape motivational experiences of youth athletes. In addition to the traditional focus on coaches and parents, the nature and quality of peer relationships have been increasingly recognized as important contributors to athletes' sport motivation (Smith & Ullrich-French, 2020). Compared to adolescents' relationships with adults, peer relationships offer more balance of power and serve as unique sources of intimacy and validation that are important for psychosocial development (Rubin et al., 2006; Sullivan, 1953). To date, most sport research has focused on how positive features of peer relationships link with adaptive patterns of sport motivation (Smith & Delli Paoli, 2018). Less peer-focused research in sport has examined challenges in peer relationships when studying motivational processes. Examination of how negative features of peer relationships are tied to athletes' sport motivation is warranted to better understand the social context of youth sport.

Peer research in sport has been guided by developmental theory that considers multiple forms of peer relationships, including specific friendships and engagement within the larger peer group (Rubin et al., 2006; Sullivan, 1953). Whereas dyadic friendships constitute the close, intimate relationship between two individuals, peer

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acceptance refers to being accepted by the broader peer group (Rubin et al., 2006). From a developmental lens, more adaptive forms of psychosocial adjustment are expected to emerge for youth who cultivate quality best-friendships (e.g., with a specific teammate) and who feel accepted by their larger peer groups (e.g., a sport team). In line with this perspective, sport research has addressed the functional role of friendship quality with a specific teammate and peer acceptance from the broader sport team for youth athletes' sport motivation (Smith & Delli Paoli, 2018; Weiss & Stuntz, 2004). These studies have consistently linked more positive perceptions of a best sport friendship and peer acceptance with more adaptive motivational experiences. To broaden the study of peer relationships in sport and address the potentially unique motivational impact of negative peer relationships, it is important to examine negative perceptions toward specific teammates and the broader sport team.

Friendship conflict is conceptualized as a negative feature of sport friendships (Weiss et al., 1996) that holds potential to detract from high-quality motivational experiences. Specifically, friendship conflict in a sport context has been conceptualized as the degree to which an athlete perceives they get mad, argue, and fight with a best friend on their sport team (Weiss & Smith, 1999, 2002; Weiss et al., 1996). Conflict with a specific teammate revolves around interpersonal disputes and conflicting personalities (Holt et al., 2012) and could be negatively tied to an athlete's support functions (e.g., intimacy, companionship) that are commonly afforded through high-quality friendships. There is currently equivocal support for how friendship conflict is tied to positive and negative motivational processes in youth athletes. Quantitative studies have shown that

higher friendship conflict is positively associated with athlete burnout (Pacewicz & Smith, 2022; Smith et al., 2010), maladaptive perfectionism, and ego-involved motivational climate (Ommundsen et al., 2005). However, studies have also shown no significant associations between friendship conflict and athlete engagement, sport commitment, and enjoyment (Pacewicz & Smith, 2022; Weiss & Smith, 2002). This pattern of associations may suggest that friendship conflict has stronger ties with maladaptive forms of sport motivation, highlighting the importance of examining friendship conflict with a wider array of negative motivational constructs in sport.

The existing conceptualization of friendship conflict in sport may not capture the intensity of conflict manifestations that detract from positive sport experiences (Smith & Ullrich-French, 2020). More intense conflictual experiences that reflect overt or relational forms of aggression may show stronger ties with motivation. This notion is supported by developmental studies that have established positive associations between overt and relational aggression within adolescent friendships and various forms of psychosocial maladjustment (Crick & Grotpeter, 1995; Crick & Nelson, 2002; Reijntjes et al., 2010). Evidence of overt and relational forms of aggression is evident within teammate relationships (B. Evans et al., 2016; Partridge & Knapp, 2016). For example, an examination of adolescent girls' experiences with conflictual teammate experiences in sport revealed that conflict manifested in both direct (e.g., hitting another girl) and indirect (e.g., giving dirty looks or starting rumors) forms of peer victimization (Partridge & Knapp, 2016). In turn, peer victimization had negative implications for athletes' sport experiences, including worse communication and cohesion, greater competitive anxiety,

and negative emotions (Partridge & Knapp, 2016). In addition to friendship conflict, capturing overt and relational aggression within dyadic sport friendships may afford a deeper understanding of negative peer relationship features.

Exploring group-oriented perceptions of peer relationships can also provide valuable insight into the connection between negative peer relationships and sport motivation. Peer rejection is a group-oriented construct that captures the degree to which an individual feels overtly disliked by the larger peer group (Rubin et al., 2006). Several studies have shown that peer rejection is linked with forms of psychosocial maladjustment in youth such as externalizing and internalizing behaviors, low self-esteem, loneliness, and worse academic adjustment (Asher et al., 2001; Parker & Asher, 1987; Rubin et al., 2006, 2015). However, little research has examined how perceived peer rejection may be associated with motivational processes in sport. One study examined whether aspects of teammate relationships, including peer rejection, predicted athlete burnout and engagement by way of loneliness (Pacewicz & Smith, 2022). Adolescent athletes who perceived stronger peer rejection also reported stronger perceptions of loneliness and, in turn, higher athlete burnout and lower engagement. In line with this pattern of results, peer rejection may be meaningfully tied to other maladaptive forms of sport motivation.

When addressing peer relationships and sport motivation, it is important to explore additional mechanisms that may link social relationships with motivational processes in sport. One potential mechanism is athlete social identity (Bruner, Sutcliffe, et al., 2020; Tajfel & Turner, 1979). Athlete social identity has been represented as a

multidimensional aspect of an individual's self-concept which captures the subjective importance of group membership (cognitive centrality), positive affective feelings associated with group membership (ingroup affect), and perceptions of bonding and similarity with other group members (ingroup ties; Bruner & Benson, 2018; Cameron, 2004). Like the motivationally salient role of peer relationships, athletes' social identity has been consistently linked with sport motivation. Specifically, stronger athlete social identity has been tied to greater autonomous motivation, effort and commitment to one's sport team, and sport enjoyment, as well as lower athlete burnout (Fransen, Haslam, et al., 2020; Fransen, McEwan, et al., 2020; Martin et al., 2018; Murray et al., 2022; Murray & Sabiston, 2022).

Considering that peer relationships serve as important sources for social validation (Harter, 2006; Sullivan, 1953), teammate relationships may make important contributions to athletes' self-perceptions as a group member (i.e., their social identity). To date, research has largely focused on how positive peer relationship constructs are associated with social identity. For instance, research has demonstrated that higher frequencies of self-reported friendship ties with teammates were positively associated with athlete social identity, including cognitive centrality, ingroup affect, and ingroup ties (Graupensperger, Panza, & Evans, 2020). More recently, researchers examined if positive friendship quality and peer acceptance were associated with high school athletes' enthusiastic sport commitment, sport enjoyment, and autonomous motivation by way of social identity (see Chapter 3). Their results showed that positive friendship quality was indirectly associated with sport commitment and autonomous motivation by way of

cognitive centrality and was associated with commitment, enjoyment, and autonomous motivation through ingroup affect. In addition, peer acceptance was indirectly associated with sport commitment, enjoyment, and autonomous motivation by way of ingroup affect. Together, these studies suggest that distinct forms of peer relationships may be important to consider relative to athletes' social identity, and in turn, their sport motivation.

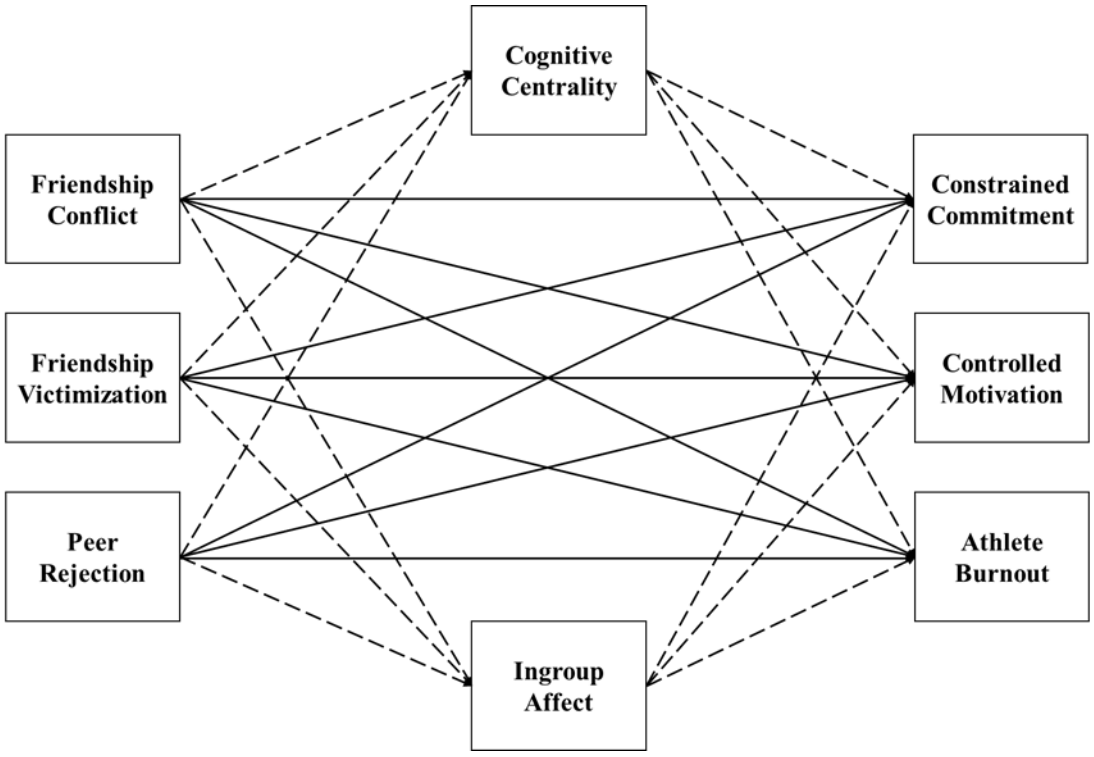
Negative forms of peer relationships may detract from athletes' social identity. Sport research has demonstrated that negative peer interactions, reflected in higher frequencies of antisocial behaviors from teammates, predicted lower athlete social identity. For example, researchers qualitatively examined the link between intrateam moral behaviors and social identity in youth hockey teams and found higher self-reported frequencies of antisocial teammate behaviors to detract from athletes' social identity (Bruner et al., 2017). Building from this work, researchers have also used a daily-diary approach to examine how moral behaviors associated with adolescent athletes' social identity over a 10-day period (Benson & Bruner, 2018). Results illustrated that on days athletes reported higher frequencies of antisocial teammate behaviors, they also reported lower social identification with their sport team (Benson & Bruner, 2018). Considering the associations between negative peer interactions and athlete social identity, further examination of potential links between negative forms of peer relationships, athlete social identity, and sport motivation is warranted.

This study was designed to improve understanding of how negative forms of peer relationships may be associated with athletes' social identity in ways that may facilitate

maladaptive sport motivation. The proposed hypothesized model is illustrated in Figure 4.1. Specifically, the purpose of this study was (a) to examine the associations of negative peer constructs (i.e., friendship conflict, friendship victimization, and peer rejection) with maladaptive constrained commitment, controlled motivation, and athlete burnout, and (b) to examine whether athlete social identity (i.e., cognitive centrality, ingroup affect) mediated these associations. We hypothesized that friendship conflict, friendship victimization, and peer rejection would be positively associated with constrained commitment, controlled motivation, and athlete burnout. In addition, we hypothesized that the negative peer constructs would inversely associate with social identity, which in

Figure 4.1

Study 3: Hypothesized Path Model



Note. Solid lines indicate positive hypothesized relationships and dashed lines indicate negative relationships.

turn would inversely associate with the maladaptive sport motivation constructs. This would support the mediating role of social identity where significant indirect effects are observed.

Method

Participants

Data were collected from 160 youth athletes (boys = 105, girls = 55) competing in club soccer (n = 137) and high school tennis (n = 23) teams in the Midwest and Northeast regions of the United States. Participants ranged in age from 11 to 18 years (M = 15.1, SD = 1.9) and self-identified as White (79.4%), More than one race (8.8%), Other (5.0%), Black/African American (3.1%), Asian (2.5%), and American Indian/Alaskan Native (1.3%). Hispanic/Latino ethnicity was reported by 8.8% of participants. There were 20 total sport teams represented in the sample, including soccer (k = 18) and tennis (k = 2). There were fourteen boys' sport teams and six girls' sport teams represented in the sample. The number of participants per team ranged between one and fifteen. Approximately one-fifth (22.5%) of participants self-identified as holding a formal leadership role. Most participants were starters on their team (64.4%), followed by occasional starters (25.0%), and non-starters (10.6%). At the time of data collection, all participants had been actively competing in their competitive season. Participants reported their stage of season as beginning of the season (53.8%), midseason (34.4%), and end of season (11.9%).

Procedure

Ethical approval was obtained by the Utah State University institutional review board (see Appendix D). Administrators (i.e., high school athletic directors) were contacted for permission to contact coaches in their school district (see Appendix E). Following approval, high school coaches were contacted via email to assess interest for their sport team's participation in the study. Club sport coaches were contacted directly. If a coach agreed to have their team participate, they were asked to distribute a link to an online Qualtrics consent form to parents and to provide the researchers with a copy of a team roster. The roster list was randomized and used to populate the peer nomination scale in the questionnaire battery prior to the research visit. During the research visit, the primary author explained the purpose of the study and answered relevant questions from athletes and coaches. Participants were informed that their participation was voluntary, their responses were confidential, and that any identifying information would be removed from their surveys. Participants with parental consent and who offered their assent (or their consent if 18 years old) were then administered the questionnaire battery (see Appendix F for consent and assent forms). The primary researcher was present during data collection to ensure that participants maintained an appropriate distance from other participants during survey completion and did not share answers. The questionnaire battery took approximately 20 minutes to complete (questionnaire available upon request). Athletes were compensated with a $10 electronic Amazon gift card in exchange for their participation in the study.

Measures

Demographics

Participants were asked to identify their age, gender, race, and ethnicity. They also reported on their leadership status, starting status, and stage of season.

Friendship Conflict and Victimization

The friendship conflict and friendship victimization items were administered together using the instruction set from the Sport Friendship Quality Scale (SFQS; Weiss & Smith 1999). The instruction set reinforced responses pertaining to a specific teammate by asking the participant to write the initials of their best friend on their team in a box at the top of the questionnaire. Responses for all friendship items were measured on a scale ranging from 1 (*not true at all*) to 5 (*really true*).

Friendship Conflict. The friendship conflict subscale from the Sport Friendship Quality Scale (SFQS; Weiss & Smith, 1999) was used to measure perceived friendship conflict with a best friend on the respondents' sport team. The conflict subscale includes three items (e.g., "My friend and I get mad at each other"). A friendship conflict score was calculated by averaging responses to the conflict items. Adequate internal consistency reliability and construct validity for scores on the friendship conflict subscale have been demonstrated in developmentally similar populations of youth athletes (e.g., Weiss & Smith, 1999). In the current study, friendship conflict scores displayed adequate internal consistency reliability ($\alpha = .86$).

Friendship Victimization. Seven items from the relational aggression and overt aggression subscales from the Friendship Qualities Measure-Self Report (FQM-S;

Grotpeter & Crick, 1996) were used to measure perceived victimization from a best friend on one's sport team. The relational aggression subscale contains four items (e.g., "My friend ignores me when he/she is mad at me") and assesses the degree to which respondents report being recipients of relationally aggressive behavior from their friend. The overt aggression subscale contains three items (e.g., "My friend pushes and shoves me when he/she is mad at me") and assesses the degree to which participants report being recipients of overtly aggressive behavior from their friend. A global score for friendship victimization was created by averaging the seven items. Support for internal consistency reliability and validity of scores on relational and overt aggression scales has been demonstrated in adolescent populations (Grotpeter & Crick, 1996). In the current study, internal consistency reliability was marginal for relational victimization scores ($\alpha = .63$) and adequate for overt victimization ($\alpha = .72$) and global friendship victimization ($\alpha = .79$) scores.

The friendship conflict and friendship victimization items were balanced with eight positively valenced items comprising the things in common (e.g., "My friend and I have the same values") and companionship and pleasant play (e.g., "I like to play with my friend") subscales from the SFQS. This was to balance the overall affective valence of the survey for respondents. Also, for exploratory purposes an item was added at the end of the friendship measure which instructed participants to identify whether their best sport friend was also their best friend outside of sport (1 = *Yes*, 2 = *No*).

Peer Rejection

The unsympathetic/insensitive behavior subscale from the Positive and Negative

Social Exchanges scale (PNSE; Newsom et al., 2005) was used to assess the perceived frequency of an individual being rejected by their teammates. The instruction set was modified to, “In the past month, how often did your teammates...” and included 3-items (e.g., “Leave you out of activities you would have enjoyed?”). These items were balanced with three positively valanced items from the informational support subscale on the PNSE (e.g., “Offer helpful advice when you needed to make important decisions”). Responses were measured on a 5-point scale ranging from 0 (*never*) to 4 (*very often*). The three rejection items were averaged to create a global score for perceived peer rejection on one’s sport team. Internal consistency reliability and predictive validity for scores on the negative social exchanges scale have been supported in adolescent athlete samples (e.g., Pacewicz & Smith, 2022). In this study, peer rejection scores displayed adequate internal consistency reliability ($\alpha = .76$).

Social Identity

The Social Identity Questionnaire for Sport (SIQS; Bruner & Benson, 2018) was used to assess athletes’ social identity. Adapted from Cameron (2004), the SIQS includes 9-items that span three subscales: cognitive centrality (“In general, being a team member is an important part of my self-image”), ingroup affect (e.g., “Generally, I feel good when I think about myself as a team member”), and ingroup ties (e.g., “I feel a sense of being “connected” with other members in this team”). Responses are measured on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Individual items were averaged to create subscale scores for the respective social identity dimensions and a global athlete social identity score was created by averaging all items. Previous research has

demonstrated adequate internal consistency reliability and construct validity of scores for the three separate dimensions (Bruner & Benson, 2018). The internal consistency of scores for cognitive centrality (α = .77), ingroup affect (α = .89), ingroup ties (α = .86), and global athlete social identity (α = .90) were adequate in the current study.

We made an *a priori* decision to only include the cognitive centrality and ingroup affect dimensions in the formal analysis. Whereas cognitive centrality and ingroup affect both assess self-perceptions about being a group member, the ingroup ties dimension represents an athlete's bonds with other members of the team. Accordingly, there is potential conceptual overlap between ingroup ties and our assessment of peer relationships, which were of primary theoretical interest. The ingroup ties dimension is therefore included in the descriptive analysis, but not in the formal path model.

Constrained Sport Commitment

The sport commitment subscale from the Sport Commitment Questionnaire-2 (SCQ-2; Scanlan et al., 2016) was used to assess athletes' constrained sport commitment. The sport commitment subscale includes five items that assess constrained commitment (e.g., "I feel trapped in this sport") and was presented with six items that assess enthusiastic sport commitment (e.g., "I am willing to overcome any obstacle to keep playing this sport") to maintain overall affective balance in the study questionnaire. Responses are measured on a five-point scale with anchor points ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The five constrained sport commitment items were averaged to create a global score for constrained commitment. Previous research has demonstrated support for internal consistency reliability and construct validity of

constrained commitment scores (e.g., Scanlan et al., 2016). Scores on the constrained commitment subscale showed adequate internal consistency reliability in this study (α = .77).

Controlled Motivation

The Behavioral Regulation in Sport Questionnaire (BRSQ-6; Lonsdale et al., 2008) was used to assess controlled motivation. The BRSQ begins with the stem "I participate in my sport…" and includes 24-items that span six dimensions: intrinsic motivation (e.g., "Because I find it pleasurable"), integrated regulation (e.g., "Because it is a part of who I am"), identified regulation (e.g., "Because I value the benefits of my sport"), introjected regulation (e.g., "Because I would feel ashamed if I quit"), external regulation (e.g., Because I feel pressure to play from other people"), and amotivation (e.g., "But I question why I am putting myself through this"). Responses were measured on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Consistent with previous research (e.g., O'Neil & Hodge, 2020), individual items were averaged within the respective introjected regulation and extrinsic motivation subscales. An index for controlled motivation was then calculated using the formula: 2* introjected regulation + 2*external regulation. Internal consistency reliability and factorial validity for scores on the BRSQ have been supported in previous youth sport research (Lonsdale et al., 2008). Individual scores on the introjected regulation (α = .84) and external regulation (α = .87) subscales showed satisfactory internal consistency reliability in the present study, along with combined scores across both subscales (α = .91).

Athlete Burnout

The Athlete Burnout Questionnaire (ABQ; Raedeke & Smith, 2001, 2009) was used to measure athletes' burnout perceptions. The measure consists of 15-items across three subscales: emotional/physical exhaustion (e.g., "I feel "wiped out" from my sport"), reduced sense of accomplishment (e.g., "I am not achieving much in my sport"), and sport devaluation (e.g., "I have negative feelings toward my sport"). Responses are measured on a scale with anchor points ranging from 1 (*almost never*) to 5 (*almost always*). A global score was also calculated by averaging all 15 burnout items. Adequate internal consistency reliability and construct validity of scores from the ABQ in adolescent sport populations has been demonstrated in previous research (Raedeke & Smith, 2001). Internal consistency reliability was adequate for scores on each burnout dimension including emotional exhaustion ($\alpha = .89$), reduced accomplishment ($\alpha = .77$), and sport devaluation ($\alpha = .84$), as well as global burnout ($\alpha = .91$).

Sociometric Status

Sociometric data were procured for descriptive exploratory purposes. Sociometric status was assessed using a peer nomination questionnaire adapted from procedures in Coie et al. (1982). Participants were prompted with two items, 1) "Please circle three people you *like the most* on your team," and 2) "Please circle three people you *like the least* on your team." A randomized order of team names on the roster list was presented below each item. Participants were instructed to circle the names of three individuals who corresponded to each item. The total number of 'like most' and 'like least' nominations were summed and standardized within-team to account for disparity in roster size. A

social preference score for each participant was computed by subtracting the standardized number of 'like least' nominations from 'like most' nominations. A social impact score for each participant was computed by adding the standardized number of 'like most' and 'like least' nominations. Participants were then classified into one of five established sociometric categories based on Coie et al.'s (1982) classification procedure using standardized nomination scores. In line with previous research examining sociometric status in sport teams (Herbison et al., 2019; Vierimaa & Côté, 2016), participants were classified as: *popular* (social preference > 0.8, like most > 0, like least < 0), *rejected* (social preference < -0.8, like most < 0, like least > 0), *neglected* (social impact < -0.8, like most < 0, like least < 0), or *controversial* (social impact > 0.8, like most > 0, like least > 0). Remaining participants were classified as *average*.

Data Analysis

Data analyses were conducted using R version 4.4.0 (R Core Team, 2024). Data were screened for patterns of missing data, normality assumptions, and outliers (Tabachnick & Fidell, 2013). Potential missing data patterns were assessed using Little's missing completely at random (MCAR) test (Little, 1988). Normality assumptions were inspected through univariate skewness and kurtosis values. Univariate outliers were screened using standardized subscale scores (± 3.29) and multivariate outliers were assessed through Mahalanobis distance ($p < .001$; Tabachnick & Fidell, 2013). Internal consistency reliability was examined through Cronbach's alpha values. Descriptive statistics were calculated including means, standard deviations, and bivariate correlations between the study variables.

Exploratory descriptive analyses were conducted in three steps. First, multivariate analyses of variance (MANOVAs) and follow-up univariate tests were conducted to explore potential age (early versus late adolescents) and gender (boy versus girl) differences on the sets of peer relationships, social identity, and motivation variables, respectively[6]. Second, the proportion of individuals who rated their best sport friend as their best friend outside of sport was calculated (1 = *Yes*, 2 = *No*). A one-way MANOVA was conducted to examine if scores on the study variables differed based on whether participants' best friend in sport was also their best friend outside of sport. Finally, additional MANOVAs and follow-up univariate tests were conducted to explore whether scores on the peer relationships, social identity, and motivation variables differed based on classification of sociometric status (i.e., popular, rejected, neglected, controversial, average). Post-hoc comparisons were conducted using Tukey's HSD test.

Observed variable path analysis using maximum likelihood estimation with robust Huber-White standard errors (MLR) was conducted using the lavaan package in R (Rosseel, 2012). Participant age and gender were included as control variables in the path analysis. Age was modeled as a continuous exogenous independent variable and gender was coded (boys = 0, girls= 1). Bias-corrected bootstrapped confidence intervals (5,000 resamples) were used to assess indirect effects. Bootstrapping was conducted using maximum likelihood estimation since MLR is not available for this analysis in R.

[6] Separate permutational MANOVAs and follow-up Mann-Whitney U tests were also conducted when examining group differences on the set of peer relationship variables given the non-normal distribution of friendship victimization scores. These statistical tests are non-parametric frameworks that can accommodate analyses for non-normally distributed variables (Anderson, 2017). Interpretation of effects did not differ from the MANOVA framework. We, therefore, report the MANOVA results for ease of interpretation.

Significant indirect effects were inferred if the confidence interval for a specific indirect effect did not span zero (Preacher & Hayes, 2008). This approach is preferred to using *p* values as bootstrapping does not make distributional assumptions of the indirect effect.

Results

Preliminary Data Screening

Inspection of skewness (-1.75 to 3.38) and kurtosis (-0.45 to 14.99) values revealed deviations from normality. These were most pronounced for friendship victimization scores, which congregated at the lower pole on the set of response options. Approximately 1.1% of individual scale items were missing across all participants, which were missing completely at random, X^2 (2226) = 2334.43, p = .054. Missing data were therefore handled using full information maximum likelihood estimation. This approach uses all available information to estimate the model parameters. Because athletes were nested within sport teams, intraclass correlation coefficients (ICCs) were examined to assess assumptions for nonindependence. Unconditional null models showed ICC values for the primary study variables ranged between .08 and .20 (see Table 4.1) suggesting potentially meaningful variation was attributable to sport team membership (Maas & Hox, 2005). We attempted to control for group membership using the "cluster=" function in lavaan. This function adjusts standard errors to account for clustering around a specified variable – in this study, sport team membership. The model terminated normally but the variance-covariance matrix was non-positive definite, likely because of the moderate sample size and low ratio of lower-level to upper-level units. An alternative model was tested with a dummy-coded group membership variable included as a

Table 4.1

Descriptive Statistics for the Study Variables (N = 160)

Heading	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Friendship conflict	-												
2. Friendship victimization	.51**	-											
3. Relational victimization	.38**	.87**	-										
4. Overt victimization	.51**	.88**	.53**	-									
5. Peer rejection	.16*	.23**	.23**	.17*	-								
6. Cognitive centrality	-.01	.00	-.04	.04	-.17*	-							
7. Ingroup affect	-.07	-.11	-.15	-.05	-.36**	.62**	-						
8. Ingroup ties	-.05	.00	.00	.01	-.43**	.56**	.67**	-					
9. Constrained commitment	.03	.11	.15	.05	.27**	-.02	-.31**	-.18*	-				
10. Controlled motivation	.07	.15	.16*	.11	.39**	.10	-.27**	-.20*	.64**	-			
11. Athlete burnout	.15	.21*	.19*	.16*	.35**	-.22**	-.50**	-.34**	.58**	.48**	-		
12. Age	.04	.00	.04	-.05	.16*	-.21**	-.14	-.16*	.05	.10	.21**	-	
13. Gender	-.29**	-.27**	-.20*	-.27**	.01	-.08	-.04	.04	-.04	-.11	.17*	-.09	-
Scale Range	1-5	1-5	1-5	1-5	0-4	1-7	1-7	1-7	1-5	1-7	1-5	-	-
α	.86	.79	.63	.72	.76	.77	.89	.86	.77	.91	.91	-	-
Mean	1.77	1.25	1.24	1.25	0.50	5.02	6.09	5.73	1.84	11.66	1.92	15.06	-
Standard Deviation	0.87	0.43	0.42	0.58	0.64	1.43	1.14	1.31	0.82	5.96	0.69	1.89	-
Skewness	1.48	3.48	2.94	3.38	1.35	-0.53	-1.75	-1.32	1.30	0.79	1.10	-	-
Kurtosis	1.87	14.99	10.22	13.72	1.05	-0.45	3.39	1.33	1.25	-0.12	1.08	-	-
Intraclass Correlation Coefficient	.14	.20	.03	.38	.10	.17	.15	.21	.08	.13	.12	-	-

Note. α = Cronbach's alpha coefficient. Gender is coded *boys* = 0, *girls* = 1.

* $p < .05$, ** $p < .01$.

covariate. This model did not converge. Models were therefore estimated without controlling for group membership as the data structure was not appropriate for estimating group-level effects.

Standardized subscale scores were inspected to screen for univariate and multivariate outliers. Three univariate and four multivariate outlier cases were identified. Group difference tests and formal path analyses were conducted with and without outlier cases. Because estimates changed with the removal of these cases, group difference tests and the path analysis were conducted without outlier cases. In total, 153 cases were included in the group difference tests and path analysis.

Descriptive Statistics

A summary of descriptive statistics for the study variables is shown in Table 4.1. Participants reported relatively low scores on the set of negative peer relationships and maladaptive sport motivation variables and moderate-to-high scores on the social identity variables. Higher friendship conflict scores corresponded with higher friendship victimization and peer rejection but were not associated with the social identity and motivation variables. Friendship victimization scores shared positive correlations with peer rejection and athlete burnout. Peer rejection scores were negatively correlated with the social identity variables and positively correlated with the maladaptive motivation variables. The social identity variables generally shared negative correlations with the maladaptive motivation variables. The overall pattern of correlations was mostly consistent with expectations.

Group difference tests were conducted with and without outlier cases. Results are

reported without seven outliers due to differences in the interpretation of these effects when outlier cases were removed. Group differences tests were therefore conducted with 153 total cases. Traditional benchmarks (small = 0.01, medium = 0.06, large = 0.14; Cohen, 1988) were used to interpret effect sizes. First, we conducted one-way MANOVAs to examine if early adolescents (11-14 years) differed from late adolescents (15-18 years) on the peer relationships, social identity, and motivation variables. There was a significant multivariate effect of age on the set of peer relationship variables, Pillai's Trace = 0.08, $F(3, 149) = 4.31$, $p = .006$; $\eta^2 = .08$. Follow up univariate tests showed older adolescents scored higher on peer rejection compared to early adolescents, $F(1,151) = 12.86$, $p < .001$, $\eta^2 = .08$. There was no significant multivariate effect for age on the set of social identity variables, Pillai's Trace = 0.04; $F(3, 148) = 2.05$, $p = .109$; $\eta^2 = .04$. There was a significant multivariate effect for age on the set of motivation variables, Pillai's Trace = 0.07; $F(3, 147) = 3.46$, $p = .018$; $\eta^2 = .07$. Older adolescents scored higher on burnout compared to younger adolescents, $F(1,149) = 10.33$, $p = .002$, $\eta^2 = .07$. Effect sizes for these differences were small to medium.

Three additional group difference tests were conducted to examine potential gender differences on the study variables. There was a significant multivariate effect of gender on the set of peer relationship variables, Pillai's Trace = 0.13, $F(3, 149) = 7.18$, $p < .001$; $\eta^2 = .13$. Follow up univariate tests showed boys scored higher on friendship conflict, $F(1,151) = 7.52$, $p < .001$, $\eta^2 = .07$, and friendship victimization, $F(1,151) = 16.63$, $p < .001$, $\eta^2 = .10$, compared to girls. There was not a significant multivariate effect of gender on the social identity variables, Pillai's Trace = 0.02; F (3, 148 = 1.04, p

= .377; $\eta^2 = .02$. There was a significant multivariate effect of gender on the motivation variables, Pillai's Trace = 0.11; F (3, 147) = 6.02, $p < .001$; $\eta^2 = .11$. However, univariate tests revealed no significant differences on the motivation variables. Effect sizes for these differences were small to medium. A summary of descriptive differences for age and gender are in Table 4.2.

Table 4.2

Descriptive Statistics by Age and Gender (N = 153)

	Girls (n = 52)		Boys (n = 101)		Early adolescent (n = 52)		Late adolescent (n = 101)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Friendship conflict	1.42[a]	0.62	1.89[a]	0.87	1.74	0.84	1.73	0.82
Friendship victimization	1.08[b]	0.11	1.27[b]	0.33	1.19	0.32	1.21	0.27
Peer rejection	0.47	0.59	0.46	0.61	0.23[c]	0.36	0.59[c]	0.67
Cognitive centrality	4.99	1.50	5.09	1.35	5.36	1.24	4.90	1.45
Ingroup affect	6.23	1.00	6.14	1.03	6.42	0.89	6.05	1.06
Ingroup ties	5.96	1.22	5.70	1.24	6.09	0.99	5.63	1.33
Constrained commitment	1.73	0.78	1.87	0.82	1.65	0.76	1.91	0.82
Controlled motivation	10.18	5.71	12.01	5.61	10.18	5.05	12.04	5.91
Athlete burnout	2.00	0.67	1.80	0.60	1.65[d]	0.63	1.99[d]	0.60

Note. Seven outlier cases removed. Significant mean differences are denoted with matching alphabetic superscripts. Early Adolescent = 11-14 years, Late Adolescent = 15-18 years.

We then examined if scores on the peer relationships, social identity, and motivation variables could be differentiated based on whether participants' best sport friend was also their best friend out of sport. Approximately one-third (35.7%) of participants indicated that their best friend on their team was also their best friend outside of their sport. There was not a significant multivariate effect for the peer relationships variables, Pillai's Trace = 0.01, F(3, 146) = 0.60, $p = .616$; $\eta^2 = .01$, social identity variables, Pillai's Trace = 0.02, F(3, 145) = 0.76, $p = .517$; $\eta^2 = .02$, nor the motivation

variables, Pillai's Trace = 0.02, $F(3, 144) = 0.75$, $p = .526$; $\eta^2 = .02$.

Finally, group difference tests were conducted to examine if scores on the peer relationships, social identity, and motivation variables differed by sociometric status. Following recommendations in developmental literature (Cillessen & Marks, 2011), participant data were only used for teams in which at least 60% of athletes completed sociometric assessments in the questionnaire battery. Sociometric data were analyzed for 55 participants across four club soccer teams (three boys, one girls) within the broader sample. Seventeen participants were classified as popular (30.9%), seven as rejected (12.7%), 14 as neglected (25.5%), three as controversial (5.5%), and 14 as average (25.5%). This is generally consistent with classification percentages reported in previous sport research (Herbison et al., 2019; Vierimaa & Côté, 2016). There was not a significant multivariate effect of sociometric status on the peer relationships variables, Pillai's Trace = 0.35; $F(12, 150) = 1.65$, $p = .083$; $\eta^2 = .12$. There was a significant multivariate effect of sociometric status on the social identity variables, Pillai's Trace = 0.46; $F(12, 150) = 2.24$, $p = .012$; $\eta^2 = .15$. A follow-up univariate test showed there was a statistically significant difference for ingroup ties scores, $F(4, 50) = 4.23$, $p = .005$; $\eta^2 = .25$. Post-hoc comparisons showed rejected participants reported significantly ($p = .034$) lower ingroup ties scores ($M = 4.76$, $SD = 1.52$) than popular participants ($M = 6.27$, $SD = 0.71$). Also, neglected participants ($M = 5.02$, $SD = 1.45$) reported significantly lower ingroup ties scores ($p = .028$) than popular participants. There was not a significant multivariate effect of sociometric status on the motivation variables, Pillai's Trace = 0.31; $F(12, 147) = 1.43$, $p = .157$; $\eta^2 = .11$.

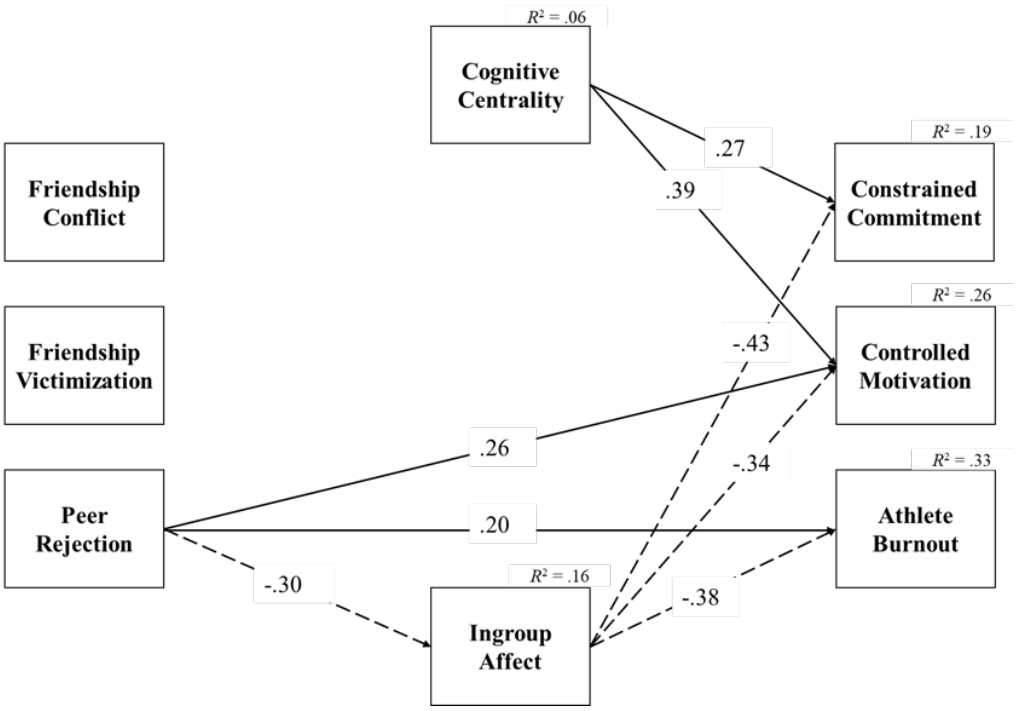
Path Model

Observed variable path analysis was used to test the hypothesized model. Participant age and gender were included as control variables for each endogenous variable in the path analysis. Friendship conflict and friendship victimization were not significantly associated with constrained commitment, controlled motivation, nor athlete burnout. However, peer rejection was positively associated with controlled motivation ($\beta = 0.26$, $p = .001$), and athlete burnout ($\beta = 0.20$, $p = .013$). Neither friendship conflict, friendship victimization, nor peer rejection was significantly associated with cognitive centrality. Peer rejection was negatively associated with ingroup affect ($\beta = -0.30$, $p < .001$). In turn, cognitive centrality was positively associated with constrained commitment ($\beta = 0.27$ $p = .005$) and controlled motivation ($\beta = 0.39$, $p < .001$) and ingroup affect was negatively associated with constrained commitment ($\beta = -0.43$, $p < .001$), controlled motivation ($\beta = -0.34$, $p < .001$), and athlete burnout ($\beta = -0.38$, $p < .001$). For the control variables, age was negatively associated with cognitive centrality ($\beta = -0.20$, $p = .009$) and positively associated with burnout ($\beta = 0.15$, $p = .011$). Gender was positively associated with burnout ($\beta = 0.25$, $p < .001$), indicating that girls reported significantly higher burnout perceptions. Direct effects are shown visually in Figure 4.2.

Indirect effects were assessed using 5,000 bootstrapped resamples. Peer rejection was indirectly associated with constrained commitment ($\beta = 0.13$), controlled motivation ($\beta = 0.10$), and athlete burnout ($\beta = 0.11$) by way of ingroup affect. There were no significant indirect effects by way of cognitive centrality. The observed path analysis explained approximately 6% of variance for cognitive centrality, 16% for ingroup affect,

Figure 4.2

Study 3: Path Model (N = 153)



Note. Only significant paths are shown and covariances omitted for simplicity. Dashed lines indicate negative relationships. Age and gender included as control variables. Age was negatively associated with cognitive centrality (β = -.20) and positively associated with burnout (β = .15). Gender was positively associated with burnout (β = .25) indicating girls had higher burnout perceptions than boys. R^2 = variance explained.

19% for constrained commitment, 26% for controlled motivation, and 33% for athlete burnout. A summary of indirect effects is summarized in Table 4.3.

Discussion

Negative peer relationships are naturally occurring features in the sport environment and may detract from high-quality youth sport experiences (Pacewicz & Smith, 2022; Partridge & Knapp, 2016). This study examined whether perceived

Table 4.3

Standardized Direct and Indirect Effects from the Path Analysis (N = 153)

Variable paths	Direct effect	(*SE*)	Indirect effect	(*SE*)	95% CI	
Cognitive centrality						
Friendship conflict	-.03	(0.09)	-	-	-	
Friendship victimization	-.05	(0.10)	-	-	-	
Peer rejection	-.10	(0.08)				
Ingroup affect						
Friendship conflict	-.00	(0.10)	-	-	-	
Friendship victimization	-.21	(0.11)	-	-	-	
Peer rejection	-.30*	(0.09)				
Constrained commitment						
Friendship conflict	-.04	(0.07)	-	-	-	
Friendship victimization	.00	(0.09)	-	-	-	
Peer rejection	.17	(0.09)				
Cognitive centrality	.27**	(0.10)		-	-	
Ingroup affect	-.43**	(0.12)		-	-	
Friendship conflict → cognitive centrality			-.01	(0.03)	[-0.07	0.04]
Friendship conflict → ingroup affect			.00	(0.04)	[-0.09	0.09]
Friendship victimization→ cognitive centrality	-	-	-.01	(0.03)	[-0.07	0.05]
Friendship victimization→ ingroup affect	-	-	.09	(0.06)	[-0.02	0.22]
Peer rejection→ cognitive centrality	-	-	-.03	(0.03)	[-0.09	0.02]
Peer rejection→ ingroup affect	-	-	.13	(0.05)	[0.04	0.24]
Controlled motivation						
Friendship conflict	-.06	(0.07)	-	-	-	
Friendship victimization	.08	(0.09)	-	-	-	
Peer rejection	.26*	(0.08)				
Cognitive centrality	.39**	(0.08)	-	-	-	
Ingroup affect	-.34**	(0.10)		-	-	
Friendship conflict→ cognitive centrality	-	-	-.01	(0.04)	[-0.09	0.06]
Friendship conflict→ ingroup affect	-	-	.00	(0.04)	[-0.07	0.08]
Friendship victimization→ cognitive centrality	-	-	-.02	(0.04)	[-0.10	0.07]
Friendship victimization→ ingroup affect			.07	(0.05)	[-0.01	0.18]
Peer rejection→ cognitive centrality			-.04	(0.03)	[-0.11	0.02]
Peer rejection→ ingroup affect	-	-	.10	(0.04)	[0.03	0.20]
Athlete burnout						
Friendship conflict	.08	(0.07)	-	-	-	
Friendship victimization	.15	(0.08)	-	-	-	
Peer rejection	.20*	(0.08)				
Cognitive centrality	.11	(0.08)		-	-	
Ingroup affect	-.38**	(0.09)		-	-	
Friendship conflict→ cognitive centrality	-	-	-.00	(0.01)	[-0.04	0.02]
Friendship conflict→ ingroup affect	-	-	.00	(0.04)	[-0.07	0.08]
Friendship victimization→ cognitive centrality	-	-	-.01	(0.02)	[-0.04	0.03]
Friendship victimization→ ingroup affect	-	-	.08	(0.05)	[-0.02	0.19]
Peer rejection→ cognitive centrality			-.01	(0.02)	[-0.05	0.01]
Peer rejection→ ingroup affect			.11	(0.04)	[0.04	0.21]

Note. Age and gender are included as controls for endogenous variables. Significant indirect effects are underlined.

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

friendship conflict, friendship victimization, and peer rejection predicted maladaptive sport motivation by way of athlete social identity. Participant age and gender were included as control variables in the analysis. Results showed peer rejection, but not friendship conflict or victimization, was positively associated with controlled motivation and athlete burnout. Ingroup affect negatively predicted constrained commitment, controlled motivation, and athlete burnout, while cognitive centrality positively predicted constrained commitment and controlled motivation. Indirect effects showed peer rejection was associated with constrained commitment, controlled motivation, and athlete burnout by way of ingroup affect. Finally, younger participants scored higher on cognitive centrality and lower on burnout compared to older participants, and girls scored higher on burnout compared to boys. The findings provide partial support for the hypothesized model and showcase a potential pathway through which negative peer relationships may link with maladaptive sport motivation.

Research examining antecedents of athlete social identity has tended to focus on positive features of the sport experience (Bruner, Sutcliffe, et al., 2020; see also Chapter 2). A valuable contribution of this work is exploring factors that may be negatively tied to athletes' social identity. Results showed peer rejection was negatively associated with ingroup affect but not cognitive centrality. That is, perceptions of being more frequently left out by teammates corresponded with lower positive feelings about group membership, but not the subjective importance of group membership. Similar trends are evident in research examining associations between moral teammate behaviors and athlete social identity. Specifically, antisocial teammate behaviors (e.g., being sworn at

by a teammate) were negatively associated with ingroup affect but not cognitive centrality in a developmentally similar sample of youth hockey players (Benson & Bruner, 2018). In the context of negative relationships, an individual could still bestow subjective importance to their group membership even if they perceive negative teammate relationships, such as peer rejection. On the other hand, more adaptive features of teammate relationships, including positive friendship quality and prosocial teammate behavior, have been associated with stronger cognitive centrality (Benson & Bruner, 2018; see also Chapter 3). Positive peer relationships may play a comparatively meaningful role in facilitating the subjective importance of being a group member as compared to negative peer relationships included in this study.

Findings also showed peer rejection to positively predict controlled motivation and athlete burnout, while friendship conflict and victimization were not significantly associated with maladaptive motivation. This supplements prior work tying peer rejection indirectly to athlete burnout (Pacewicz & Smith, 2022) and extends these findings by showcasing direct associations between peer rejection and additional maladaptive sport motivation constructs. However, the pattern for friendship constructs runs contrary to youth sport research demonstrating positive associations between friendship conflict and athlete burnout (Pacewicz & Smith, 2022; Smith et al., 2010). This could suggest that conflict is salient to athletes' motivation only in unique circumstances (Smith & Ullrich-French, 2020). Recent research has shown unique effects of peer relationships to sport motivation when considering friendship conflict in combination with positive friendship quality and peer acceptance (O'Neil et al., 2023; Smith et al., 2006). Manifestations of

friendship conflict could be more strongly tied to maladaptive sport motivation in the presence of negative (e.g., high peer rejection), or absence of positive (e.g., low peer acceptance), peer relationship features.

Friendship victimization scores were also not significantly associated with maladaptive sport motivation. This was unexpected considering the victimization items captured more intense expressions of conflict beyond getting mad or arguing with a close friend. The distribution of friendship victimization scores was leptokurtic (i.e., most responses congregated at the lower pole), suggesting that victimization behaviors were uncommon relative to athletes in the sample. A possible explanation is that the overt and relational victimization items in this study did not adequately capture the range of victimization behaviors that manifest among close friends in sport. For example, researchers have documented direct and indirect victimization behaviors that were sport-specific (e.g., not passing to an unliked teammate) and which occurred outside of sport (e.g., writing disparaging comments about a teammate on social media; Partridge & Knapp, 2016). Another possible explanation is that peer victimization behaviors are infrequent in close friendships and could manifest more frequently between individuals who are not close friends. Nominating specific peers who are more aggressive, or who are victimized more often, is an alternative way to assess victimization behaviors (e.g., Laninga-Wijnen et al., 2017). Social network methodologies could provide a clearer picture of peer victimization experiences in sport. A deeper understanding of which overt and relational victimization behaviors are most common and salient to athletes' sport experiences is an important step to uncovering ways peer victimization can detract from

high-quality youth sport experiences.

A unique descriptive element of this study was achieved through obtaining peer nomination data for athletes who were liked most or liked least on their sport teams. Nominations were used to classify athletes into sociometric status categories (i.e., popular, rejected, neglected, controversial, average) and were compared for potential differences on the peer relationships, social identity, and motivation variables. This approach provided a triangulated view and useful descriptive comparison of athletes' self-reported peer rejection on their sport team. Approximately 12% of participants were classified as rejected, which is indicative of the low levels of perceived peer rejection (M = 0.50, SD = 0.64) in the broader sample. Descriptive analyses showed that rejected athletes had significantly lower scores on ingroup ties than popular athletes. This makes conceptual sense as ingroup ties is a social identity dimension assessing close bonds with other group members (Bruner & Benson, 2018). It is notable that differences did not emerge for other social identity dimensions or maladaptive motivation constructs considering the pattern of results for perceived peer rejection in the path model. This highlights the importance of capturing personal views of one's peer relationships as they can offer unique insight into their psychological impact (Ladd, 2009). Nonetheless, only a subset of participants in the broader sample were included in the sociometric analysis because teams with < 60% participation were excluded, potentially limiting the power to detect meaningful differences among the study variables.

Associations between athlete social identity and maladaptive sport motivation variables were partially consistent with expectations. As expected, ingroup affect was

negatively associated with constrained commitment, controlled motivation, and athlete burnout. This supplements prior youth sport research showcasing positive associations between ingroup affect and adaptive sport motivation, including sport commitment and autonomous motivation (Martin et al., 2018; see also Chapter 3). Contrary to expectations, cognitive centrality was positively associated with constrained commitment and controlled motivation, but not athlete burnout. This is noteworthy as both constrained commitment and controlled motivation reflect that one's motivation for sport is based on obligatory or extrinsic motives, such as feeling forced or pressured to continue sport participation (Lonsdale et al., 2008; Scanlan et al., 2016). Although the subjective importance of being a group member may carry motivational benefits (see Chapter 3), athletes may also feel obligated to continue participation on their team when group membership is more central to their sense of self. This trend is also noteworthy because prior work has showed no significant associations between global athlete social identity and controlled motivation (Murray et al., 2022). Examining different dimensions of social identity may reveal unique associations to athletes' sport experiences that are not captured when social identity is treated as a unidimensional construct.

The findings supplement theory on the importance of peer relationships during adolescence. Developmental theory suggests that distinct types of interpersonal relationships are important for meeting developmental needs at different life stages (Laursen & Veenstra, 2021; Smetana et al., 2006). Early childhood is situated as a period sensitive to acceptance within the broader peer group and close dyadic friendships become more salient to youths' psychosocial experiences in early adolescence as they

develop a stronger need for intimate peer relationships. The pattern of findings for peer rejection provide support for this perspective and suggest that feeling left out by one's peers can detract from adaptive motivational and developmental experiences of youth athletes (Pacewicz & Smith, 2022; Partridge & Knapp, 2016). Considering shifting interpersonal needs for intimacy in adolescence, it was surprising that null effects were observed for the friendship variables. In the current study, approximately a third of participants in the sample identified their best friend in sport as their best friend outside of sport. It is possible that patterns of friendship conflict and victimization could differ for individuals whose best friend in sport is also their best friend outside of sport. Alternatively, patterns may be more evident for mutually identified best friendships, which was not an element captured in this study. Developmental literature has demonstrated that close reciprocated friendships can buffer against forms of psychosocial maladjustment, such as loneliness and victimization (Erath et al., 2010). The pursuit of these research avenues would add further insight into the developmental importance of young peoples' peer relationships.

In addition to theoretical contributions, the examination of indirect pathways offers insight into potential mechanisms that may link peer relationships with athletes' motivational experiences. Peer rejection was indirectly associated with constrained commitment, controlled motivation, and athlete burnout through ingroup affect. This suggests that feeling frequently rejected by one's teammates may be tied to maladaptive sport motivation by diminishing the positive feelings associated with group membership. These findings have practical implications as they could help inform coach and

practitioner strategies to enhance the quality of youth athletes' sport motivation. Because peer rejection emerged as a stronger predictor of athlete social identity and sport motivation compared to friendship conflict and victimization, group-oriented strategies to promote positive peer relationships may be an effective strategy to enhance team-functioning. Personal-disclosure mutual-sharing is an illustrative example of a group-oriented intervention to enhance teammate relationships and social identity in youth sport teams (Evans et al., 2013). This approach involves having athletes share personally meaningful stories with teammates in a group setting to foster empathy and understanding of others' experiences. Other strategies such as fostering cooperative learning environments, structuring interdependent team goals, and socializing new team members are recommended strategies for increasing feelings of teammate acceptance on sport teams (Ntoumanis et al., 2007). Thoughtful implementation of team-building strategies may reduce athletes' feelings of rejection while enhancing the positive feelings associated with team membership, and in turn, promote more adaptive sport motivation (Smith & Delli Paoli, 2018). It should be noted, however, that indirect effects in the path model were small in magnitude. Alongside the reduction of peer rejection in sport teams, coaches and practitioners could simultaneously target other meaningful group processes (e.g., group cohesion; Bruner, Eys, et al., 2020) in tandem with relationship-oriented interventions.

Considering the limitations of this study is important to qualify the results and can provide meaningful direction for future research. From a methodological perspective, the cross-sectional design prohibits inferring directional effects between the study variables.

It is also likely that peer relationships and athlete social identity may fluctuate over the course of a competitive season (Graupensperger, Panza, Budziszewski, & Evans, 2020). Longitudinal research would add meaningful insight into how peer relationships may shape, and be shaped by, athletes' social identity in ways that are of motivational importance. In addition, although we attempted to account for the nested data structure, we experienced challenges controlling for group level effects in the path analysis. This is likely due to the moderate sample size and small ratio of lower level to upper-level units. Accounting for clustering effects is important as within-cluster variability can cause underestimation of standard errors and inflate type-one error rates (Cameron & Miller, 2015). Multilevel modeling would be a valuable extension to this work and could add conceptual insight as to potential team-level associations between the study variables. A fruitful line of work could examine whether sport teams with higher peer rejection, on average, have distinct consequences for athletes' social identity and sport motivation.

From a conceptual lens, only negative peer relationships and maladaptive motivation constructs were factored into the study conceptualization. Although this was a conceptually informed decision to obtain insight into a broader array of negative peer relationships and motivation constructs, positive and negative peer relationships and motivation are co-occurring features in real-world sport contexts (Fraser-Thomas & Côté, 2009). Simultaneously including positive and negative peer relationships and motivation constructs within the same study design could possibly better represent the complexity of youth sport environments (Smith & Ullrich-French, 2020). This study will presumably be important for guiding such work by illuminating which aspects of peer relationships are

consistently tied to the motivational and developmental experiences of youth athletes. Finally, the inclusion of youth athletes ranging from early to late adolescence introduced a developmental confound, especially given descriptive differences in peer rejection and athlete burnout perceptions between early and late adolescents. Although age was included as a control variable in the path analysis, the relatively moderate sample size prohibited a more rigorous examination of age differences. It is important for future work to take a stronger developmental focus by deliberately testing group differences based on meaningful developmental criteria. For instance, youth develop progressively more complex cognitive capacities as they transition from early to late adolescence (see Galván, 2021, for a review). Researchers could leverage statistical approaches such as moderation or multigroup analysis to test whether normative age-related changes in cognitive development play a role in the associations between peer relationships, social identity, and motivational sport experiences. Such work would contribute to the broader human development literature by emphasizing how engagement with teammates can foster identity development and psychosocial experiences within organized youth sport.

Having considered the limitations of this study and potential directions to move in the future, the present work makes multiple valuable contributions to sport psychology literature. We add to the empirical and theoretical knowledge base on teammate relationships in sport by examining a broader array of negative peer relationships as tied to athletes' social identity and maladaptive sport motivation. Peer rejection positively contributed to constrained commitment, controlled motivation, and athlete burnout by way of ingroup affect. Athlete social identity made both positive and negative

contributions to athletes' maladaptive motivation. Continued research on how peer dynamics link with motivational sport experiences of youth athletes is warranted in future research.

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CHAPTER 5

GENERAL DISUCSSION

Organized sport can be an important developmental context for young people (Smith, 2019; Weiss & Stuntz, 2004). The transition from childhood to adolescence corresponds with an increase in the prominence and complexity of peer relationships (Veenstra & Laninga-Wijnen, 2023), making teammate relationships meaningful to study with respect to both youth development and sport engagement. Burgeoning research in sport has shown peer relationships as important to motivation (e.g., Holt et al., 2008; Pacewicz & Smith, 2022; Partridge & Knapp, 2016; Smith & Ullrich-French, 2020). Such examinations have primarily focused on how positive peer relationships directly contribute to sport motivation. Continued exploration of a broader array of negative peer relationships and motivation constructs, along with exploring potential pathways that link these areas, is important to further understanding the youth sport experience.

Identity exploration and formation are key developmental tasks during adolescence that coincide with the motivational salience of peer relationships. Athlete social identity is among the identity processes that are increasingly recognized as an important part of the sport experience. Athlete social identity represents the part of an individual's self-concept derived through membership in their sport team (Bruner et al., 2020) and is conceptualized along three dimensions: the subjective importance of sport team membership (i.e., cognitive centrality), positive emotions about sport team membership (i.e., ingroup affect), and psychological bonds with other group members

(i.e., ingroup ties; Bruner & Benson, 2018). Peer relationships may play an important role in shaping athletes' social identity because they serve as sources of validation and provide social comparative information about oneself as a group member relative to other teammates. Research exploring the connection of peer relationships with athletes' social identity has potential to enhance the understanding of high-quality motivational sport experiences. This three-study dissertation was designed to contribute to the scientific advancement of this research area and to generate ideas for future scholarship and practice efforts.

A scoping review of literature was conducted in study one to assess the broad landscape of constructs that have been conceptualized as possible antecedents of athlete social identity in organized sport. This was an important step to draw empirical links between peer relationships and athlete social identity, along with identifying theoretical and measurement tools that could effectively guide studies two and three. A total of 55 articles across 60 studies were included in the full review. A novel contribution of this study was comparison of trends of youth-focused research with studies focused on adult or mixed youth/adult samples. Eighteen of 60 studies included in the full review were conducted within youth sport. Considering the developmental importance bestowed to youth athlete social identity (Bruner et al., 2020), this trend emphasized the importance for continued investigation with young athlete populations. Indeed, the relative dearth of work focused on young people signals a missed opportunity by the research community, being that identity development is of acute interest during adolescence. Possible antecedents of athlete social identity were organized into seven categories including

leadership factors, environmental factors, interventions, personal factors, group factors, moral factors, and interpersonal factors. Notably, the interpersonal factors category had the lowest frequency of studies, all of which focused on positively-valenced interpersonal constructs. Although understudied, social connections between group members featured as a meaningful correlate of athlete social identity and represented a promising area for continued research.

Study two was devised to examine whether athlete social identity mediated the associations between positive peer relationships and adaptive sport motivation. The selection of peer relationships variables was informed by specific tenets of developmental theories and empirical research highlighting the importance of multiple features of peer relationships, including dyadic friendships and views of the broader peer group, as tied to youths' psychosocial growth (Rubin et al., 2015; Smith & Ullrich-French, 2020; Sullivan, 1953). Specifically, the purpose of study two was to examine whether positive peer relationships (i.e., friendship quality, peer acceptance) predicted sport motivation (i.e., enthusiastic commitment, sport enjoyment, autonomous motivation) by way of athlete social identity (i.e., cognitive centrality, ingroup affect). Although positive peer relationships were not directly tied to sport motivation, results showed friendship quality and peer acceptance were indirectly associated with enthusiastic commitment, sport enjoyment, and autonomous motivation through unique social identity dimensions. The results align with theoretical perspectives suggesting that dyadic friendships and peer acceptance make similar, but distinct contributions to youths' psychosocial development (Bagwell & Bukowski, 2018; McDonald & Asher, 2018) and emphasize pathways

through which peer relationships may foster high-quality sport motivation.

Study three complemented study two by addressing how negative peer relationships are tied with maladaptive sport motivation by way of athlete social identity. Negative peer relationships and sport motivation variables were chosen to conceptually align with the positive peer relationships and motivation variables selected in study two. The purpose of study three was to examine if negative peer relationships (i.e., friendship conflict, friendship victimization, peer rejection) predicted sport motivation (i.e., constrained commitment, controlled motivation, athlete burnout) by way of athlete social identity (i.e., cognitive centrality, ingroup affect). Results showed peer rejection to be positively associated with maladaptive sport motivation both directly and indirectly through the ingroup affect dimension of athlete social identity. Contrary to previous work (Pacewicz & Smith, 2022; Smith et al., 2010), friendship conflict and friendship victimization did not significantly predict athlete social identity or maladaptive motivation markers. Another unexpected finding was that cognitive centrality positively predicted constrained commitment and controlled motivation, highlighting potential motivational consequences that may stem from identification with one's sport team. Said another way, strong athlete social identity was associated with athlete motivation in complex ways. An important contribution of this work was examining a broader array of negative peer relationships and maladaptive sport motivation constructs than in previous work (Smith & Ullrich-Smith, 2020), along with exploring social identity as a potential bridge between these families of constructs.

The results across dissertation studies hold potential to make unique empirical and

theoretical knowledge contributions to sport psychology literature. A prominent theme in studies two and three was inconsistent direct associations between peer relationships and sport motivation constructs. Positive friendship quality and peer acceptance were not directly tied to adaptive motivation markers in study two and friendship conflict and victimization were not directly tied to maladaptive motivation markers in study three. Future work should continue to examine whether peer relationships exert more consistent effects on athletes' sport motivation through indirect pathways, including cognitive and affective elements of athletes' social identity. Indeed, conceptually similar work showing co-rumination with close friends and peer rejection to indirectly predict athlete burnout by way of loneliness lends support for this perspective (Pacewicz & Smith, 2022). An alternative viewpoint is that athletes may reconcile different types of peer relationships in ways that are not adequately captured by examining independent linear associations as conducted in this dissertation. Adopting variable-centered or person-centered approaches that capture athletes' collective social experiences, such as examining collective patterns of positive (e.g., positive friendship quality) and negative (e.g., peer rejection) peer relationships, could better illustrate the motivational significance of peer relationships in sport (O'Neil et al., 2023; Smith et al., 2006; Ullrich-French & Smith, 2006). Altogether, studies two and three offer valuable insight into ways that peer relationships may be salient to athletes' motivational experiences.

Athlete social identity dimensions were more consistent predictors of sport motivation compared to peer relationships, although the direction of effects was only partially aligned with expectations. Ingroup affect positively predicted enthusiastic

commitment, sport enjoyment, and autonomous motivation in study two, and negatively predicted constrained commitment, controlled motivation, and athlete burnout in study three. Effect sizes were meaningful for the adaptive (β = .41 to .55) and maladaptive (β = -.39 to -.45) markers of motivation, suggesting that affective aspects of athletes' social identity are tied to high-quality motivational experiences (Martin et al., 2018). On the other hand, cognitive centrality positively predicted *both* adaptive (i.e., enthusiastic commitment, autonomous motivation) and maladaptive (i.e., constrained commitment, controlled motivation) motivational experiences. This challenges recent conceptual arguments that stronger athlete social identity should promote greater intrinsic versus extrinsic forms of sport motivation (Greenaway et al., 2020). It is possible that stronger subjective importance of group membership may come with expectations or pressure from others (e.g., teammates, coaches) to continue sport participation, especially as athletes increase their investment in highly specialized training in preparation for elite performance during adolescence (Côté & Vierimaa, 2014). Continued exploration of these trends is needed to better understand circumstances in which cognitive aspects of youth athletes' social identity may carry motivational benefits and challenges.

This set of dissertation studies also addressed recent calls to explore factors that may predict athletes' social identity, considering the developmental benefits that have been tied to athlete's identification with their sport team (Bruner et al., 2020). The scoping review in study one served as an initial step for documenting studies that have examined possible antecedents of athlete social identity in youth sport. Leadership factors was the most prominently studied category pertaining to athlete social identity. This was

likely due to recent theoretical advancements of the social identity approach to leadership (Haslam et al., 2020), which has been leveraged by sport psychology researchers to study the importance of athlete social identity (Stevens et al., 2021). Comparatively less research attention was devoted to interpersonal factors, signaling a lack of integration of developmental perspectives in youth athlete social identity research. Considering the developmental importance bestowed to peer relationships in childhood and adolescence, these trends showed room to improve the understanding of how interpersonal aspects of the sport environment may impact athletes' social identity in youth sport.

Studies two and three addressed promising future directions identified in the scoping review, including a stronger consideration of interpersonal factors and attending to factors that may negatively predict athletes' social identity. Positive friendship quality and peer acceptance explained a comparable amount of variance in ingroup affect in study two (R^2 = 14%) compared to peer rejection in study three (R^2 = 16%). Features of positive and negative peer relationships both make important contributions to youth athletes' feelings pertaining to group membership. This aligns with extant research linking perceived peer relationships with affective responses in the sport environment (Daniels & Leaper, 2006; Garn, 2016; Pacewicz & Smith, 2022; Ullrich-French & Smith, 2006). On the other hand, positive friendship quality emerged as the only significant predictor of cognitive centrality. This pattern is noteworthy considering the increased developmental importance bestowed to dyadic friendships during adolescence (Bagwell & Bukowski, 2018; Brown & Larson, 2009; McDonald & Asher, 2018). The support functions offered in close friendships, such as loyalty and intimacy, may play a salient

role in facilitating the subjective importance of group membership for adolescent athletes. Yet, overall, peer relationships appear to be more robustly tied to the affective experience of athlete social identity.

A theoretical contribution to the broader psychological literature is integrating the study of close relationships and social identity processes, which have historically been considered independently (Brewer, 2008). Social identity processes have been studied in groups where interpersonal relationships are uncommon or unnecessary, such as in anonymous experimental lab studies (e.g., Tajfel et al., 1971) or larger social categories (e.g., political groups; Hogg, 2004). Interpersonal relationships are more often examined in smaller common bond groups characterized by frequent face-to-face interactions (Postmes et al., 2005), such as family or work groups. From a social identity lens, interpersonal relationships and social identities are proposed to represent distinct levels of the self and, therefore, should have different identity properties (Brewer, 2008; Brewer & Gardner, 1996). This belief was evident in study one, being that interpersonal factors had the lowest frequency of studies examining possible antecedents of athlete social identity. Developmental perspectives nonetheless suggest that identity exploration and formation occur within the context of close interpersonal relationships (Branje et al., 2021), making teammate relationships important to study as tied to athletes' social identity. Studies two and three show there is value in addressing how the nature and quality of peer relationships may uniquely associate with aspects of athletes' social identity and, in turn, sport motivation. This dissertation could serve as a foundation for future exploration of how close interpersonal relationships may be implicated in social identity development.

The findings in this dissertation also make a unique contribution to human development literature by underscoring peer relationships and social identity as important for promoting young people's motivation within achievement domains. Human development researchers have long bestowed importance to examining linkages between interpersonal relationships and identity development processes across a range of achievement contexts, such as in school settings (Branje et al., 2021). Organized sport is another important achievement context embedded within broader cultural and societal systems (Dorsch et al., 2022) that has received comparatively less research attention as a developmental arena for young people. This dissertation shows there is value in studying how peer relationships and identity-related processes within sport may be tied to adolescents' motivational experiences. These insights could serve as a platform for integrating peer relationships and social identity frameworks that historically have been considered independently (Brewer, 2008).

The empirical and conceptual contributions of this dissertation have applied implications for enhancing the quality of youth sport experiences. Findings from this dissertation highlight the importance of addressing specific dyadic friendships along with group-oriented perceptions of teammate relationships in efforts to enhance athletes' psychological connection to the team and their motivation for sport. Coaches and sport psychology practitioners are well-positioned to address the formation and maintenance of positive peer relationships given their proximity and access to the peer network. Drawing from the peer relationships literature in sport, promoting an adaptive motivational climate could be one way to enhance feelings of peer acceptance and social support (Smith &

Delli Paoli, 2018). Coaches are encouraged to provide opportunities for new team members to socialize and establish friends with teammates at the beginning of the season and sustain a cooperative learning environment where athletes must work together to achieve collective outcomes (Ntoumanis et al., 2007; Vazou et al., 2005). Results from the scoping review in study one also illustrates the promise of relationship-oriented team-building interventions in promoting athletes' peer relationships and social identity. Coaches and sport practitioners could facilitate team-building interventions intended to promote team unity, such as establishing shared team norms and open communication channels between group members (Panza et al., 2022; Tassi et al., 2023). Such strategies hold potential to enhance the subjective importance and positive affective feelings of group membership and, in turn, promote high quality motivational experiences in sport.

Sport coaches and practitioners should simultaneously manage the reduction of negative peer relationships when attending to the formation and maintenance of positive peer relationships. Coaches may wish to target feelings of peer rejection as it was a dominant predictor of athletes' social identity and maladaptive motivation in study three. A first step in managing peer rejection would presumably be to identify which athletes may feel frequently rejected by their teammates and work to integrate those individuals into the sport team. There are multiple types of adverse peer behaviors ranging from passive (e.g., being ignored or neglected by teammates) to overt (e.g., being pushed or kicked by teammates) behavioral indicators (Partridge & Knapp, 2016; Smith & Delli Paoli, 2018). Such behaviors may indicate that an athlete is not valued within the sport team and promote adverse motivational and developmental sport experiences. Strategies

to reduce peer rejection can be gleaned from school settings, where considerable research attention has been paid to understanding peer rejection. Intervention efforts to reduce peer rejection in school settings have shown that leading mixed groups of rejected and accepted students in cooperative learning games that require mutual trust and teamwork is an avenue to reduce peer rejection and enhance social acceptance in classrooms (e.g., Mikami et al., 2005). Coaches could similarly pair rejected and accepted athletes in small groups and have them work toward collective goals that require trust and teamwork. Although friendship conflict did not emerge as a significant predictor in study three, peer-focused research shows that teammate conflict is a natural part of the sport experience (Holt et al., 2008, 2012). It may be important for coaches and practitioners to establish open communication and norms for addressing conflict early in the season and expected behaviors to manage teammate conflict over the course of the season (Paradis et al., 2014). Collectively, this dissertation offers insight into which types of peer relationships may be important for enhancing athletes' social identity and motivation. Attending to the formation and maintenance of adaptive teammate relationships holds potential to optimize positive developmental and motivational experiences for young athletes.

While the studies in this dissertation make important empirical, theoretical, and practical contributions to the sport psychology literature, it is important to consider the limitations of this work. Attention to the limitations in this dissertation can guide future research that will advance understanding of peer and group dynamics in organized sport. A primary limitation of this dissertation was the reliance on cross-sectional research designs. Studies two and three used cross-sectional surveys to test associations between

peer relationships, athlete social identity, and sport motivation. On one hand, this permitted exploration of a broader array of peer relationships and motivation variables as connected to athlete social identity that will presumably be important to guide future research. Cross-sectional research designs nonetheless prohibit the inference of bidirectional associations over time. Longitudinal research is a logical progression in this research line to better understand the interplay between peer and group dynamics with athletes' sport motivation (e.g., Benson & Bruner, 2018). For instance, it is likely that peer relationships and athlete social identity may reinforce one another over the course of a competitive season. Researchers could test whether athletes with stronger social identity at the beginning of a competitive season report higher-quality teammate relationships at mid- to late-season timepoints. Examining longitudinal trajectories (i.e., intra- or inter-individual change) of peer relationships and/or athlete social identity could also provide a unique lens to the development and maintenance of athletes' sport motivation (e.g., Graupensperger et al., 2020).

Another limitation is separating positive and negative peer relationships and sport motivation constructs across studies two and three. That is, study two examined only positive peer relationships (i.e., friendship quality, peer acceptance) and sport motivation (i.e., enthusiastic commitment, sport enjoyment, autonomous motivation) and study three examined only negative peer relationships (i.e., friendship conflict, friendship victimization, peer rejection) and sport motivation (i.e., constrained commitment, controlled motivation, athlete burnout). This was an informed decision in that it enabled a broader examination of multiple types of peer relationships and motivation variables that

would be challenging to analyze and digest if considered simultaneously in statistical models. However, positive and negative aspects of peer relationships and sport motivation occur together in real-world sport contexts (Fraser-Thomas & Côté, 2009). Researchers could take a stronger ecological approach by examining contributions of positive *and* negative peer relationships to athletes' social identity and sport motivation (e.g., Ullrich-French & Smith, 2006; Smith et al., 2006). This would permit researchers to examine the relative independent contribution of multiple peer relationships features, along with how they may jointly be important for athletes' developmental experiences. For example, the presence of a high-quality best friendship could buffer potentially compromising effects of peer rejection on athletes' social identity and motivation. Factoring in positive and negative peer relationships and/or sport motivation variables into the same study conceptualization could better portray the complexity inherent within sport environments. Importantly, a key consideration in such work will be the selection of peer relationships constructs. Results in studies two and three offer insight for researchers to strategically select a manageable number of conceptually sound constructs to examine in future empirical work.

Reliance on self-report data for the peer relationships variables carry limitations that should be carefully considered when interpreting the results of studies two and three. Self-report data certainly can offer important subjective insight into psychological variables of interest. For example, understanding how a young person evaluates the support functions in a dyadic friendship can be, in itself, important to the psychological impact of such social relationships (Ladd, 2009). Yet, self-report data is limited in scope

to individual-level perceptions and does not account for how the views of others can shape group-level dynamics. A more comprehensive view of the pathways tested in studies two and three could be obtained by triangulating the views of other teammates concerning peer relationships. Adopting alternative methodologies that supplement self-perceptions of peer relationships is a potentially fruitful avenue to enhance understanding of peer dynamics in sport. For example, the collection of social network data (e.g., sociometric ratings) could offer a triangulated perspective of which athletes are accepted or rejected by their peers (Herbsion et al., 2019; Vierimaa & Côté, 2016). Although sociometric data were collected in study three, practical barriers (e.g., lack of parent consent, participant absences) prevented a more rigorous examination of how sociometric statuses may be tied to athletes' developmental sport experiences. This is a potentially fruitful line of work that could add new insights into peer relationships research in sport.

From a data analytic perspective, studies two and three utilized observed variable path analysis to test hypothesized associations between peer relationships, athlete social identity, and sport motivation constructs. There are strengths to path analysis including the ability to simultaneously model direct and indirect effects, along with reducing type I error caused by conducting separate significance tests, such as in multiple linear regression. This noted, there are statistical limitations to using observed scores in path analytic models, such as the inability to account for measurement error. Latent variable modeling may offer a more accurate representation of the constructs of intertest by accounting for measurement error and capturing associations between latent factors and their respective observed indicators (Kline, 2016). While obtaining adequately powered

sample sizes for latent variable modeling can be difficult given practical barriers to recruiting youth athletes (e.g., school district approval, parent consent), employing such statistical approaches in future work will be important to supplement the findings illustrated from studies two and three in this dissertation.

These limitations acknowledged, this dissertation provides important insight as to how peer relationships are associated with athletes' social identity and sport motivation. Study one overviewed the current state of literature examining possible antecedents to athlete social identity in organized sport. This study emphasized a need for continued examination of possible antecedents of youth athletes' social identity, especially for interpersonal factors. Studies two and three were designed to address this need by examining whether features of peer relationships predicted athlete social identity and their sport motivation. Patterns from both studies indicated that distinct types of peer relationships tied with athlete social identity in ways that promoted both adaptive and maladaptive forms of sport motivation. Enhancing positive features of peer relationships may be an important avenue to strengthen athletes' social identity and promote high-quality sport motivation. More broadly, these studies emphasize adolescence as an important developmental period to study athletes' peer relationships and social identity. This work is important as it shows there is value in studying how peer relationships and identity-related processes within sport may be tied to adolescents' sport motivation. This dissertation offers a foundation moving forward for integrating the study of peer and group dynamics as tied to young athletes' sport experiences.

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APPENDICES

Appendix A

Study Two – Institutional Review Board Approval Letter

Institutional Review Board

Expedite #7
Letter of Approval

From: Melanie Domenech Rodriguez, IRB Chair

Nicole Vouvalis, IRB Director

To: ***Alan Smith***

Date: ***November 29, 2021***

Protocol #: ***12305***

Title: ***Teammate Relationships and Motivation in Youth Sport***

Your proposal has been reviewed by the Institutional Review Board and is approved under expedite procedure #7 (based on the Department of Health and Human Services (DHHS) regulations for the protection of human research subjects, 45 CFR Part 46, as amended to include provisions of the Federal Policy for the Protection of Human Subjects, January 21, 2019):

> *Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.*

This approval applies only to the proposal currently on file for the period of approval specified in the protocol. You will be asked to submit an annual check in around the anniversary of the date of original approval. As part of the IRB's quality assurance procedures, this research may also be randomly selected for audit. If so, you will receive a request for completion of an Audit Report form during the month of the anniversary date of original approval. If the proposal will be active for more than five years, it will undergo a full continuation review every fifth year.

Any change affecting human subjects, including extension of the expiration date, must be approved by the IRB **prior** to implementation by submitting an Amendment request. Injuries or any unanticipated problems involving risk to subjects or to others must be reported immediately to the Chair of the Institutional Review Board. If Non-USU Personnel will complete work on this project, they may not begin until an External Researcher Agreement or Reliance Agreement has been fully executed by USU and the appropriate Non-USU entity, regardless of the protocol approval status here at USU.

Prior to involving human subjects, properly executed informed consent must be obtained from each subject or from an authorized representative, and documentation of informed consent must be kept on file for at least three years after the project ends. Each subject must be furnished with a copy of the informed consent document for their personal records.

Upon receipt of this memo, you may begin your research. If you have questions, please call the IRB office at (435) 797-1821 or email to irb@usu.edu.

The IRB wishes you success with your research.

Appendix B

Study Two – Recruitment Email

Dear Coach _____,

I am a doctoral student at Utah State University who studies youth sport. I was a high school and college athlete and seek to give back by conducting research on what makes for quality youth sport experiences. Because you are a high school coach, I seek your permission to visit your athletes to participate in a research study that examines how teammate relationships are tied to athlete motivation.

The study involves athletes completing a 15-minute questionnaire. Athlete participation will require parent consent, and therefore I would schedule two visits with your team. At the first, I would provide the consent forms and explain the study. At the second, interested athletes with parent consent would complete the questionnaire. I can come before or after practices, or can visit during or after a competition/event if most convenient.

Thank you for your consideration of this important project! Please let me know (justin.worley@usu.edu) if you are willing to have me visit with your athletes. You can also contact me or my supervisor, Dr. Alan Smith (al.smith@usu.edu), if you have any questions.

Warm regards,

Justin Worley

Appendix C

Study Two – Consent and Assent Forms

- Received vaccination, voluntarily agree to wear face coverings, sanitizing writing utensils after each use, social distancing when appropriate, hand washing.

Confidentiality

The researchers will make every effort to ensure that the information about your child in this study remains confidential. Your child's identity will not be revealed in any publications, presentations, or reports resulting from this research study. Research records will be kept confidential, consistent with federal and state regulations. Only the primary investigators and research assistant(s) will have access to the data, with the written surveys kept in a secure, locked location and all digital data in a restricted-access, encrypted, cloud-based storage system. To protect your child's privacy, identifiable information (i.e., the team name) will be removed from your child's survey and replaced with a de-identified numerical ID as soon as the researchers bring the survey to their research space. No other identifying information is collected.

It is unlikely, but possible, that others (Utah State University or state or federal officials) may require us to share the information your child gives us from the study to ensure that the research was conducted safely and appropriately. We will only share your family's information if law or policy requires us to do so. If the researchers learn about suspected abuse/neglect of a vulnerable individual, state law requires that the researchers report this suspicion to the authorities. Similarly, if researchers learn about specific, imminent harm to self or others, they may need to break confidentiality to report that information to the appropriate authorities or care providers.

Voluntary Participation & Withdrawal

Your child's participation in this research is completely voluntary. If you agree to have your child participate now and change your mind later, you may withdraw your child by informing the researcher. Please note that after your child completes the survey your child cannot be withdrawn from the study. Because the survey is completed anonymously, we would be unable to determine which survey your child completed. Your refusal to provide consent for your child to participate will involve no penalty to you or your child.

Compensation

You and your child will not be compensated for participating in the study. There is no cost to you or your child for participation in the study, beyond your child's time to complete the survey.

IRB Review

The Institutional Review Board (IRB) for the protection of human research participants at Utah State University has reviewed and approved this study. If you or your child has questions about the research study itself, please contact the Principal Investigator at al.smith@usu.edu. If you or your child have questions about your child's rights or would simply like to speak with someone other than the research team about questions or concerns, please contact the IRB Director at (435) 797-0567 or irb@usu.edu.

Dr. Alan Smith
Principal Investigator
al.smith@usu.edu

Justin Worley
Co-Investigator
justin.worley@usu.edu

Permission to Participate (Parent)

By signing below, you agree to allow your child to participate in this study. You indicate that you understand the risks and benefits of your child's participation, and that you know what your child will be asked to do. You also agree that you have asked any questions you might have, and are clear on how to stop your family's participation in the study if anyone would like. Please be sure to retain a copy of this form for your records.

Parent/Legal Guardian's Signature	Parent/Legal Guardian's Name, Printed	Date

Child's Name, Printed

COVID-19 Safety Requests

Please note that the research team is not required to comply with these requests, but many researchers are happy to oblige where possible. **The research team will inform you** if they are unable to commit to any of your selections. You may decline to participate or withdraw your child's participation at any time.

☐ I would like the researchers my child interacts with to be up-to-date on their COVID-19 vaccines (two weeks after a booster dose of the vaccine)

☐ I would like the researchers my child interacts with to use a facial covering

☐ I would like the researchers my child interacts with to use a facial covering only if they are not fully vaccinated

☐ I would like the researchers my child interacts with to take additional safety measures related to COVID-19:

Page 1 of 3
Protocol #12305
IRB Approval Date: November 29, 2021
Amendment Approved (Version 4): February 18, 2022
Consent Document Expires: December 31, 2022

Youth Assent

Teammate Relationships and Motivation in Youth Sport

Introduction

You are invited to participate in a research study conducted by Dr. Alan Smith, Dean of the Emma Eccles Jones College of Education, and Justin Worley, a doctoral student in the Department of Human Development and Family Studies, at Utah State University. The purpose of this research is to better understand how peer relationships relate to motivational outcomes within youth sport athletes. Your participation is entirely voluntary.

This form includes detailed information on the research to help you decide whether to participate. Please read it carefully and ask any questions you have before you agree to participate.

Procedures

Your participation will involve completing a survey about your relationships with teammates and your sport motivation. Completing the survey is voluntary and takes about 20 minutes.

Risks

This is a minimal risk research study. That means that the risks of participating are no more likely or serious than those you encounter in everyday activities. In rare instances, you may feel uncomfortable answering certain questions. You can skip any question and can stop participating at any time. Loss of confidentiality is a risk of most research, including this study. However, we have taken careful steps to ensure that responses remain private. For example, we do not ask you to put your name on the survey, we keep the surveys in a locked location, and our electronic files are secured by passwords and encryption. We will use your data for research purposes only.

Benefits

There are no direct benefits of participation to you, though you may enjoy the opportunity to share your views. We believe this study could help us understand youth sport better and help us promote quality youth sport experiences.

COVID-19 Disclosures

Risks associated with contracting COVID-19 cannot be eliminated. Please carefully consider whether you are comfortable participating in person, particularly if you or someone in your home is at higher risk of serious illness [https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html] from COVID-19.

COVID-19 vaccination is strongly encouraged, but not required, for Utah State University employees and students. This means that we cannot guarantee that the people you interact with in this research project are vaccinated. Masking or using other face coverings is strongly encouraged, but not required, for Utah State University employees and students. This means that we cannot guarantee that the people you interact with in this research project will wear a face covering. Researchers and fellow participants are not required to share vaccination information with you or to wear a facial covering, unless this research is not on USU's campus and the site where it will occur does require face coverings or vaccines. **Research participation is always completely voluntary, and you can decline or stop participating at any time.** Below, you will be permitted to *request* certain safety accommodations from the research team, but please know that they are not required to comply.

The researchers in this project are taking the following steps to ensure your safety and comfort during the in-person portions of this research project:

- Received vaccination, voluntarily agree to wear face coverings, sanitizing writing utensils after each use, social distancing, hand washing.

Confidentiality

The researchers will make every effort to ensure that the information you provide as part of this study remains confidential. Your identity will not be revealed in any publications, presentations, or reports resulting from this research study. Research records will be kept confidential, consistent with federal and state regulations. Only the research team will have access to the surveys, which will be kept in a locked location. Our electronic files are secured by passwords and encryption. To protect your privacy, identifiable information (i.e., the team name) will be removed from your survey and replaced with a numerical ID as soon as we return to our research space. We do not ask you for your name or other identifying information.

It is unlikely, but possible, that others (Utah State University or state or federal officials) may require us to share the information you give us from the study to ensure that the research was conducted safely and appropriately. We will only share your information if law or policy requires us to do so. If the researchers learn about suspected abuse/neglect of a vulnerable individual, state law requires that the researchers report this suspicion to the authorities. Similarly, if researchers learn about specific, imminent harm to self or others, they may need to break confidentiality to report that information to the appropriate authorities or care providers.

Voluntary Participation & Withdrawal

Your participation in this research is completely voluntary. If you agree to participate now and change your mind later, you can withdraw by telling the researcher. However, after you turn in the survey we cannot withdraw you because we wouldn't know which survey is yours. Refusing to participate is ok and there is no penalty to you.

Compensation

You will not be compensated for participating in the study. There is no cost to you for participation in the study, beyond the time to complete the survey.

IRB Review

The Institutional Review Board (IRB) for the protection of human research participants at Utah State University has reviewed and approved this study. If you have questions about the research study itself, please contact the Principal Investigator at al.smith@usu.edu. If you have questions about your rights or would simply like to speak with someone *other* than the research team about questions or concerns, please contact the IRB Director at (435) 797-0567 or irb@usu.edu. *The signature blocks below look funny now but will sort themselves out once information is filled in and deleted.*

Dr. Alan Smith
Principal Investigator
al.smith@usu.edu

Justin Worley
Co-Investigator
justin.worley@usu.edu

PLEASE GO TO NEXT PAGE →

Your Assent

By signing below, you agree to participate in this study. You also understand the risks and benefits of participation, what you will be asked to do, and how to stop participation in the study. You also agree that you have asked any questions you might have and have been provided a copy of this form for your records.

If you would like to be in this study, please sign your name and write the date.

_____ _____

Name (signed) Name (printed)

_____ _____

Date Age on this Date

COVID-19 Safety Requests

Please note that the research team is not required to comply with these requests, but many researchers are happy to where possible. **The research team will inform you** if they are unable to commit to any of your selections. You may decline to participate or stop your participation at any time.

☐ I would like the researchers I interact with to be up-to-date on their COVID-19 vaccines (two weeks after a booster dose of the vaccine)

☐ I would like the researchers I interact with to use a facial covering

☐ I would like the researchers I interact with to use a facial covering only if they are not fully vaccinated

☐ I would like the researchers I interact with to take additional safety measures related to COVID-19:

_____

Appendix D

Study Three – Institutional Review Board Approval Letter

Research
UtahStateUniversity

Notification of Protocol Approval

From: Ronald Gillam, Ph.D.
Chair, Institutional Review Board

Nicole Vouvalis, J.D.
Director of Human Research Protections

To: Alan Smith
Date: 2023-11-10
Protocol #: 13922
Title: Team Dynamics in Youth Sport

Your proposal has been reviewed by the Institutional Review Board and is approved under Expedited procedure(s) Expedited Category 7 (based on the Department of Health and Human Services (DHHS) regulations for the protection of human research subjects, 45 CFR Part 46, as amended to include provisions of the Federal Policy for the Protection of Human Subjects, January 21, 2019):

> Research on individual or group characteristics or behavior (e.g., cognition, motivation, identity, communication, culture, social behavior) or research using methods such as survey, interview, oral history, program or human factors evaluation, etc.

This approval applies only to the proposal currently on file for the period of approval specified in the protocol. You will be asked to submit an annual check in around the anniversary of the date of original approval. As part of the IRB's quality assurance procedures, this research may also be randomly selected for audit. If so, you will receive a request for completion of an Audit Report form during the month of the anniversary date of original approval. If the proposal will be active for more than five years, it will undergo a full continuation review every fifth year.

Any change affecting human subjects, including extension of the expiration date, must be approved by the IRB **prior** to implementation by submitting an Amendment request. Injuries or any unanticipated problems involving risk to subjects or to others must be reported immediately to the Chair of the Institutional Review Board. If Non-USU Personnel will complete work on this project, they may not begin until an External Researcher Agreement or Reliance Agreement has been fully executed by USU and the appropriate Non-USU entity, regardless of the protocol approval status here at USU.

Prior to involving human subjects, properly executed informed consent must be obtained from each subject or from an authorized representative, and documentation of informed consent must be kept on file for at least three years after the project ends. Each subject must be furnished with a copy of the informed consent document for their personal records.

Upon receipt of this memo, you may begin your research. If you have questions, please call the IRB office at (435) 797-1821 or email to irb@usu.edu. The IRB wishes you success with your research.

Appendix E

Study Three – Recruitment Emails

Administrator Email

Dear [School Administrator Name],

My name is Justin Worley, and I am a PhD student at Utah State University (formerly a student at [Michigan State/Muhlenberg High School]. I was a high school and college athlete and seek to give back by conducting research on what makes for quality youth sport experiences. I am currently conducting a research study on youth athletes' sport experiences (IRB #13922). This research project will improve our understanding of young people's experiences in youth sport and could help inform future efforts to improve these experiences. **I am seeking your approval as a school administrator to contact coaches in your school district to include their sport teams in this research project.**

If approval from school administration and coaches is granted, we will schedule a time to meet with the coach and their team either before or after a practice session. Youth athletes will complete a one-time survey that will take approximately 20 minutes. The study carries minimal risks meaning that risk is no more likely or serious than those encountered in everyday activities. The survey is entirely voluntary and participating athletes will receive a $10 electronic Amazon gift card following their completion of the study. The survey results will be pooled for a dissertation project and individual results of this study will remain confidential. Should this study be published, only pooled results will be documented.

Thank you for your consideration of my request. If you have any further questions about the research project, please feel free to contact me or my PhD advisor, Dr. Alan Smith (al.smith@usu.edu).

Kind Regards,

Justin Worley

Coach Email

Dear Coach,

I am a doctoral student at Utah State University (formerly a student at [Michigan State University/Muhlenberg High School]) who studies youth sport. I was a high school and college athlete and seek to give back by conducting research on what makes for quality youth sport experiences. We are currently conducting a study with youth athletes across the US that examines how teammate relationships are tied to athlete motivation (IRB #13922). Because you are a school/club youth sport coach, **I seek your permission to visit your athletes** to participate in our research study. Youth athletes (~10-18 years old) are eligible to participate. **Participating athletes will receive a $10 electronic Amazon gift card following their completion of the study.**

If you are interested in having your team participate in this study, please let me know. I will need to obtain parent consent from athletes who are under 18 years of age. This can be done through either of the following ways depending on your preference. *Please note – if there are any families on your team who do not speak or read English as a first-language at home, please let me know. I will provide a translated message and consent form to distribute to those families*.

a) You can send the following link to parents of your youth athletes (INSERT LINK). The link goes to a Qualtrics survey where parents can find information on the study and provide consent for their child to participate. If this option is preferred, please cut and paste the message at bottom when contacting parents.

b) I can visit the team, either at a practice or competition, to introduce myself and the study to your athletes and provide them with a hard-copy parent consent form for them to take home and return at my follow-up visit.

Following either of these options, I would visit the team to have your athletes take part in the study. **Because some of the survey questions will be completed in reference to one's teammates, I will ask you for a copy of the team roster before this team visit**. During this visit, youth athletes with parent consent will have the opportunity to complete the study questionnaire. This one-time survey will take approximately 15-20 minutes to complete.

Thank you for your consideration of this important project! Please let me know if you are willing to have me visit with your athletes. You can also contact my PhD advisor, Dr. Alan Smith (al.smith@usu.edu), if you have any questions.

Warm regards,

Justin Worley

Example Message to Parents

Dear Parents,

A PhD student based out of Utah State University (formerly a student at [Michigan State/Muhlenberg High School]) is requesting permission for your child to participate in a research study on young people's experiences in sport (IRB #13922). To participate in the study, your child must be a youth athlete (~10-18 years old). The study involves taking a one-time survey, which will take approximately 15-20 minutes to complete.

To find information on the study and provide consent for your child to participate, please follow the link. If you have questions about the study, you can contact the main investigator, Dr. Alan Smith (al.smith@usu.edu).

[INSERT QUALITRICS LINK]

Thanks!

Appendix F

Study Three – Consent and Assent Forms

Team Dynamics in Youth Sport

Introduction

Your child is invited to participate in a research study conducted by Dr. Alan Smith, Dean of the Emma Eccles Jones College of Education, and Justin Worley, a doctoral student in the Department of Human Development and Family Studies, at Utah State University. The purpose of this research is to better understand how teammate relationships link with motivation in youth sport athletes. Your child has been asked to participate because they are a youth athlete. Your child's participation is entirely voluntary.

This form includes detailed information on the research to help you decide whether to allow participation. Please read it carefully and ask any questions you have before you agree to let your child participate.

Procedures

Your child's participation will involve completing a survey about their relationships with teammates and their sport motivation. Completing the survey is voluntary and takes about 15-20 minutes.

Risks

This is a minimal risk research study. That means that the risks of participating are no more likely or serious than those your child encounters in everyday activities. Your child might feel uncomfortable answering certain questions. However, your child may skip any question and can withdraw from participation at any time. Loss of confidentiality is a risk of most research, including this study. However, we have taken careful steps to ensure that confidentiality is protected. In order to minimize any risks and discomforts, survey responses will be de-identified so responses cannot be linked to your child's name. Other steps include storing the written surveys in a secure, locked location and all digital data in a restricted-access, encrypted, cloud-based storage system. We will use your child's data for research purposes only.

Benefits

There are no direct benefits of participation to your child, though your child may enjoy the opportunity to share their views related to their sport experience. We believe this study could improve our understanding of social factors tied to athlete motivation and could aid us in promoting quality youth sport experiences. Understanding positive youth sport experiences can lead to athletes' lifelong commitment to physical fitness and overall well-being.

Confidentiality

The researchers will make every effort to ensure that the information about your child in this study remains confidential. Your child's identity will not be revealed in any publications, presentations, or reports resulting from this research study. Research records will be kept confidential, consistent with federal and state regulations. Only the primary investigators and research assistant(s) will have access to the data, with the written surveys kept in a secure, locked location and all digital data in a restricted-access, encrypted, cloud-based storage system. To protect your child's privacy, identifiable information (i.e., name, team name, roster list) will be removed from your child's survey and replaced with a de-identified numerical ID as soon as the researchers bring the survey to their research space.

It is unlikely, but possible, that others (Utah State University or state or federal officials) may require us to share the information your child gives us from the study to ensure that the research was conducted safely and appropriately. We will only share your family's information if law or policy requires us to do so. If the researchers learn about suspected abuse/neglect of a vulnerable individual, state law requires that the researchers report this

suspicion to the authorities. Similarly, if researchers learn about specific, imminent harm to self or others, they may need to break confidentiality to report that information to the appropriate authorities or care providers.

Voluntary Participation & Withdrawal

Your child's participation in this research is completely voluntary. If you agree to have your child participate now and change your mind later, you may withdraw your child by informing the researcher. Please note that after your child's survey is de-identified, your child cannot be withdrawn from the study. Because the surveys will be de-identified, we would be unable to determine which survey your child completed. Surveys will be de-identified within approximately one week from when they are taken. Your refusal to provide consent for your child to participate will involve no penalty to you or your child.

Compensation

Your child will be compensated with a $10 electronic Amazon gift card for participating in the study. The gift card will be sent to an email address provided by your child. For children under 13 who do not have an email address, compensation will be provided to you on your child's behalf. In this case, the gift card will be sent to the email address you provide below. There is no cost to you or your child for participation in the study, beyond your child's time to complete the survey.

Findings

Identifiers may be removed from your child's survey. These de-identified data can be used or distributed for future research without additional consent from you, as the parent/legal guardian, or your child. If you do not wish for us to use your child's data in this way, please state so below.

IRB Review

The Institutional Review Board (IRB) for the protection of human research participants at Utah State University has reviewed and approved this study. If you or your child has questions about the research study itself, please contact the Principal Investigator at al.smith@usu.edu. If you or your child have questions about your child's rights or would simply like to speak with someone other than the research team about questions or concerns, please contact the IRB Director at (435) 797-0567 or irb@usu.edu.

Dr. Alan Smith
Principal Investigator
al.smith@usu.edu

Justin Worley
Student Investigator
justin.worley@usu.edu

Permission to Participate

By signing below, you agree to allow your child to participate in this study. You indicate that you understand the risks and benefits of your child's participation, and that you know what your child will be asked to do. You also agree that you have asked any questions you might have, and are clear on how to stop your family's participation in the study if anyone would like. Please be sure to retain a copy of this form for your records.

Parent/Legal Guardian's Signature | Parent/Legal Guardian's Name, Printed | Date

Research
UtahStateUniversity

Parent Email, Printed

Child's Name, Printed

☐ I do **not** agree to allow my child's de-identified information to be used or shared for future research.

Informed Consent

Team Dynamics in Youth Sport

Introduction

You are invited to participate in a research study conducted by Dr. Alan Smith, Dean of the Emma Eccles Jones College of Education, and Justin Worley, a doctoral student in the Department of Human Development and Family Studies, at Utah State University. The purpose of this research is to better understand how teammate relationships link with motivation in youth sport athletes. You have been asked to participate because you are a high school-aged athlete. Your participation is entirely voluntary.

This form includes detailed information about the research to help you decide whether to participate. Please read it carefully and ask any questions you have before you agree to participate.

Procedures

Your participation will involve completing a survey about your relationships with teammates and sport motivation. Completing the survey is voluntary and takes about 15-20 minutes.

Risks

This is a minimal risk research study. That means that the risks of participating are no more likely or serious than those you may encounter in everyday activities. You might feel uncomfortable answering certain questions. However, you may skip any question and can withdraw from participation at any time. Loss of confidentiality is a risk of most research, including this study. However, we have taken careful steps to ensure that confidentiality is protected. In order to minimize any risks and discomforts, survey responses will be de-identified so responses cannot be linked to your name. Other steps include storing the written surveys in a secure, locked location and all digital data in a restricted-access, encrypted, cloud-based storage system. We will use your data for research purposes only.

Benefits

There are no direct benefits of your participation, though you may enjoy the opportunity to share your views related to your sport experience. We believe this study could improve our understanding of social factors tied to athlete motivation and could aid us in promoting quality youth sport experiences. Understanding positive youth sport experiences can lead to athletes' lifelong commitment to physical fitness and overall well-being.

Confidentiality

The researchers will make every effort to ensure that your information in this study remains confidential. Your identity will not be revealed in any publications, presentations, or reports resulting from this research study. Research records will be kept confidential, consistent with federal and state regulations. Only the primary investigators and research assistant(s) will have access to the data, with the written surveys kept in a secure, locked location and all digital data in a restricted-access, encrypted, cloud-based storage system. To protect your privacy, identifiable information (i.e., name, team name, roster list) will be removed from your survey and replaced with a de-identified numerical ID as soon as the researchers bring the survey to their research space.

It is unlikely, but possible, that others (Utah State University or state or federal officials) may require us to share the information you have given us from the study to ensure that the research was conducted safely and appropriately. We will only share your information if law or policy requires us to do so. If the researchers learn about suspected abuse/neglect of a vulnerable individual, state law requires that the researchers report this suspicion to the authorities. Similarly, if researchers learn about specific, imminent harm to self or others, they may need to break confidentiality to report that information to the appropriate authorities or care providers.

Research
UtahStateUniversity

v.10.5

Voluntary Participation & Withdrawal
Your participation in this research is completely voluntary. If you agree to participate now and change your mind later, you may withdraw by informing the researcher. Please note that after your survey is de-identified, you cannot be withdrawn from the study. Surveys will be de-identified within approximately one week from when they are taken. Because the surveys will be de-identified, we would be unable to determine which survey you completed. Your refusal to provide consent will involve no penalty to you.

Compensation
You will be compensated with a $10 electronic Amazon gift card for participating in the study. The gift card will be sent to an email address provided by you below. There is no cost to you for participation in the study, beyond your time to complete the survey.

Findings
Identifiers may be removed from your survey. These de-identified data can be used or distributed for future research without additional consent from you. If you do not wish for us to use your data in this way, please state so below.

IRB Review
The Institutional Review Board (IRB) for the protection of human research participants at Utah State University has reviewed and approved this study. If you have questions about the research study itself, please contact the Principal Investigator at al.smith@usu.edu. If you have questions or would simply like to speak with someone other than the research team about questions or concerns, please contact the IRB Director at (435) 797-0567 or irb@usu.edu.

Dr. Alan Smith
Principal Investigator
al.smith@usu.edu

Justin Worley
Student Investigator
Justin.worley@usu.edu

Informed Consent
By signing below, you agree to participate in this study. You indicate that you understand the risks and benefits of participation, and that you know what you will be asked to do. You also agree that you have asked any questions you might have, and are clear on how to stop your participation in the study if you choose to do so. Please be sure to retain a copy of this form for your records.

Participant's Signature _____ Participant's Name, Printed _____ Date _____

Participant's Email (where the gift card will be sent) _____

☐ I do **not** agree to allow my de-identified information to be used or shared for future research.

Research UtahStateUniversity

Page 1 of 1
Protocol #13922
IRB Approval Date: November 10, 2023
Amendment Approved (Version 6): March 12, 2024
Consent Document Expires: June 29, 2024

v.10.5

Youth Assent

Team Dynamics in Youth Sport

Dr. Alan Smith and Justin Worley are studying how relationships with your teammates affects how much you like playing sports. This will help us learn more about people like you. If you would like to be a part of this research study, you will answer some questions in a survey about your relationships with teammates and why you like playing sports. You don't have to join if you don't want to, it's your choice. The survey will take about 15-20 minutes.

When the researchers do things like ask you questions, some other things could happen. For example, you might be uncomfortable answering some questions or someone could find out your answers. We will do everything we can to keep those things from happening, but there is still a chance, so we want you to know that first.

Not everyone who is a part of answering questions in a survey receives something good from it. In this study, nothing directly good will happen to you, but you will help us learn more about people like you. Also, we will tell other people about what we learned from doing this study with you and the other people who are in the study, but we won't tell anyone your name or that you were in the study. For your help in our study, we will give you a $10 electronic Amazon gift card. If you do not have an email address, the gift card will be sent to an email provided by your parent.

If this sounds like something you would like to do, we will ask you to say that you understand what we talked about, and that you do want to be part of the study. You do not have to be in this study if you do not want to be. If you decide to stop after we start, just tell the researcher. No one will be upset if you don't want to do this, or change your mind later.

You can ask any questions you have, now or later, by emailing Alan Smith at al.smith@usu.edu or Justin Worley at justin.worley@usu.edu. If you want the researchers to do anything to keep you safe and healthy, like wear a mask or be vaccinated, please ask your parents and the researchers. Your parents know about this research study, and they have said you can be part of the study, if you want.

Your Assent
If you would like to be in this study, please sign your name and write the date.

_____ _____
Name Date

_____
Your Email (where the gift card will be sent)

☐ I do **not** have an email address.

CIRRICULUM VITAE

JUSTIN T. WORLEY

CONTACT INFORMATION

Justin Worley
Dept. of Human Development and Family Studies
Utah State University
2905 Old Main Hill, FL 101
Logan, Utah 84321-2905

Email: justin.worley@usu.edu
Twitter: @justinworley18
Google Scholar Citations
ResearchGate

EDUCATION

2021-2024 **Ph.D. Student, Human Development and Family Studies**[7]
Utah State University (Logan, UT)
Dissertation: Peer relationships, social identity, and motivational experiences in youth sport
Advisor: Alan L. Smith, Ph.D.

2017-2019 **M.S., Exercise and Sport Sciences**
Ithaca College (Ithaca, NY)
Thesis: The relationship between peer servant leadership, team cohesion, and social identity in intercollegiate athletes
Advisor: Sebastian Harenberg, Ph.D.

2013-2017 **B.A., Psychology**
Lehigh University (Bethlehem, PA)
Thesis: Conflicting normative information and its association with marijuana legalization attitudes and behavioral intentions
Advisor: Lucy E. Napper, Ph.D.

PUBLICATIONS

Peer-reviewed publications:

Meter, D. J., **Worley, J. T.**, Butler, K., Renshaw, T., & Poteat, P. V. (2024). Adolescents' perceptions of teacher/staff defending against stigma-based peer victimization. *European Journal of Developmental Psychology*. Advanced online publication. https://doi.org/10.1080/17405629.2024.2315761

[7] Completed two years of Ph.D. coursework within the Department of Kinesiology at Michigan State University (Fall 2019-Spring 2021). Moved with advisor, Al Smith, to Utah State University (Fall 2022).

Worley, J. T., Meter, D. J., Hall, A. R., Nishina, A., & Medina, M. (2023). Prospective associations between peer support, academic competence, and anxiety in college students. *Social Psychology of Education*, *26*, 1017-1035. https://doi.org/10.1007/s11218-023-09781-3

Worley, J. T., Harenberg, S., Tripler, G., Wagener, D., & Bernstein, J. (2022). Positional competition and prosocial and antisocial behavior in college athletes. *International Journal of Sport Psychology*, *53*(6), 591-601. https://doi.org/10.7352/IJSP.2022.53.591

Harenberg, S., McCarver, Z., **Worley, J. T.**, et al. (2021). The effectiveness of 3D multiple object tracking training on decision-making in soccer. *Science and Medicine in Football*, *6*(3), 355-362. https://doi.org/10.1080/24733938.2021.1965201

Worley, J. T., Harenberg, S., & Vosloo, J. (2020). The relationship between peer-servant leadership, social identity, and team cohesion in intercollegiate athletes. *Psychology of Sport and Exercise,* Article 101712. https://doi.org/10.1016/j.psychsport.2020.101712

SCHOLARLY PRESENTATIONS

Worley, J. T., O'Neil, L., & Smith, A. L., (2024, June). Evaluating adolescent athletes' scores on the Sport Friendship Quality Scale using CFA and ESEM. Poster presentation at the North American Society for the Psychology of Sport and Physical Activity. New Orleans, LA. [abstract published in *Journal of Sport & Exercise Psychology*, *46*, S102].

Worley, J. T., & Smith, A. L., (2023, June). Perceptions of peer relationships, social identity, and motivational experiences in high school athletes. Oral presentation at the North American Society for the Psychology of Sport and Physical Activity. Toronto, Canada. [abstract published in *Journal of Sport & Exercise Psychology*, *45*, S125].

Worley, J. T., O'Neil, L., Cook, M., Adams, K. V., Dorsch, T. E., & Blazo, J. A. (2023, June). Youth sport participation during COVID-19: Exploring the role of parents' perceived barriers and investment. Poster presentation at the North American Society for the Psychology of Sport and Physical Activity. Toronto, Canada. [abstract published in *Journal of Sport & Exercise Psychology*, *45*, S124].

O'Neil, L., **Worley, J. T.**, & Smith, A. L., (2023, June). The interplay of friendship quality and peer acceptance in youth sport: A comparison of variable-centered and person-centered approaches. Oral presentation at the North American Society for the Psychology of Sport and Physical Activity. Toronto, Canada. [abstract

published in *Journal of Sport & Exercise Psychology*, *45*, S101].

O'Neil, L., **Worley, J. T.**, Schwartz, S. E., Pierce, S., & Amorose, A. J. (2023, June). Collegiate student-athletes' commitment to school and sport: The role of academic and athletic identification. Oral presentation at the North American Society for the Psychology of Sport and Physical Activity. Toronto, Canada. [abstract published in *Journal of Sport & Exercise Psychology*, *45*, S100].

Nieto, M., **Worley, J.**, Harenberg, S., Kuo, L., & Vosloo, J. (2023, June). Inclusive leadership in sport: A scoping review. Poster presentation at the North American Society for the Psychology of Sport and Physical Activity. Toronto, Canada. [abstract published in *Journal of Sport & Exercise Psychology*, *45*, S99].

Meter, D., **Worley, J. T.,** Hall, A. R., & Renshaw, T. (2023, March). The association between online vicarious racial/ethnic discrimination and student subjective well-being. Flash talk paper presentation at the Society for Research on Child Development Biennial Meeting. Salt Lake City, UT.

Meter, D. J., **Worley, J. T.**, Butler, K., & Renshaw, T. (March, 2023). Student and teacher defending of stigma-based peer victimization among adolescents. Flash Talk presented at the Society for Research on Adolescence Annual Meeting. San Diego, CA.

Gottardo, J. A., **Worley, J. T. (presenter),** & Smith, A. L. (2022, May). Perceptions of parent behavior and coach burnout. Poster presentation at the North American Society for the Psychology of Sport and Physical Activity. Waikoloa, HI. [abstract published in *Journal of Sport & Exercise Psychology*, *44*, S81].

Worley, J. T., & Smith, A. L. (2021, March). Does social identification moderate the tie of peer relationships and motivational outcomes in youth athletes? Oral proposal presentation at the Eastern Canadian Sport and Exercise Psychology Symposium. Virtual Conference.

Worley, J. T., & Smith, A. L. (2020, February). Does need satisfaction and thwarting mediate the relationship of coach interpersonal style with team identification in youth sport? Oral proposal presentation at the Midwest Sport and Exercise Psychology Symposium. Normal, IL.

Worley, J. T., Harenberg, S, & Vosloo, J. (2019, October). Competing for playing time: The relationship between positional competition and social identity in collegiate athletes**.** Poster presentation at the Association for Applied Sport Psychology national conference. Portland, OR.

Worley, J. T., McCarver, Z., Anderson, S., Stone, S., Yule, A., Nieto, M., Harenberg, S, & Vosloo, J. (2019, March) The impact of self-talk on performance under competitive conditions: A pilot-study**.** Oral presentation at the Eastern Canadian Sport Psychology Symposium. Vaughn, ON, Canada.

Worley, J. T., Harenberg, S, & Vosloo, J. (2018, March) The relationship between peer-servant leadership, team cohesion, and athlete satisfaction in intercollegiate athletes**.** Oral proposal presentation at the Eastern Canadian Sport Psychology Symposium. Montreal, ON, Canada.

TEACHING EXPERIENCE

Utah State University

HDFS 1500: Human Development Across the Lifespan (Fall, 2022; Spring, 2023)

- Primary instructor for lecture course (~150 undergraduate students) focused on the cognitive, physical, and social development of humans across the lifespan.

Michigan State University

KIN 121: The Healthy Lifestyle (Fall 2021)

- Primary online instructor for a lecture course designed to teach understanding of cardiovascular risk factors, lifestyle habits, and aerobic capacities and their relationship to optimal health and longevity.

KIN 300C: Coaching Soccer (Fall 2020, Spring, 2021)

- Primary instructor for hybrid lecture course: ½ semester of lectures centering on effective coaching practices in soccer, ½ semester of applied soccer sessions implementing coaching strategies.

KIN 118C: Soccer II (Fall, 2019)

- Primary instructor for instruction of advanced technical skill development in soccer.

KIN 108R: Indoor Soccer (Fall 2019, Spring 2020)

- Primary instructor for instructional physical activity course emphasizing basic technical skill development in soccer.

RESEARCH SUPPORT

Unfunded:

2023 **National College Athletics Association**
NCAA Graduate Research Grant
The social support team and NCAA student-athletes' adjustment to college

Role: Principal Investigator
$7,440

SCHOLARSHIPS & FELLOWSHIPS

Utah State University, 2021-Present

Dissertation Graduate Research Award ($3989.00)
Brent C. and Kevon Miller Graduate Scholarship ($1,250)
Human Development & Family Studies Department Graduate Scholarship ($750.00)

Michigan State University, 2020-2021

Summer Research Fellowship (competitive award in College of Education; $6,000)
Summer Research Development Fellowship (competitive award in College of Education; $5,000)

Lehigh University, 2017

Strohl Undergraduate Research Grant (competitive award in College of Arts and Sciences; $3,000)

SERVICE

Utah State University, Department of Human Development and Family Studies

NASPSPA Annual Conference Student Representative (June 2023)
Abstract Reviewer (Association for Applied Sport Psychology, 2023)
Abstract Reviewer (Society for Research on Adolescence, 2022)
Department of Kinesiology Hiring Committee – Graduate Student Representative (2022)

Michigan State University, Department of Kinesiology

KIN Faculty Advisory Committee (Fall 2020-Spring 2021)
KIN Undergraduate Student Liaison, (Fall 2019-Spring 2020)
NASPSPA Annual Conference Student Technology Support (Virtual Conference, 2021)
AKA Annual Conference Student Technology Support (Virtual Conference, 2021)

Ad Hoc Journal Reviewer:

International Journal of Hospitality Management
Journal for Advancing Sport Psychology Research (2x)
Journal of Athlete Development and Experience
Journal of Clinical Sport Psychology
Leisure/Loisir
Psychology of Sport and Exercise
Social Psychology of Education (2x)

PROFESSIONAL AFFILIATIONS

Society for Research on Adolescence
North American Society for the Psychology of Sport and Physical Activity
Association for Applied Sport Psychology