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The Relations between Newcomer Integration Processes and Youth Athletes' Perceptions of the Group Environment in Competitive Ice Hockey

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Abstract

The ways in which new members are integrated into a particular group environment—also known as organizational socialization processes—have been shown to be a powerful predictor of newcomer adjustment in the workplace. Yet, there is a scarcity of research on how sport teams manage the integration of new team members, and the consequences of different tactics. The current research uses the recently developed Sport Team Socialization Tactics Questionnaire (STSTQ) to evaluate how socialization processes are systematically related to youth athletes' perceptions of their group environment. Across two time points, 202 competitive adolescent ice hockey players (M_{age} = 14.47, SD = 1.23, 26.24% female) completed the STSTQ processes near the beginning of the season, and then measures of group conflict, social identity, and cohesion later in the season. As hypothesized, coach-initiated role communication tactics positively predicted task cohesion (p <.001). Also as predicted, social inclusionary tactics positively predicted social identity (p <.001). Counter to expectations, however, serial tactics was not significantly related to relationship conflict. Overall, the results point to how the processes surrounding the integration of new members may be a key leverage point for managing the social environment for athletes in youth sport.

Keywords: newcomer integration; socialization; cohesion; social identity; relationship conflict; group dynamics; sport psychology

Summary for Lay Audience

Peer relationships are important for the social development of adolescents. As peer groups can help facilitate these peer relationships, the environment associated with adolescent peer groups should be optimized. Sport teams are an example of these peer groups, as sport teams are a context with rich peer interactions. The current study assesses the potential of newcomer integration tactics to improve perceptions of the youth sport team environment. Newcomer integration tactics are strategies to aid the transition process for athletes joining a new team, and include veterans sharing information about tasks, role discussions with the coach, and scheduled team events outside of regular games and practises. Using a recently developed questionnaire (the Sport Team Socialization Tactics Questionnaire) measures these tactics, I assessed how team member integration processes were associated with athletes' perceptions of team cohesion, social identity, and relationship conflict.

To conduct this investigation, I recruited 16 competitive hockey teams, male and female, from Southwestern Ontario. Participants were between 13 and 18 years of age, competing at one of the highest skill levels for their respective age group. Following formal consent, players completed the questionnaire package once near the beginning of the season, and once towards the end of the season. Results indicate that the STSTQ is generally a reliable measure for youth sport populations. Furthermore, open dialogue between players and their coaches regarding a player's role on the team appears to be of particular salience for competitive youth ice hockey players. Shared group entry experiences (i.e., team activities outside of games and practises) appear to be closely linked to social cohesion levels within the team. The impact of veterans sharing task-

based information with newcomers was less robust, although it is still encouraged. This research contributes to the novel area of study regarding the integration of newcomers into an existing sport group, demonstrating that specific socialization processes can potentially impact relevant constructs of group dynamics.

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Belongingness theory, as introduced by Baumeister and Leary (1995), proposes that the drive to establish meaningful relationships and feel accepted is an innate aspect of human behaviour. This need to belong may be of particular importance to "teenagers", or adolescents. Adolescence is a critical developmental period for the expansion of social relationships. The peer relationships of adolescents can influence their social development through the provision of social support, as well as contributing to the development of their self-concept (Keeler, 1992). Moreover, adolescents begin to make independent choices, as they transition from the closed environment of the parental home to a social world surrounded by peers (Sussman, Pokhral, Ashmore, & Brown, 2007). Thus, in addition to development of relationships, adolescence is also a crucial period in the development of one's personal identity (MacPherson, Kerr, & Sterling, 2015). Successfully navigating the identity challenges faced in adolescence can result in higher levels of self-esteem and moral reasoning, whereas negative resolution of identity challenges can potentially result in academic struggles and substance abuse (MacPherson et al., 2015). Belonging to a group, such as a sports team, can aid in the cultivation of both social relationships and personal identity. Group membership fulfills a desire for connectedness, and provides an environment conducive to prosocial interactions (MacPherson et al., 2015). Peer group membership appears to facilitate the transition of adolescents into the global social environment (Sussman et al., 2007). Therefore, it is important to optimize the social atmosphere and environment within these adolescent groups. In the current thesis, I focus on how the initial entry experiences of new members

into a peer group (i.e., sport team) are associated with adolescents' perceptions of their social environment. More specifically, the current thesis advances recent work that has begun to explore newcomer integration processes in sport by examining the relations between specific sport team socialization tactics and perceptions of cohesion, social identity, and relationship conflict.

Background of Socialization Tactics in Organizational Psychology

Research regarding newcomer socialization is well established, however, most literature to date is housed in the field of organizational psychology. Organizational socialization can be defined as "...the process by which an individual acquires the social knowledge and skills necessary to assume an organizational role" (Van Maanen & Schein, 1979, p3). Organizational socialization can also be referred to as newcomer integration. Although organization socialization processes were originally described as a way to help individuals navigate the socially constructed boundaries associated with group-entry experiences (Van Maanen & Schein, 1979), Benson, Evans, and Eys (2016) noted that athletes joining a new team must navigate similar boundaries. *Functional boundaries* determine how task responsibilities are to be divided among team members. Translated to the context of a hockey team, an example of this would be assigning players to a specific position (e.g., forward, defense, goaltender) and further specializing them based on skill proficiency (e.g., a forward who plays on the power play vs. a forward who plays on the penalty kill). Next, there are *hierarchical boundaries,* which refer to status and power distinctions among group members. This includes formal distinction of authority (e.g., coach/captain/non-captain) as well as implied social position within the group (e.g., first year on the team, fifth year on the team). Finally, there are *inclusionary*

boundaries, which refer to the challenges faced by a newcomer as they move from the periphery of a group to its inner circles (e.g., a first year player sitting alone in the dressing room versus a player who is comfortable to socialize with the core group).

Van Maanen and Schein extended their work to suggest there are six general dimensions that can describe the way a newcomer is integrated by their organization. For readers familiar with ice hockey, these original dimensions can be remembered as "the original six". The first dimension is whether new team members undergo uniform training exercises (collective tactics, e.g., practicing drills as a group), or receive individually tailored training and instruction (individual tactics, e.g., a coach working one-on-one with a new centre to improve their faceoff ability). The second dimension is the degree of formality associated with the socialization processes. Newcomer socialization can happen formally (e.g., new players having a planned meeting with coaching staff to learn team norms/tendencies) or informally (e.g., newcomers practising with the group as a whole, gradually learning team norms/tendencies as the season progresses through observation and first-hand experience). A third dimension of socialization is whether the advancement of responsibilities is sequential in nature, or if they are random. A sequential approach would involve a defined series of steps for the advancement of one's responsibilities, whereas there is no outline or time-based expectation for these responsibilities in a random approach. A fourth dimension of socialization, similar to the third, is whether or not there is a strict timetable associated with the progression of responsibilities. For example, a coach could have the goal of integrating a new forward onto the top power play unit by the end of the first month of the season (i.e., fixed tactics), or simply have the player join the top unit whenever the

coaching staff feels they are ready (i.e., variable tactics). A fifth aspect of socialization is the degree to which veteran group members assist with the integration of new group members. Serial tactics refer to when veteran members are encouraged to share group information with new members (e.g., veteran players "buddying up" with new players at early season team events) whereas disjunctive tactics involve new players receiving no guidance from more experienced team members. The use of disjunctive tactics may be intentional if a team is trying to overhaul a previous toxic culture. The final dimension proposed by Van Maanen and Schein (1979) is whether the organization uses investiture or divestiture tactics. Investiture tactics involve the team encouraging the individual characteristics and values of new members (e.g., "we like who you are as an individual, don't change"), whereas divestiture tactics encourage a stripping of individuality from new members (e.g., "you're a member of a collective team now, leave your personal opinions/beliefs at the door").

Using this framework, Jones (1986) suggested that these six dimensions of newcomer socialization exist on a continuum, ranging from an institutionalized approach to an individualized approach. Collective, formal, sequential, fixed, serial, and investiture tactics all reflect an *institutionalized* approach, whereas individualized, informal, random, variable, disjunctive and divestiture tactics reflect an *individualized* approach. The major difference is an institutionalized approach reflects a highly structured sequence of events designed to reduce uncertainty for newcomers, whereas an individualized approach requires newcomers to figure things out for themselves (Benson & Eys, 2017). Two recent meta-analyses in the industrial-organizational field suggest that an institutionalized approach has a variety of potential benefits. One of the meta-analyses included 70 unique

samples of newcomers, indicating that an institutionalized approach was directly and positively related to role clarity, self-efficacy, job satisfaction, social acceptance, and intentions to remain (Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007). A second meta-analysis used 31 samples of newcomers with slightly different criterion measures, indicating that institutionalized socialization tactics were negatively related to role ambiguity, role conflict, and intentions to quit, and positively related to a host of benefits including, job satisfaction, organizational commitment, and job performance (Saks, Uggerslev, & Fassina, 2007). Overall, these results highlight the benefits of an institutionalized approach—at least in organizational settings. As joining a new group can be challenging, sport teams might benefit from considering ways to imbue athletes' entry experiences with greater structure and social support.

Sport Team Socialization Tactics

While organizational psychology has a respectable body of literature associated with newcomer socialization, the study of sport team integration processes has only begun to gain traction from scholars. Sport socialization can also be described as childhood participation in sport as a result of environmental factors, such as peer or parental influence, and this topic has received considerable attention (Haycock & Smith, 2014). It is crucial to indicate that the current project is not related to this notion of socialization. Rather, my thesis focuses on how athletes are integrated into a specific team. One of the initial studies in this specific area was a qualitative investigation to explore socialization processes in sport teams (Benson, Evans, & Eys, 2016). Interviews were performed with 12 coaches and 12 players from Canadian interuniversity sport teams. Interview questions were informed by the organizational socialization theory (Van

Maanen & Schein, 1979), but designed to explore socialization processes within sport. Similarities between organizational and sport group integration processes included shared group entry experiences (i.e. collective tactics), formal scheduling of practises and training camp activities (i.e. formal tactics), expectations to conform to the group (i.e. investiture tactics), mentoring of new players via veteran players (i.e. serial tactics), and unpredictable role progression (i.e. random tactics and variable tactics; Benson, Evans, & Eys, 2016).

Although these interviews identified several similarities between sport socialization tactics and the "original six" dimensions conveyed by Van Maanen and Schein (1979), there are sizable conceptual differences between work groups and sport groups. This includes the distinction between practices and formal competitive events, and, perhaps more importantly, the lack of formally scheduled team events during the offseason (Benson & Eys, 2017). So, while the work of Van Maanen and Schein (1979) is an excellent starting point for the operationalization of socialization tactics in sport teams, Benson, Evans, & Eys (2016) deemed that a sport-specific measure was in order.

The Sport Team Socialization Tactics Questionnaire (STSTQ) is a measure designed to assess the socialization tactics implemented by a sport team. The initial development of the STSTQ was achieved through four separate studies (Benson & Eys, 2017). The first study generated items that covered a variety of socialization tactics that occur in sport groups, and evaluated their content validity. A large pool of 78 items was initially generated to represent both the institutionalized approach and the corresponding dimension of the individualized approach (collective vs. individualized, formal vs. informal etc.), which was trimmed to 41 following athlete consultation and an expert

panel review. The second study evaluated the psychometric properties of this refined list of items. Results demonstrated substantial cross-loading for many of the items. As a result, the list of items had to be further refined. A revised exploratory structural equation model with a three-factor structure underlying 13 items was evaluated. These three factors, or dimensions, include *serial tactics*, *coach-initiated role communication tactics*, and *social inclusionary tactics*. The third study replicated this factor structure with an independent sample, providing further evidence for these three dimensions. Finally, the fourth study aimed to replicate results for the three-factor structure using a Bayesian structural equation model. In addition to justifying the structure of the measure, the relationship between socialization tactics and several criterion variables were assessed. Two hundred fifty-seven Canadian university athletes completed the STSTQ at the beginning of the competitive season, using STSTQ dimensions as predictor variables. Later, athletes completed criterion measures of cohesion, role clarity, and commitment near the midpoint of the competitive season. Overall, there is preliminary evidence for psychometric properties of the STSTQ, as well as correlational evidence for the benefits of serial tactics, coach-initiated role communication tactics, and social inclusionary tactics in sport groups. Furthermore, results indicated latent mean invariance for new players and returning players, which suggests the STSTQ is effective in evaluating the perceptions of newcomer integration processes for both of these groups. This is quite important, as socialization processes are relevant to both newcomers *and* returning members' perceptions of the group environment. The three dimensions of the STSTQ are outlined in detail below.

Serial tactics. *Serial tactics* represent the degree to which veteran players share task-related information with newcomers. Recall that Van Maanen and Schein (1979) suggest that new players can either receive information from veterans (serial tactics) or learn on their own (disjunctive tactics). During initial development of the STSTQ, there were intended to be two factors representing serial tactics: task-oriented serial tactics and social-oriented serial tactics. Items intended to load onto the latter were non-significant, therefore this factor was eliminated. The items used in the current measure represent task-oriented serial tactics. Essentially, these items refer to how much returning players help out new players with on-field matters. This could mean explaining drills, explaining team-specific, task-based terminology/vocabulary, explaining in-game positioning, etc. It is important to note that "serial" in the current measure does not refer to veterans assisting newcomers with social-oriented matters, such as making friends within the team or helping learn off-field norms.

The potential importance of serial tactics in sport teams is highlighted in the qualitative analysis from Benson, Evans, & Eys (2016). Athletes and coaches both spoke to the importance of veteran players in the entry experience of newcomers. Veterans acted as an extension of the coach, as they filled in gaps in knowledge regarding team activities that coaches were either unaware of or did not have time to address. This involved both task and social matters, although as just mentioned, the current items are only designed to capture task-related matters. One strategy employed by a coach was a partnering, or "buddying", system between first-year and upper-year players. Another coach, who coached ice hockey, stated "What better way to pick up habits about the way things are done than watching your veteran players; how to practice, how to prepare, how

you do things, because sport is all about action" (Benson, Evans, & Eys, 2016). In a study by Benson and Eys (2017), serial tactics predicted a range of positive outcomes, including higher levels of commitment to teammates, clarity of consequences, and group cohesion. The positive correlation with group cohesion is of particular importance, as it was demonstrated across four dimensions of cohesion. Group cohesion is a criterion variable in the current project, and these past data with university athletes encourages similar positive results.

Coach-initiated role communication tactics. *Coach-initiated role communication tactics* represent the degree to which coaches provide new players with individualized role information upon group entry (Benson & Eys, 2017). In other words, this dimension reflects the level of communication between the coach and the player(s) about players' specific roles on the team. A role can be defined as "the pattern of behavior expected of an individual in a social situation" (Carron & Eys, 2012, p. 185). The social situation in this context is the sport team, and this behavior could account for both on-field and off-field behaviors. The factor of coach-initiated role communication tactics does not relate to Van Maanen and Schein's (1979) dimensions as explicitly as serial tactics. An institutionalized approach to coach-initiated role communication tactics would theoretically incorporate aspects of formal, sequential, and fixed dimensions. In the final phase testing for the STSTQ, coach-initiated role communication tactics positively predicted two dimensions of role clarity. This included understanding role responsibilities (and the behaviors associated with executing them successfully) and clarity of how one's role is evaluated. Additionally, coach-initiated role communication

tactics predicted higher levels of task cohesion, as well as commitment to both teammates and coaching staff (Benson & Eys, 2017).

Existing lines of inquiry highlight the potential value in having coaches communicate role-specific information as part of a team's socialization process. Benson, Surya, and Eys (2014) found that a team's coach was the main source of role information for university athletes, suggesting that the nature of role communication between coaches and athletes is likely to be closely linked to the overall level of clarity associated with one's role. Indeed, the benefits of role clarity are well documented in sport literature, including increased perceptions of athlete satisfaction (Beauchamp, Bray, Eys, & Carron, 2005), decreased perceptions of competitive state anxiety (Beauchamp, Bray, Eys, & Carron, 2003), and greater athlete intentions to return to their team the following season (Eys, Carron, Bray, & Beauchamp, 2005). Moreover, the opposite of role clarity can be represented by the term *role ambiguity*. Role ambiguity has been found to display a negative relationship with group cohesion amongst university basketball teams, as well as national level rugby players (Eys & Carron, 2001; Bosselut, Heuzè, Eys, & Bouthier, 2010). Of particular interest to the current work, Bosselut, McLaren, Eys, and Heuzé (2012) suggest a reciprocal relationship between role ambiguity and task cohesion, as higher perceptions of task cohesion at midseason positively predicted variations in role perceptions at end of season amongst youth sport athletes. These results provide empirical support for not only a relationship between role communication and team cohesion, but the importance of role communication during the adjustment process of incoming athletes. Similar results in the workplace are echoed by Johlke and Duhan

(2001), who note a negative relationship between communication frequency and role ambiguity among boundary spanning employees and their supervisors.

In addition to promoting role clarity, providing individually tailored role information may also relate to the expectations an athlete has for an upcoming season. Initial role communication framework as outlined by Eys, Carron, Beauchamp, and Bray (2005), suggested negative reactions from athletes if role expectations were unclear. This area of research was recently extended by Benson, Eys, and Irving (2016), who demonstrated increases in task cohesion as role contributions approached and exceeded expectations. Furthermore, aforementioned qualitative work highlights the importance of a congruency between coaches and players regarding the expectations for their role (Benson, Evans, & Eys, 2016). Interviews with coaches suggested that this congruency is not always present. One of the ways this congruency was achieved was through formally scheduled meetings. The need for communication in regards to role expectations was endorsed by all participants (both players and coaches). This provides further support for the importance of clear role expectations, and these previous results encourage similar positive relationships between coach-initiated role communication tactics and task cohesion in the current study. Overall, it is evident that coach-initiated role communication tactics may be an important component of youth athletes' team integration experiences.

Social Inclusionary Tactics. *Social inclusionary tactics* represent the degree to which group-wide social activities are coordinated for newcomers. Group-wide social activities refer to team events that occur outside of the typical team interactions (e.g., regularly scheduled games and practices). This could include a multitude of

extracurricular activities, such as team trips to professional sporting events, laser tag, escape rooms, etc. Prior work has shown that social inclusionary tactics are positively associated with social cohesion (Benson & Eys, 2017). Furthermore, correlation findings have demonstrated that social cohesion increases as social involvement experiences approach and exceed initial expectations (Benson, Eys, & Irving, 2016). Benson, Evans, and Eys (2016) note the social difficulties new athletes may face when joining a group, as they may be attempting to forge social bonds with veteran teammates while competing against them for playing time. Positive teammate interactions during shared group entry experiences may ease this transition. Early season bonding experiences are popular amongst team sports. While a strong sense of affiliation can be developed during on-field training camp activities, coaches spoke about the importance of facilitating positive teammate interactions beyond the rigors of training camp (Benson, Evans, & Eys, 2016). Shared group experiences, as represented by social inclusionary tactics, are intended to facilitate positive teammate interactions.

Team-building exercises, in some situations, are an example of the shared group entry experiences represented by social inclusionary tactics. While not necessarily classified as social inclusionary tactics, the concept of team building is well established in team sports, as reflected in a meta-analysis by Martin, Burke, and Carron (2009). Seventeen studies assessing team-building interventions in sport groups were analyzed. These interventions were divided into four categories, with one of these categories being an adventure/outdoor experience. Four studies in the analysis fell under this intervention classification. The adventure/outdoor experience intervention aligns the closest with the definition of social inclusionary tactics in the current work, as they are shared group

experiences that are formally structured. Adventure programme interventions demonstrated statistically significant effects across a number of criterion variables, including task cohesion, social cohesion, role clarity, and performance (Martin, Burke, & Carron, 2009). However, these team-building interventions did not directly incorporate social inclusionary tactics, so comparisons to the current work should be made with caution. Social relationships are crucial for adolescents (Sussman et al., 2007), so methods to promote feelings of inclusion are of paramount importance. Results suggest that increased shared group experiences could be a potential method to foster perceptions of inclusion among youth sport athletes.

In sum, the STSTQ represents a sport-specific measure of the socialization tactics of a team, which captures a range of socialization processes that are relevant to athletes' experiences and team functioning. However, the STSTQ has only been used with adult athletes. There is no research that has applied the STSTQ to a youth sample. In some cases, there is the need to create separate tests for younger populations. An example of this is with group cohesion, where the Youth Sport Environment Questionnaire (YSEQ; Eys, Lougheed, Bray, & Carron, 2009) was created to replace the original Group Environment Questionnaire (Carron, Widmeyer, & Brawley, 1985) as an age-appropriate measure. Additionally, only a limited number of constructs have been evaluated in relation to the STSTQ. An overarching objective is to evaluate how team socialization processes are associated with youth athletes' experiences. More specifically, this project will be analyzing if early season STSTQ scores can successfully predict relations with mid-to-late season scores of group cohesion, social identity, and relationship conflict. The

following sections will introduce the rationale underscoring each of the hypothesized relations.

Group Cohesion

Group cohesion is one of the most heavily researched constructs in the realm of group dynamics. There is copious literature on cohesion and its associated benefits, which can range from reduced feelings of depression to decreased levels of anxiety (Carron & Eys, 2012). Evaluating the variables associated with cohesion has been an important research objective for social scientists in sport, industrial, social, and military branches of psychology, as well as sociology (Carron & Eys, 2012, p. 274). Cohesion can be defined as "a dynamic process that is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or the satisfaction of member affective needs" (Carron, Brawley, & Widmeyer, 1998, p. 213). The conceptual model advanced by Carron et al. (1985) entails four dimensions. While cohesion within youth populations is typically assessed using only two dimensions (task and social, as is the case in the current project), it is beneficial for the reader to be informed of these dimensions in their entirety. Carron and colleagues posit that the feelings athletes have about their team can be differentiated by how an individual feels about the degree of unity within their group as a whole (i.e., *group integration*), and a player's motivation and desire to belong to their team (i.e., *attraction to the group*). Secondly, they posit that group activities can be *socially-oriented*, which is represented by the activities associated with the development and maintenance of social relationships, and *task-oriented*, which is represented by activities associated with task accomplishment, productivity, and performance (Carron & Eys, 2012, p.269-270). This

ultimately leaves a dimension for both the task and social aspects of group integration, as well as a dimension for both the task and social aspects of individual attractions to the group. However, Eys et al. (2009) found that youth do not distinguish between the components of group integration and individual attractions to the group. Thus, researchers have focused on the on-field (task) vs. off-field (social) dimensions of cohesion when working with youth populations.

Group cohesion is linked to several important construct in the sport domain, including higher levels of team performance (Carron, Colman, Wheeler, & Stevens, 2002), higher levels of group adherence (Prapavessis & Carron, 1997a), and a willingness to sacrifice for the group (Prapavessis & Carron, 1997b). Though limited exceptions occur (e.g., Rovio, Eskola, Kozub, Duda, & Lintunen, 2009), a more cohesive group environment is generally viewed to be desirable and adaptive for both athletes and the team. Several studies have specifically used ice hockey teams as their sample population, which assist in outlining the potential importance of team cohesion for the groups studied in the current project. Spink, Nickel, Wilson, and Odnokon (2005) examined the relation between task cohesion and team task satisfaction in elite junior ice hockey players. Although these players were older than those in the current work, the competitive group atmosphere is similar. In this particular context, team satisfaction was conceptualized as satisfaction with members' contributions and coordination of their efforts towards the team's task. Both task-related dimensions of cohesion (group integration-task and attraction to the group-task) predicted higher levels of team task satisfaction, at both the individual level as well as the team level. The individual level relationship represents how a player with positive feelings about their team's unity on task matters will have

more positive feelings about their team's task-based efforts. To simplify, a player who thinks their team is all on the same page regarding their tasks also tends to view their team as exerting more effort on said tasks. The team level relationship represents an aggregate team score of cohesion that can be compared to aggregate scores of other teams (Spink et al., 2005). Bakker (2010) examined the mediating effect of cohesion on leadership behaviours and collective efficacy among elite ice hockey players. Similar to the work of Spink et al. (2005), participants were elite junior ice hockey players. In this instance, collective efficacy was defined as "…a sense of collective competence shared among individuals when allocating, coordinating, and integrating their resources in a successful concerted response to specific situational demands" (Zaccaro, Blair, Peterson, & Zazanis, 1995, p. 309). Results indicated that attraction to the group-task, group integration-task, and group integration-social dimensions of cohesion served as mediators between positive feedback and collective efficacy. This is to say that positive feedback is positively related to team cohesion, which in turn, positively predicts collective efficacy beliefs.

As previously mentioned, final phase testing for the STSTQ noted positive relationships between STSTQ dimensions and team cohesion dimensions when tested with CIS athletes (Benson & Eys, 2017). This provides a preliminary basis for hypothesizing a relationship between cohesion and all STSTQ subscales, albeit in a different sporting context. However, evidence for a relationship between team cohesion and coach-initiated role communication tactics appears to be the most substantive. Literature that supports this notion has existed for some time. In a classical study using hockey players, Grand (1982) examined the relationship between task and social

cohesion dimensions and a host of variables, including role clarity, role performance, and role acceptance in junior and university ice hockey players. Results indicated that role clarity, role performance, and role acceptance were all significantly and positively related to both dimensions of cohesion.

While the work of Grand (1982) provides a solid, hockey-centered base, the most critical evidence lies with the aforementioned positive correlation between cohesion and role clarity. The opposite of role clarity can be referred to as role ambiguity. Eys and Carron (2001) examined the relationship between role ambiguity, task cohesion, and task self-efficacy amongst university basketball teams. Results demonstrated that, specifically, a greater understanding of the scope of one's role responsibilities was a significant predictor of task cohesion. Bosselut, Heuzé, Eys, and Bouthier (2010) examined the mediational relationship between perceptions of task cohesion, role ambiguity, and cognitive anxiety during a European rugby union championship. Results displayed a mediating effect of task cohesion (group integration-task) on the relationship between role ambiguity and cognitive anxiety. Finally, Bosselut, McLaren, Eys, and Heuzé (2012) examined the reciprocal relationship between role ambiguity and group cohesion in youth interdependent sport athletes. Results demonstrated that athletes' perceptions of social cohesion predicted scope of responsibilities for defense, as well as role behaviours for defense (significant results were not observed for offense). Although there no significant effects for task cohesion, it is important to note that this study aimed at establishing a reciprocal relationship.

As institutionalized tactics are related to role clarity in the organizational domain (Bauer et al., 2007; Saks et al., 2007), one could theorize that, on a conceptual basis,

socialization tactics that promote structure and reduce uncertainty are likely to be positively associated levels of task cohesion in ice hockey teams. This conceptual relationship with cohesion is strongest for the dimension of coach-initiated role communication tactics. Past research suggests a relationship with social cohesion may also be present, although this evidence is less concrete (i.e., Bosselut et al., 2012; Grand, 1982). The first formal research hypothesis of the current project was that coach-initiated role communication tactics at time point one will be positively associated with task cohesion at time point two. However, as Benson et al. (2017) demonstrated significant correlations between all three STSTQ dimensions and all four measured dimensions of cohesion, further significant correlations within the current sample would not come as a surprise.

Social Identity

Mounting evidence has begun to point to the important role of social identity in youth sport contexts (Bruner, Boardley, & Cote, 2014; Martin, Balderson, Hawkins, Wilson, & Bruner, 2017, Bruner et al., 2017). Social identity can be defined as "the part of an individual's self-concept which derives from his/her knowledge of his/her membership of a social group (or groups) together with the value and emotional significance attached to that membership" (Tajfel, 1981, p. 255). In simpler terms, it is the feelings a player gets from being a member of their team. Similar to cohesion, social identity is not solely based in the field of sport, and can be applied to various group settings. Social identity research can be traced back to the end of World War Two, when social psychologists sought to understand atrocities like the Holocaust. 'Minimal group studies' were performed to determine the minimal conditions that would lead to a group

discriminating against another group in favour of itself (Rees, Haslam, Coffee, & Lavallee, 2015); for example, Holocaust soldiers/guards justifying the actions of their group and discriminating against the opposing group (prisoners). It was ultimately proposed that, after being categorized into a group, individuals seek to achieve or maintain their self-esteem by positively differentiating their group from a comparable group on some dimension of value (Tajfel & Turner, 1979). Essentially, people are motivated to assess their groups more positively than opposing groups, and psychological benefits can result from developing this sense of group identity (Bruner & Benson, 2017). Social identity theorizing asserts that one's self can be classified in group terms, such as "we" or "us", rather than the purely individual classification of one's self, such as "me" or "I", which serves as the basis for one's sense of belonging to a group (Rees et al., 2015).

The current thesis uses the multidimensional model advanced by Cameron (2004), which differentiates social identity perceptions along three distinct dimensions. *Cognitive centrality* (CC), which refers to both the frequency one thinks about their group, and the individual importance one associates with being a member of this group. For example, a player on the highest-level team (e.g., triple-A) may be very proud of the fact they are on the top team. They may think about it often, and being a member of this team may play a big part in how they view themselves. *In-group affect* (IGA) refers to the specific emotions, positive or negative, that occur as a result of being a member of a group. For example, a player could be extremely happy and having fun as a result of playing on their team, or they could be upset due to not fitting in with their teammates. Finally, *in-group ties* (IGT) refers to the psychological bonds that tie an individual to their group. This can

be thought of as how much a player feels like they belong to/bond with their team. Cameron's work was first adapted for a sports setting by Bruner, Boardley, and Cotè (2014), and the initial three-factor structure proved effective across domains. Although optimized for use with athletes, the Social Identity in Sport (SIQS) measure used in the current project uses these original three dimensions (Bruner & Benson, 2017).

In general, enhanced social identity is thought to be associated with positive outcomes. Among youth sport athletes, social identity has been linked to positive youth development (Bruner, Balish et al., 2017), as well as commitment, effort, and self-worth (Martin, Balderson, Hawkins, Wilson, & Bruner, 2017). Social identity may be of particular interest to ice hockey. Ice hockey is a sport with a high degree of teammate interdependence, meaning hockey players must rely on one another to a great degree in order to achieve team success. Stronger perceptions of how much players rely on their teammates may relate to the extent to which they integrate the team within their own social identity (Bruner, Eys, Evans, & Wilson, 2015).

Existing lines of inquiry suggest that sport team socialization tactics may predict a stronger social identity in youth sport. Part of this rationale stems from similarities shared between social identity and group cohesion. For example, both in-group ties and group integration-social represent feelings of similarity and belongingness with teammates. There is quantitative evidence of correlations between these constructs, as Bruner, Boardley, and Coté (2014) demonstrated the mediating effect of cohesion in the relationship between social identity and interactions youth sport athletes had with their teammates and opponents. Thus, although cohesion and social identity are separate constructs, levels of these dimensions are likely to co-vary, meaning similar relationships

with STSTQ factors are anticipated. As cohesion was significantly correlated to all dimensions of the STSTQ (as demonstrated by Benson et al., 2017), it would be reasonable to expect similar effects with social identity. However, there is more explicit evidence suggesting a relationship between social inclusionary tactics and levels of social identity.

As mentioned, shared group experiences, as represented by social inclusionary tactics, are intended to facilitate positive interactions between teammates. These social events provide a context for teammate interaction that is outside the normal environment of practices and games, and increase the proximity of teammates. There are certain group social activities, such as escape rooms and scavenger hunts, that not only encourage positive group interactions, but require them for task success. Another way to classify these positive interactions is with the term *prosocial behaviour*. Prosocial behaviours are those that help or assist another individual or group, and antisocial behaviours are those that impede or harm another individual or group (Bruner et al., 2014). Examples of said behaviours would be praising and crediting other teammates after a win, or blaming and criticizing teammates after a loss. Alternatively, there are prosocial/antisocial interactions that occur with opponents, such as helping out an injured opponent or consoling them after a loss, or deliberately injuring an opponent or using verbal insults. Recently, a collection of studies proposed a positive relationship between social identity and prosocial teammate interaction amongst competitive youth ice hockey players. Due to extensive similarities with the current project in terms of sample population and study design, these studies will be discussed at length.

Bruner, Boardley et al. (2018) analyzed the relation between social identity and prosocial/antisocial behaviour in competitive youth ice hockey players. Similar to the sample of the current project, participants were composed of competitive teams from the peewee, bantam, and midget age groups, and included both male and female teams. Results demonstrated that cognitive centrality and in-group ties positively predicted prosocial behaviour towards teammates. Additionally, an interview-based study with hockey players indicated three separate team narratives, or "climates", that explained the relations between social identity and prosocial interactions (Bruner et al., 2017a). This included a family-oriented climate, a performance-oriented climate, and a dominance-oriented climate. Teams demonstrating a family-based climate had stronger social identity scores, and exhibited higher prosocial and lower antisocial behaviour towards their teammates. Performance-based climates exhibited modest scores of social identity and prosocial/antisocial behaviours, which were contingent on team performance. Finally, teams with a dominance-oriented climate exhibited low scores of social identity, with low scores of prosocial and high scores of antisocial behaviour. During these interviews, one player spoke directly about inclusive feelings fostered through social inclusionary tactics, stating: "…Team functions and including everyone in it and it's not a select few, it's the entire team. Everyone does it together so it makes everyone feel welcome and part of the team" (Bruner et al., 2017a).

Furthermore, Bruner et al. (2017b) examined social identity and intrateam moral behaviours in competitive youth ice hockey using stimulated recall. Athletes were pre-screened to determine their level of antisocial behaviour (low, medium or high). Players were interviewed and shown video clips from the previous practice, and then asked to

respond to questions regarding the clips. These qualitative findings indicate that, regardless of individual level of antisocial behaviour, prosocial behaviours were perceived to lead to an increase in levels of social identity (Bruner et al., 2017b). This relationship between prosocial/antisocial interactions and social identity in youth hockey players was tested more formally by Benson and Bruner (2018). Male and female youth ice hockey players completed a daily diary with items assessing the frequency and nature of teammate interactions over a 10-day period. Results indicated that reported social identity levels were stronger on days where athletes reported a higher amount of prosocial interactions with teammates, and weaker on days where athletes reported a higher number of antisocial behaviours (Benson & Bruner, 2018). Social identity appears to be an important construct in competitive youth sport teams, and positive interactions with teammates seem to be closely related to social identity perceptions.

Results from past studies show the positive correlates of youth athletes' social identity levels (Bruner et al., 2014; Martin et al., 2017, Bruner, Balish et al., 2017). Preliminary speculation for a relationship between STSTQ variables and social identity can be provided through the similar nature of social identity and group cohesion, and, therefore, the apparent correlations between STSTQ dimensions and cohesion levels (Benson et al., 2017). A more direct line of reasoning can be proposed for a relationship between social identity and social inclusionary tactics. It is plausible that increasing the number of shared social experiences within a group would be positively related to the amount of prosocial interactions between teammates. As prosocial interactions feed into one's sense of social identity (Benson & Bruner, 2018), increased levels of social inclusionary tactics should do the same. The current work will empirically test this

relationship, while also examining for relations between social identity and the dimensions of serial tactics and coach-initiated role communication tactics. The second formal research hypothesis was that higher scores of social inclusionary tactics at time point one will predict higher social identity scores at time point two.

Relationship Conflict

Conflict can be defined as "a dynamic process that occurs between interdependent parties as they experience negative emotional reactions to perceived disagreements and interference with the attainment of their goals" (Barki & Hartwick, 2004, p. 234). Conflict in small groups has received attention in organizational psychology, but until recently, there has been a lack of research involving conflict in the sport psychology domain (Paradis, Carron, & Martin, 2014).

In organizational literature, team conflict has been differentiated according to categories: task, relationship, and process conflict (Behfar, Mannix, Peterson, & Trochim, 2011). The current thesis focuses on relationship conflict, which is the most consequential for affective and performance outcomes (De Wit, Greer, & Jehn, 2012)**.** Behfar et al. (2011) define relationship conflict as interpersonal tension, animosity, or annoyance among group members. Relationship conflict often produces tension and antagonism among team members that can lead to distraction from completing tasks (Holt, Knight, & Zukiwski, 2012). Holt et al. (2012) conducted a qualitative study to explore teammate conflict among 19 female Canadian university athletes. In this work, relationship conflict referred to conflicting personalities as well as interpersonal disputes and disagreements that did not directly relate to performance on the field/ice. Athletes reported that relationship conflict was more dysfunctional than performance conflict.

Something quite interesting noted by Holt et al. (2012) is the qualitative importance of team socialization processes. For example, 14 of 19 athletes identified team building exercises early in the season could assist in dealing with conflict issues when they arise. This provides reason to believe that social inclusionary tactics could reduce levels of relationship conflict. Additionally, when asked about what she would do to address conflict on her team, a player stated "Keeping communication open 'cause I feel like sometimes if there's not good communication, then that can really make it hard to solve conflicts". This does not speak directly to coach-initiated role communication tactics, although it does note the importance of communication, providing a minor theoretical linkage. Perhaps the most salient takeaway from the work of Holt et al. (2012) is the perspective that athletes first seek out the assistance of senior players and captains to mediate conflict. This was noted by 13 of 19 players. One fifth year player, when speaking about her relationship with new players, stated "…I try to like help them out, and kinda just, kinda befriend them and try to like make them see a different side of things". This provides good reason to believe that the use of serial tactics will lead to lower levels of relationship conflict.

In addition to university athletes, conflict research has been conducted with adolescent athletes. Gilbert (2000) noted frustration with teammates was a team dynamics issue among competitive female soccer players, although these frustrations appeared to be performance-based as opposed to relationship-based. Holt, Black, Tamminen, Fox, and Mandigo (2008) noted that when adolescent female soccer players faced relationship conflicts, players showed examples of resolving their conflicts for the good of the team, and using teammates to mediate conflict.

To build on the notion of veteran players as conflict mediators, some support can be drawn from the organizational psychology domain. Nifadkar and Bauer (2016) analyzed how relationship conflict linked to social anxiety with coworkers and information seeking from coworkers. Relationship conflict was positively associated with coworker social anxiety but negatively associated with information seeking from coworkers. This seeking of information from coworkers is closely related to the construct of serial tactics. While serial tactics do not outline the seeking of information by new players from veteran players, this sharing of information is quite similar. Although Nifadkar et al. treated relationship conflict as a predictor of information seeking, these results nonetheless speak to the potential association between serial tactics and relationship conflict.

Previous work demonstrates the prevalence of relationship conflict among sport teams, although noticeable gaps in the literature exist. Studies using sport groups have primarily been qualitative in nature. Additionally, these studies used an exclusively female sample. Nonetheless, research from the organizational domain suggests that sport team socialization tactics may be systematically connected to relationship conflict. For example, increased prosocial interactions as a result of social inclusionary tactics would hopefully improve teammate relationships. Also, greater understanding of one's role expectations (as a result of coach-initiated role communication tactics) could lead to less competition between teammates. However, the current state of the literature suggests serial tactics will influence relationship conflict the most directly. The third formal research hypothesis was that there will be a negative relationship between serial tactics scores at time point one and relationship conflict scores at time point two.

Summary

To conclude, the STSTQ was created to address the absence of a measure that assesses socialization tactics in sport teams. It has been proven effective with an adult population, but has never been tested with youth athletes. Youth sport teams display several key differences from university sport teams, so research with this population is warranted. For example, youth sport teams in this study were all very similar in age, whereas university teams can have a broad age gap between new players and veteran players. Youth teams have fewer formally scheduled events than university teams. Furthermore, youth sport coaches are not paid to coach, so they cannot allocate the same amount of time to improving group processes than a university coach can. This literature review has outlined the current knowledge of newcomer integration tactics, cohesion, social identity, and relationship conflict in the sport psychology domain. Rationale for the correlates of these variables has also been outlined. The purpose of the following study was to assess both the psychometric properties of the STSTQ within an adolescent sample, and relations between STSTQ scores and a host of relevant outcome variables. Results from this study will hopefully support a new strategy to improve perceptions of the youth sport environment, particularly for competitive youth ice hockey teams in Canada.

Methods

Participants

The participants were 244 ice hockey players (five female teams, 65 females; 11 male teams, 179 males) from Southwestern Ontario, ranging in age from 13 to 18 years (M_{age} = 14.63, SD = 1.26). Of this initial sample of 244 participants, 41 were absent at

time point two. These participants were excluded from the final sample. Additionally, participants who attended time point two but did not attend time point one were told that completion of the questionnaire was optional. Only one participant of this description completed a questionnaire, which was ultimately excluded from the sample. Therefore, the final sample included 202 participants (53 females, M_{age} = 14.47, SD=1.23). Participating teams were involved with the 2018-2019 competitive season at the time of the study. Male teams were recruited from Minor Bantam (i.e., players born in 2005), Bantam (i.e., players born in 2004), Minor Midget (i.e., players born in 2003), and Midget (i.e., players born in 2002 or 2001). Female teams were recruited from Bantam (i.e., players born in 2005 or 2004) and Midget (i.e., players born in 2003, 2002, or 2001). The three leagues that participating teams belonged to were all administered by the Ontario Hockey Federation (OHF).

Of the 11 male teams that participated, seven came from the highest level of minor hockey available for their age group (AAA), and four came from the second highest level available (AA). One of the AA male teams was unable to schedule an appointment for time point two data collection, so this team was ultimately excluded from the final sample. Of the five female teams that participated, two came from the highest level of minor hockey available for their age group (AA), and two came from the second highest level available (A). One female team was included from the third highest level (BB). It should be noted that players born in 2001 and 2002 are eligible to play junior hockey, which is technically a higher skill level than Midget. However, junior teams can roster players up to the age of 21, so these teams were excluded from this study. Athletes received either Timbits or Gatorade for their participation.

Procedure

Prior to contacting any teams, the study was granted ethical approval from the Western University Research and Ethics Board. Following approval, a potential list of teams was developed. To be considered for the study, a team needed fall within the 13-17 year age window and be playing within the top two skill levels for their respective gender (AAA and AA for boys, AA and A for girls). This generated a list of 138 potential teams within the targeted geographic location. The first teams contacted were within the closest geographical proximity, and recruitment then continued with more distal teams until the desired number of participants was achieved. All teams had contact information for the head coach available on their team website. Coaches were initially contacted via email.

After a team agreed to be included, the researcher and the team's coach agreed on a date and time for the researcher to initially meet with the players. In all cases, this was either before or after a team's scheduled practice. The researcher introduced himself to the players and provided a brief explanation about the study, which included the two time point design. It was also explained that participation was not mandatory, and that any player could decline participation if they wished. The researcher then distributed paper questionnaire packages, consent forms, and writing utensils to the players. Players completed the questionnaire package together in the team dressing room, but were instructed to remain quiet, to complete the questionnaires individually, and not share their responses with their teammates. Any questions about the questionnaire items were directed to the researcher. When the team was finished, they returned all study materials to the researcher. The coach was then reminded that they would be contacted later in the season to schedule an appointment for time point two of data collection. Following the

appointment, consent forms were separated from questionnaire packages, and digital entry of the questionnaire data commenced.

A minimum of eight weeks occurred between data collection appointments. The process was essentially identical to the first appointment, as coaches were contacted via email to schedule a meeting. Again, data collection took place at the arena either before or after a team practice. At the second appointment, players who were absent from the first appointment were told the questionnaire was optional. Absentees from time point one who chose to complete the questionnaire did not have their data included in the final sample. Coaches were instructed to have any player unable to attend the second appointment inform them in advance (if said players were present at time point one).

Measures

The following measures were assessed: demographics, newcomer integration, relationship conflict, social identity, and team cohesion. All α's reported pertain to the measurements taken in the current study. The questionnaire package was completed in full at both time points.

Demographics. Participants reported demographic characteristics including age, gender, years of experience playing ice hockey, whether or not they were a member of their current team last season, how many years they had been a member of their current team, and whether or not they served as a captain of their current team. Questionnaire responses were matched across time using a de-identified code based on each player's date of birth, number of sisters, and middle initial (e.g., 24-1-C).

Newcomer integration. Newcomer integration processes were assessed using the Sport Team Socialization Tactics Questionnaire (STSTQ; Benson & Eys, 2017). Previous

work with the STSTQ supported a three-factor structure with university-aged samples, along with measurement invariance according to tenure (i.e., new members versus returning team members), starting status, and gender (Benson & Eys, 2017). The measure consists of 13 items designed to assess the process of integrating new players into an existing team. Items are scored on a 9-point Likert scale, from 1 (*strongly disagree*) to 9 (*strongly agree*). Each item is preceded by the stem "When new athletes join this team…" A higher score indicates strong integration processes. The STSTQ consists of three subscales. The *serial tactics* subscale (α = .82) assesses the degree to which veteran players share task-related information with newcomers, and is represented by items such as "more experienced teammates are there to assist in helping them improve their skill-set". The *social inclusionary tactics* subscale (α = .67) measures the degree to which group-wide social activities are coordinated for newcomers, and is represented by items such as "group social events are scheduled for all new members to participate in". Finally, the *coach-initiated role communication tactics* subscale (α = .86) assesses the degree to which coaches provide new players with individualized role information upon group entry, and is represented by items such as "The coaching staff ensures there are learning opportunities designed to give newcomers an understanding of task responsibilities".

Relationship conflict. Relationship conflict was assessed using a shortened version of the Group Conflict Questionnaire (Behfar, Mannix, Peterson, & Trochim, 2011). The complete measure includes subscales for task conflict and process conflict, although only the relationship conflict subscale (α =.93) was included in our questionnaire package. Although primarily used in organizational settings, questions are

nonetheless highly relevant for use with sport teams. Items are scored on a 5-point Likert scale, from 1 (*a very small amount*) to 5 (*a lot*). Example items include "how much friction is there among members of your team?" and "how much emotional conflict is there among members of your team?". Higher scores indicate greater levels of in-group relationship conflict.

Social identity. Social identity was assessed using the Social Identity Questionnaire for Sport (SIQS; Bruner & Benson, 2018). It is a 9-item measure that is scored on a 7-point Likert scale, from 1 (*strongly disagree*) to 7 (*strongly agree*). A higher score indicates a stronger impact of team membership on the social identity of the individual. Strong internal consistency was demonstrated with the current sample. The SIQS contains three subscales. The *in-group ties* subscale (α =.91) measures perceptions of similarity, bonding, and belongingness with other group members, and is represented by items such as "I feel strong ties to other members of this team". The *cognitive centrality* subscale (α = .86) assesses the importance of being a group member and is represented by items such as "In general, being a member of this team is an important part of my self-image". The *in-group affect* subscale (α =.94) measures the positive feelings associated with group membership, and is represented by items such as "I feel good about being a member of this team".

Team cohesion. Team cohesion was assessed using the Youth Sport Environment Questionnaire (YSEQ; Eys, Loughead, Bray, & Carron, 2009). It is an 18-item measure that is scored on a 9-point Likert scale, from 1 (*strongly disagree)* to 9 (*strongly agree).* There are two negatively worded items included to detect response acquiescence, but these items are not included in the scoring of the subscales. A higher score indicates a

greater level of cohesion within the team. The YSEQ assesses cohesion using a task component and a social component. The task component (α =.96) refers to the on-field activities of the group, and is represented by items such as “I am happy with my team’s level of desire to win”. The social component (α =.95) refers to the off-field activities of the group, and is represented by items such as “We contact each other often (phone, text message, internet)”.

Data Analysis

All analyses were performed using SPSS. Only participants who completed measures at both time points were included in the main analysis. Sport Team Socialization Tactics Questionnaire (STSTQ) scores represent subscale scores of participants at time point one. Subscale scores for the Social Identity Questionnaire for Sport (SIQS), the Youth Sport Environment Questionnaire (YSEQ), and the Group Conflict Questionnaire are from time point two. Multiple regression analyses were performed using STSTQ dimensions as predictors (serial tactics, coach-initiated role communication tactics, and social inclusionary tactics). Predictor variables were entered simultaneously. Six multiple regressions were performed in total, using a different subscale from cohesion (i.e., task cohesion), social identity (i.e., cognitive centrality), and relationship conflict as the criterion variable each time. Follow-up analyses were performed to evaluate the zero-order relations between each of the STSTQ dimensions and the criterion variables. Standardized regression coefficients are reported in the main text.

Results

Prior to testing the main hypotheses, data cleaning procedures were undertaken and assumptions for regression were evaluated. To locate any univariate outliers, z-scores were computed for all predictor and criterion variables. No outliers were identified, as all z-scores were lower than 3.29 (Field, 2017). A Mahalanobis distance analysis was performed to search for potential multivariate outliers that would affect the data. A distance score was calculated for each criterion variable (cognitive centrality, in-group affiliation, in-group ties, group conflict, task cohesion, social cohesion). Serial tactics, social inclusionary tactics, and coach-initiated role communication tactics served as the predictor variables for each distance score. Distance scores above 16.3 were to be identified (Field, 2017). Three participant scores met this criterion; therefore, they were removed from the final analysis. Normality and linearity issues arose from the fact that results displayed a significant negative skew (except relationship conflict, which was positively skewed). This skewness has been demonstrated in past studies of sport teams (Bosselut, Heuzé, Eys, & Bouthier, 2010; Bruner, Eys, Evans, & Wilson, 2015), so it might be beneficial to transform these data in the future or employ an estimator that is robust to non-normality. This issue of normality is discussed in the limitations section.

Descriptive Statistics and Bivariate Correlations

Demographic information about the sample are given in Table 1 and descriptive statistics and bivariate correlations are presented in Table 2. As expected, the socialization tactics dimensions were positively correlated with one another. Serial tactics demonstrated significant positive correlations with cognitive centrality, in-group ties, task cohesion, and social cohesion. Coach-initiated role communication tactics were

significantly negatively associated with group conflict, but positively correlated with all other relevant criterion variables. Social inclusionary tactics demonstrated significant correlations at $p < .001$ with all variables except group conflict.

Team Cohesion

All multiple regressions are presented in Table 3. The first hypothesis of a relationship between task cohesion and coach-initiated role communication tactics was supported. During multiple regressions, with task cohesion as the criterion variable, there was a significant, positive relationship with coach-initiated role communication tactics ($B = .40$, $p < .001$). With social cohesion as the criterion variable, there was a significant, positive relationship with social inclusionary tactics ($B = .30$, $p < .001$).

The zero-order relations between each STSTQ dimension of team cohesion were also evaluated. Coach-initiated role communication tactics were positively related to both social cohesion ($B = .35$, $p < .001$) and task cohesion ($B = .44$, $p < .001$). Social inclusionary tactics were strongly positively related to both social cohesion ($B = .39$, $p < .001$) and task cohesion ($B = .33$, $p < .001$). Finally, serial tactics were positively related to both social cohesion ($B = .22$, $p = .001$) and task cohesion ($B = .20$, $p = .002$).

Social Identity

The second research hypothesis of a relationship between social inclusionary tactics and social identity was partially supported. During multiple regressions, with cognitive centrality as the criterion variable, there was a significant, positive relationship with coach-initiated role communication tactics ($B = .39$, $p < .001$). With in-group ties as the criterion variable, there was a significant, positive relationship with social inclusionary tactics ($B = .24$, $p = .004$). With in-group affect as the criterion variable, there was a

significant, positive relationship with coach-initiated role communication tactics (B = .43, p < .001) Across all three regressions, serial tactics was not significantly associated with social identity, ps > .05.

The zero-order relations between each STSTQ dimension of social identity were also evaluated. Coach-initiated role communication tactics significantly positively predicted cognitive centrality (B = .39, p < .001), in-group affiliation (B = .36, p < .001), and in-group ties (B = .27, p < .001). With social inclusionary tactics as the predictor, there was a significant, positive relationship with both cognitive centrality (B = .28, p < .001) and in-group ties (B = .32 p < .001). There was positive relationship with in-group affiliation, albeit smaller in magnitude (B = .21, p = .003). Across all six regressions, there were no significant relations with serial tactics, *ps* > .05.

Relationship Conflict

Our third hypothesis of a negative relationship between serial tactics and relationship conflict was not supported. No relations were significant at *ps* <.05 for the multiple regression analysis. This is likewise for the zero-order correlations, although bivariate indications demonstrate a slight, significant, negative relationship between coach-initiated role communication tactics and relationship conflict (B= -.16, p = .01).

Table 1. Demographic Information

	Male	Female	Total
Time point 1 participants	178	65	243
Time point 2 participants	150	53	203
New players	42	35	77
Returning players	105	17	122
Forward	84	25	109
Defence	46	23	69
Goalie	16	5	21
Formal Captain	23	4	27

Table 2. Descriptive Statistics and Bivariate Correlations.

	M	SD	1	2	3	4	5	6	7	8	9
(1) Serial Tactics	6.69	1.57	-	.53***	.50***	.15*	.06	.17*	.22**	.20**	-.01
(2) Coach Tactics	6.78	1.30	-	-	.52***	.39***	.36***	.27***	.35***	.44***	-.16*
(3) Social Tactics	7.03	1.45	-	-	-	.28***	.21**	.32***	.39***	.33***	-.09
(4) Cognitive Centrality	5.66	1.35	-	-	-	-	.62***	.50***	.58***	.53***	-.34***
(5) In-group Affect	6.14	1.16	-	-	-	-	-	.61***	.61***	.77***	-.56***
(6) In-group Ties	5.98	1.11	-	-	-	-	-	-	.80***	.60***	-.34***
(7) Social Cohesion	7.06	1.80	-	-	-	-	-	-	-	.67***	-.34***
(8) Task Cohesion	6.90	1.88	-	-	-	-	-	-	-	-	-.58***
(9) Group Conflict	1.95	1.02	-	-	-	-	-	-	-	-	-

Note. *** p <.001, ** p <.01, * p <.05.
1-3 = Time point 1, 4-9 = Time point 2

Table 3. Multiple Regressions

	Social Cohesion		Task Cohesion	
	β (SE)	*t*	*β* (SE)	*t*
Predictor				
Serial	-0.05 (0.10)	-0.61	-0.10 (0.10)	-1.25
Coach	-0.22 (0.12)	2.60	0.40 ***(0.12)	4.91
Social	0.30*** (0.10)	3.73	0.17 (0.10)	2.10
F change	13.83		16.51	
*R*2	0.18		0.21	

	Cognitive Centrality		In-group Ties	
	β (SE)	*t*	*β* (SE)	*t*
Predictor				
Serial	-0.13 (0.07)	1.54	-0.06 (0.06)	-0.71
Coach	0.39*** (0.09)	-2.25	0.17 (0.07)	1.99
Social	0.14 (0.08)	-0.47	0.24* (0.06)	2.91
F change	13.31		7.84	
*R*2	0.73		0.11	

	In-group Affect		Relationship Conflict	
	β (SE)	*t*	*β* (SE)	*t*
Predictor				
Serial	-0.23 (0.06)	-2.76	0.13 (0.06)	1.54
Coach	0.43*** (0.08)	5.16	-0.20 (0.07)	-2.25
Social	0.08 (0.07)	1.00	-0.04 (0.06)	-0.47
F change	12.02		2.30	
*R*2	0.16		0.35	

Note. Serial = Serial Tactics. Coach = Coach-Initiated Role Communication Tactics. Social = Social Inclusionary tactics. *** p <.001, ** p <.01, * p <.05

Discussion

The current thesis provides insight into the relationship between socialization tactics and several important variables of group dynamics. Primarily, significant relationships between newcomer integration scores and criterion variables provide further evidence for the criterion validity of the STSTQ. Additionally, it appears that the Sport Team Socialization Tactics Questionnaire is generally reliable for younger sport teams. Moving forward, researchers can confidently use this measure of newcomer integration with adolescent teams as well as adult teams. It does not appear a separate measure is necessary for younger groups, albeit serial tactics appears to be less relevant to this context. In support of the first hypothesis, the results showed that coach-initiated role communication tactics positively related to task cohesion across two time points. In support of the second hypothesis, bivariate correlations revealed that social inclusionary tactics were positively related to all three dimensions of social identity. However, only in-group ties displayed a statistically significant correlation with social inclusionary tactics when the other dimensions of the STSTQ were included. The third hypothesis of serial tactics being negatively related to relationship conflict was not supported; relationships between STSTQ dimensions and relationship conflict were ultimately weak.

Cohesion

The first set of hypotheses pertained to how socialization tactics would be related to youth athletes' perceptions of team cohesion later in the season. Positive bivariate correlations were demonstrated between all three STSTQ dimensions with both task and social cohesion. Multiple regressions revealed a statistically significant, positive

relationship between coach-initiated role communication tactics and task cohesion, as well as a statistically significant, positive relationship between social inclusionary tactics and social cohesion.

Coach-initiated role communication tactics. Supporting the first hypothesis, coach-initiated role communication tactics and task cohesion appear to be strongly linked. Relationships between cohesion and role dimensions such as clarity, acceptance, and performance have been demonstrated in sport settings in the past (e.g., Grand, 1982). Similarly, sport team cohesion has demonstrated a negative relationship with role ambiguity (Bosselut, Heuzé, Eys, & Bouthier, 2010; Bosselut, Heuze, & Sarrazin, 2010; Eys & Carron, 2001). Coach-initiated communication tactics are likely the antecedent of role clarity, which in turn, relates to cohesion. Thus, role clarity is a potential mechanism linking coach-initiated role communication to cohesion. Our results provide further contribution for the previously established relationship between cohesion and role clarity/ambiguity. Research surrounding the expectations one has regarding their role, however, is quite novel. Benson, Irving, and Eys (2016) found that task cohesion increased as role contributions approached and exceeded expectations. It should be noted that coach-initiated role communication tactics items incorporate these role expectations into their design, as well. This is evidenced with items such as “the coaching staff communicates a general timeframe it will take to achieve more prominent task responsibilities in the group”, and “coaches clearly state what newcomers need to accomplish to acquire a more prominent role in competitive situations”. Moving forward, researchers should aim to further clarity how cohesion relates to role expectations. In addition to task cohesion, there was a positive bivariate relationship between coach-

initiated role communication tactics and social cohesion. While coach-initiated role communication tactics items are exclusively task-focused, these results suggest that benefits are not limited to task cohesion, as Benson et al. (2017) also identified a positive relationship between coach tactics and social cohesion. It would appear that the expectation one has regarding their role, in conjunction with the clarity of said role, could meaningfully be connected to perceptions of team cohesion in youth sport.

Serial tactics. Serial tactics displayed significant, positive bivariate relationships with both task and social cohesion. This is similar to the findings of Benson et al. (2017), who demonstrated the ability of serial tactics to positively predict cohesion across multiple dimensions. Increases in task cohesion were in line with expectations, as serial tactics represent task-based information sharing between veterans and newcomers. Interestingly, Benson et al. (2017) noticed similar correlational strength for serial tactics relationships with task cohesion and social cohesion. This is noteworthy as serial tactics items only capture task-based information sharing. In the current sample, serial tactics appear to be more tightly linked to social cohesion than task cohesion. Although information being shared is task-based, results suggest that social bonds could be enhanced through this communication. Although serial tactics did not account for unique variance when other dimensions of the STSTQ were included as predictors, the bivariate correlations nonetheless suggest that the sharing of task-based information between veterans and newcomers could be associated with task and social cohesion levels.

Social inclusionary tactics. Social inclusionary tactics exhibited the strongest positive association with social cohesion, which was anticipated. This is likely due in part to increased prosocial interactions between teammates as a consequence of team social

events. Benson, Evans, and Eys (2016) note that for university athletes, the training camp period developed a strong sense of social affiliation, and that inclusion in social activities was a highlight during the initial stages of being a team member. Similarly, university athletes who exceeded their social involvement expectations perceived higher levels of social cohesion within the group (Benson, Eys, & Irving, 2016). Benson et al. (2017) noticed a similar relationship with university athletes, as social inclusionary tactics predicted increased social cohesion later in the season. However, these previous findings all occurred within adult samples. Results from the current project provide quantitative support for a potential association between the occurrence of social events near the onset of a season and youth athletes' perceptions of social cohesion later in a season. These results further support the link between team member socialization processes and athletes' perceptions of cohesion. Although the literature positing the benefits of team cohesion is well established, the current work suggests potential new avenues by which cohesion levels can be increased.

Social identity

The second set of hypotheses pertained to how socialization tactics would relate to youth athletes' perceptions of social identity later in the season. Positive bivariate relations were demonstrated between all STSTQ dimensions with cognitive centrality, in-group affect, and in-group ties, with one exception; there was no statistical relationship between serial tactics and in-group ties. Multiple regression analyses revealed a slight, positive, statistically significant relationship between social inclusionary tactics and in-group ties.

Social inclusionary tactics. The second hypothesis of a positive relationship between social inclusionary tactics and social identity was partially supported. Social inclusionary tactics displayed the most significant relationship of the three STSTQ variables with the social identity dimension of in-group ties. This could be explained increased prosocial interactions between teammates during group social activities. Social inclusionary tactics represent shared group experiences, which are designed to have teammates form relationships outside of the sport environment. Theoretically, this means they are going to share more positive interactions with one another. As discussed, previous research has indicated a positive relationship between prosocial interactions and social identity (Bruner, Boardley, & Cotè, 2014; Bruner et al., 2017b; Benson & Bruner, 2018). Positive bivariate relationships were also demonstrated between social inclusionary tactics and the social identity dimensions of cognitive centrality and in-group affect. Bruner et al. (2014) demonstrated a positive relationship between prosocial behaviours and in-group ties as well as in-group affect, although cognitive centrality was unable to be measured due to poor reliability. In the current sample, cognitive centrality displayed a stronger correlation with social inclusionary tactics than in-group affect, which suggests that prosocial behaviours, as a consequence of scheduled team events, could potentially influence all three dimensions of social identity moving forward.

Coach-initiated role communication tactics. Something that was not directly anticipated was the strength of the relationship between coach-initiated role communication tactics and social identity subscales. Multiple regression analyses demonstrated that coach-initiated role communication tactics appear to be significantly and positively related to cognitive centrality as well as in-group affect, which was not the

case for social inclusionary tactics. In terms of bivariate relations, coach-initiated role communication tactics displayed a stronger relationship with both in-group affect and cognitive centrality than social inclusionary tactics did. Furthermore, the relationship with in-group ties was only slightly stronger for social inclusionary tactics. This suggests that social identity levels are perhaps augmented by clearly communicating role information, which is a novel finding. In terms of cognitive centrality, perhaps player-coach discussions regarding a player's role can contribute to the importance of group membership for the player. For example, if a coach is consistently reminding a player about the importance of the player's individual role, this may increase their perceived importance of team membership. In terms of in-group affect, a player could derive more positive feelings from group membership if the coach values their role. For example, a player who gets less playing time may be more satisfied with their status on the team if the coach reinforces the importance of the player's contributions. Finally, levels of in-group ties could be influenced through coach-player role discussions as a function of increasing the salience of the bond between player and team. This draws on a social identity approach to leadership (Reicher, Haslam, & Platow, 2018), which suggests that leaders must establish themselves as part of their group, hence fostering a bond with their followers who also identify as being part of said group. Furthermore, this communication between player and coach can be considered prosocial behaviour. Increased prosocial behaviour between teammates has recently been linked to increases in social identity (Benson et al., 2018; Bruner et al., 2017b), so perhaps social identity can also be increased via prosocial behaviour between players and their coaches.

Serial tactics. Relationships between serial tactics and social identity were less pronounced in comparison to the other dimensions of the STSTQ. No significant relationships were revealed between serial tactics and social identity dimensions during multiple regression analyses. As mentioned, serial tactics displayed no significant bivariate relationship with in-group affect. The positive bivariate links with cognitive centrality and in-group ties are likely due to increased prosocial interactions during the sharing of task-based information between new players and returning players. Perhaps task discussions with veteran players increase the importance a new player associates with being a member of their new team (i.e. cognitive centrality). Bonds being forged between new teammates as a result of task discussions could potentially explain the positive link to in-group ties. The explanation for this increase is of similar reasoning to the explanation of the relationship of serial tactics and social cohesion. The definitions of social cohesion and in-group ties are closely linked, so it is feasible to anticipate that something that affects the former would also affect the latter. In fact, the strongest correlation between any two measured variables was between time two scores of social cohesion and in-group ties.

While recent work has demonstrated the benefits of increased social identity (Bruner, Balish et al., 2017; Martin, Balderson, Hawkins, Wilson, & Bruner, 2017), knowledge of how to increase social identity levels is currently limited. Novel research (Benson et al., 2018; Bruner et al., 2017b) has indicated that prosocial behaviours between teammates are positively related to social identity levels. Institutionalized socialization processes, particularly coach-initiated role communication tactics and social

inclusionary tactics, appear to be a method of increasing the frequency of these prosocial behaviours in youth sport athletes.

Relationship conflict

The third set of hypotheses pertained to how socialization tactics would relate to youth athletes' perceptions of relationship conflict later in the season. Relationship conflict only demonstrated a significant correlation with coach-initiated role communication tactics.

Serial tactics. The third hypothesis of a negative relationship between serial tactics and relationship conflict was not supported. These results could be an example of range restriction due to floor effects, as participants reported very low conflict scores, on average. Low conflict scores could potentially be due to the fact that athletes generally tend to view their team quite favourably (Bosselut, Heuzé, Eys, & Bouthier, 2010; Bruner, Eys, Evans, & Wilson, 2015). Another possibility is social desirability bias, as athletes were conceivably unwilling to divulge negative information about their teammates or coaches. I was often asked "Is the coach going to read this?", which is a potential limitation of this study. As conflict is a newer concept in relation to sport, there is no extant literature that assesses a relationship between conflict and socialization tactics in sport. Although, when relationship conflict and organizational socialization were explicitly investigated in an organizational context (Nifadkar & Bauer, 2016), relationship conflict with coworkers was negatively related to seeking information from coworkers. The seeking of information from "veteran" coworkers is closely aligned with the dimension of serial tactics. These results cannot be directly compared, as the work of Nifadkar et al. (2016) used relationship conflict as a predictor and information sharing as

a criterion, which is the opposite of the current project's design. However, considering these results, it was surprising that serial tactics were, in fact, the weakest predictor of relationship conflict among the three STSTQ variables.

Social inclusionary tactics. In regard to social inclusionary tactics, no significant relationships were uncovered. In theory, increased prosocial interactions between teammates could improve relationship conflict in a similar nature to how they improve social identity. This was ultimately not reflected in the current data, so further research is warranted.

Coach-initiated role communication tactics. Although no significant relationship was demonstrated through the multiple regression analyses, and the fact that the bivariate correlation was only significant at the .05 level, relationship conflict was significantly, negatively related to coach-initiated role communication tactics. This can potentially be explained by players having a greater understanding of their role, and more realistic expectations about this role, as a result of open communication with the coach. Bosselut, McLaren, Eys, and Heuzè (2012) note that personal characteristics, such as anxiety, can be altered due to pressure associated with one's role. Moreover, Nifadkar et al. (2016) demonstrated a positive correlation between relationship conflict and social anxiety with coworkers. Perhaps if players have clear knowledge regarding their role, it could lead to less animosity between teammates. This can be outlined in the following situation. If player A is consistently made aware that they will be getting less playing time than player B, player A may have decreased expectations regarding their role. If player A is never informed of the coach's expectations, player A may maintain a high contribution expectation. This could lead to a sense of competition, and potentially

conflict, between player B and player A. As role ambiguity appears to be negatively associated with team cohesion (Bosselut et al, 2010; Bosselut, Heuze, & Sarrazin, 2010; Eys & Carron, 2001), perhaps a positive correlation with relationship conflict exists. This correlation with relationship conflict further reinforces the importance of coach-initiated role communication tactics within youth sport.

Although relationships with socialization tactics were weak, there were significant, negative relationships between relationship conflict and the other criterion variables (cohesion and social identity). So, while socialization tactics may not have a direct effect on relationship conflict levels, perhaps socialization tactics can still influence relationship conflict indirectly as a result of increasing cohesion and social identity.

Further Theoretical Implications

One of the underlying purposes of the current study was to evaluate the effectiveness of socialization tactics with a youth sport sample. In general, there is a scarcity of literature on how newcomer integration processes are linked to group dynamics in sport. This work adds to the notion that integration processes could in fact be linked to sport team dynamics. It would appear sport teams of all levels should focus upon improving their integration techniques, and the STSTQ could be an effective tool for this improvement.

Benson and Eys (2017) noted the differences between organizational groups and university sport groups (e.g., a lack of formally scheduled events during the offseason in sport teams). A youth sport team, however, differs from both of these aforementioned group contexts. Adolescent teams in this study only had roughly three formally scheduled team events per week, compared to daily activities on business days for work groups and

university teams. This limits the amount of communication between teammates, which warrants a need to facilitate more prosocial interactions. Another major difference is the fact that those occupying a leadership position in the workplace and on university teams (i.e., bosses and coaches) are paid employees. Their job is dependent on the successful functioning of the group they command, and as it is their primary occupation, they can afford to dedicate additional time to structuring group activities. Coaches of adolescent teams, however, are often volunteers. Interactions with their subordinates (players) only occur outside of the coach's primary employment, so opportunities for communication are limited. Results of this study could be even more useful for adolescent coaches, as they could readily improve the environment of their team using tactics that are easy to implement.

One issue that should be discussed is the limited effects of serial tactics. Although serial tactics demonstrated a statistically significant relationship with four of the six criterion variables, the strength of these correlations was weaker than for social inclusionary tactics or coach-initiated role communication tactics. In fact, out of the three STSTQ dimensions, serial tactics had the weakest correlation with all six criterion variables. This was surprising, as the impact of serial tactics with university athletes was robust; serial tactics had stronger correlations with both task and social cohesion than did the other two socialization tactic dimensions (Benson & Eys, 2017). This could be explained by players being of similar age. This age gap is a major difference between adolescent athletes and university athletes. New players on adolescent teams are of similar, or equal, age to the players that they are joining. This is not the case in university teams, as freshman players are typically quite younger than senior players. Without a

significant gap in group age, perceptions of being a “rookie” are likely less pronounced. Moreover, a new player on an adolescent team likely has less of a transition in terms of task demands. For example, a player making the transition from AA to AAA ice hockey has less of a change in relative ability level than a player transitioning from a high school soccer team to university soccer team. These results suggest the differences between returning players and incoming players are less meaningful in adolescent sport compared to university sport.

Nonetheless, coach-initiated role communication tactics appear to be systematically related to athletes’ perceptions of their group. Coach tactics were also the only STSTQ variable to display a statistically significant correlation with relationship conflict. Furthermore, of these three STSTQ variables, correlations were strongest for coach-initiated role communication tactics with four of the six criterion variables. Perhaps coaches are of greater influence to adolescents than they are to adults. It would be interesting to assess if age was a moderating factor in the strength of coach-initiated role tactics correlations. If coaches are of less importance to adults, one could anticipate a negative relationship between age and effectiveness of coach-initiated role communication tactics. Regardless, role communication between coaches and players seems to be of paramount importance for competitive youth sport athletes.

Limitations

As is the case with all studies, this work had multiple associated limitations. One of these limitations was attrition; 42 players did not complete the questionnaire package at time point two. Although a respectable >80% of the initial sample was successfully retained, the loss of these 42 participants is a limitation nonetheless. Another limitation is

the fact that data were only collected at two time points. While collecting at two time points is certainly better than one, a third data collection appointment would allow for the analysis of *change* within the criterion variables, opposed to simply identifying relationships between criterion variables and predictors. Additionally, this study is limited by the demographics of the sample population. It is difficult to readily apply these results to other youth sports, as the current study was exclusively composed of hockey teams. Hockey teams are typically less racially diverse than other sports, resulting in a sample that was predominantly Caucasian. Furthermore, as all teams were competitive, fees to play on these teams are likely quite high. Therefore, the sample is likely not an accurate representation of individuals with a lower socioeconomic status.

Currently, it is unknown if STSTQ scores at time point one are similar for those who completed the follow-up and those who did not, which is another limitation. This study also fails to account for youth sport athletes under the age of 13, so extrapolations from the current results to younger age groups should be made with caution. It is also difficult to compare these results to recreational youth sport athletes, as all teams involved were deemed to be elite. Another potential limitation is the weak reliability demonstrated by the social inclusionary tactics subscale ($\alpha = .67$). Higher internal consistency for this dimension would produce a greater level of confidence within our results. Something else to consider is the fact that it is unknown if coaches were new or returning, which could influence the state of the group environment. It is also unknown if new players were moving up or down in skill level. Finally, the skewness and kurtosis of the data is a main limitation of the current work. Scores for newcomer integration, team cohesion, and social identity display a drastic negative skew. Alternatively, relationship

conflict scores display a drastic positive skew. As mentioned, athletes tend to view the team they are on quite favourably (Bosselut et al., 2010; Bruner et al., 2015), which could be a reason for these distribution patterns. There are various strategies that can be employed to address this issue (e.g., using an estimator that is robust to non-normality), and while these strategies are beyond the scope of a Master's thesis, the drastic nature of our sample's skewness cannot be ignored as a present limitation.

Future Directions

There are a variety of avenues that could be explored in the future regarding this study. Many of these avenues involve further analysis of the current sample. For example, it would be prudent to analyze for measurement invariance. Benson and Eys (2017) demonstrated measurement invariance for gender, tenure (i.e. newcomer or veteran), and starting status. It would be worthwhile to evaluate measurement invariance across demographic variables in the current sample. The demographic section of our questionnaire asked for player age, gender, years of playing experience, position, years on current team, and whether or not a player was a formal captain. However, we did not control for these factors during data analysis. Many of these demographic factors had the potential to reveal further information regarding the sample. In terms of sex differences, we are unaware if socialization tactics make more or less of a difference on male teams opposed to female teams. This could especially be a factor regarding relationship conflict. Although not formally analysed as a research question, it was noted that females displayed noticeably higher relationship conflict scores at time point two than males *(M* = 2.72 female, *M* = 1.67 male), As sport conflict research is relatively new, future research could potentially benefit from deliberately examining gender differences as a mediator of

relationship conflict within sport groups. Another dimension that could be examined is whether a player was a newcomer to the team, or a returning member. It is conceivable to think that new players would have different views of socialization processes than a veteran player, as the acclimation process for a player who was on the team in past years would likely be much simpler. Benson and Eys (2017) noted that consequences associated with socialization tactics may partly depend on the behaviours or personalities of the newcomers. Future research should consider assessing individual personality factors when evaluating the effectiveness of socialization tactics. Finally, within the current demographic information, it would be useful to control for player age. While STSTQ reliability scores were generally strong for our youth sample (with social inclusionary tactics being a minor exception), it would be interesting to see if these scores declined if only 13 and 14-year-old participants were included. This would also allow for the analysis of age as a mediating factor between socialization tactics and criterion variables.

Team Performance. Although the current sample was not of appropriate size for this technique, an area where this work could be expanded is through the use of multilevel analyses. Many projects in the past involving hockey teams (Spink et al., 2005; Bakker, 2010) have analyzed results at the individual (player) level as well as the team level. This method of analysis would allow for a firmer grasp on the socialization processes of teams, as team scores could be established in addition to player scores. Specifically, one area that team-level analysis could focus on would be team performance. If competition schedules and results could be obtained, the effects of team performance (as a function of winning and losing) could be investigated. To date, there

has been no research regarding socialization tactics and team performance in sport. This would also generate further evidence for relationships between team performance and the criterion variables of cohesion, social identity, and relationship conflict. Regarding social identity, teams have been noted to identify more with their group after a win, and less with their group after a loss (Murrell & Gaertner, 1992; Zucchermaglio, 2005). It would be of value to see if teams with a losing record displayed lower social identity scores than teams with winning records. Regarding cohesion, it has been mentioned that increases in cohesion are typically associated with increases in performance (Carron, Colman, Wheeler, & Stevens, 2002). A qualitative Finnish study using male adolescent ice hockey players demonstrated alternative results. Rovio, Eskola, Kozub, Duda, and Lintunen (2009) found that high levels of social cohesion were associated with decreases in team performance. This was the result of group members conforming, not properly evaluating the performance of the team, and not expressing critical opinions towards their teammates. As these results were qualitative, extrapolations should be drawn with caution. Alternatively, a prospective multilevel study from Benson, Šiška, Eys, Priklerová, and Slepička (2016) found that in elite European youth sport athletes, team performance at midseason predicted task and social cohesion levels, although cohesion did not predict team performance. These findings are more in line with traditional cohesion literature, although hockey players were not involved in this sample. As both of these works are European, there is an opportunity for replication with North American youth sport athletes to further investigate relations between cohesion and performance.

Intervention. There is potential for an intervention designed to target socialization processes. The results of this work, combined with socialization research in

sport and organizational psychology, depict clear benefits of institutionalized tactics. Speaking specifically to the Sport Team Socialization Tactics Questionnaire, the dimensions are clearly defined, and could easily be targeted using an intervention procedure. This would involve a researcher working with teams to increase the use of these tactics. This intervention would include a) a formal discussion with veteran players encouraging the sharing of task-based information with newcomers, b) the scheduling of formal meetings between players and coaches to increase the frequency of this communication, and c) the scheduling of off-ice/field team building activities that occur throughout the year, in addition to those at the beginning of the season. It would appear an intervention of this nature might enhance team dynamics.

Research with other sport groups. A strength of the current study is that the sample was comprised entirely of youth ice hockey teams, which increases the external reliability for these groups. However, it is difficult to predict if these findings could be as effectively applied to different types of sports teams. Future studies using the STSTQ with other types of sports are recommended. The STSTQ could be readily applied to research in other English-speaking populations, such as the United Kingdom or Australia. Soccer literature could potentially be advanced, as the STSTQ demonstrated effectiveness in a sample that included university soccer players (Benson & Eys, 2017). Furthermore, soccer seems to share a similar level of task interdependence with ice hockey, which encourages similar effective results with soccer players.

On the note of task interdependence, the STSTQ should be applied to sport populations without said interdependence. Individual sport athletes, such as wrestling or swimming, usually do not require teammates for task success. However, these athletes

still belong to a team, and train/interact in ways similar to interdependent teams. It would be salient to analyze variance between different levels of task interdependence and effects of optimized socialization tactics.

Practical Implications

Results from this study suggest that coaches of adolescent ice hockey teams should attempt to implement processes that promote shared group experiences, individually tailored role information, and information sharing between members. This is especially true for the dimensions of coach-initiated role communication tactics and social inclusionary tactics. Coaches should have formally scheduled discussions with their players regarding a player's role on the team. The results of this work demonstrate the importance of this communication at the beginning of the season, but coaches should be encouraged to maintain these role discussions throughout the year. An example of this strategy would be to pull players aside, individually, during a team practice and engage in a conversation regarding a player's responsibilities. Regardless how a coach chooses to implement this communication, establishing open dialogue pertinent to athletes' role responsibilities appears to be quite important to athletes' perceptions of their group environment.

The present results also indicate the importance of planned team events. While socialization processes tend to be the most intense upon the arrival of new players (i.e. the beginning of the season), these processes are ongoing. Benson, Evans, and Eys, (2016) note that while integration processes are present at the beginning of the season, coaches may find it difficult to manipulate conditions to ensure these processes continue beyond the initial stages of team involvement. Coaches are encouraged to employ these

inclusionary tactics throughout the year, in addition to the beginning of the season. As adolescents are experiencing a period of their lives where building relationships is crucial (Macpherson, Kerr, & Sterling, 2016), opportunities to facilitate these relationships with teammates should not be exclusive to the beginning of the season. Furthermore, planned group activities should emphasize teammate interaction in order to facilitate prosocial behaviours. Thus, a team event at an escape room would be recommended over a team event at a cinema. Finally, although results for serial tactics were less significant, coaches should still encourage returning players to engage in the sharing of task-related knowledge with new players. A lack of statistical significance does not necessarily equate to a lack of importance. Previous works (Bauer et al., 2007; Saks et al., 2007; Benson & Eys, 2017) have demonstrated the effectiveness of serial socialization tactics, so there is no reason that they should not be employed with youth sport athletes, even if benefits are less pronounced in the current sample.

Conclusion

The STSTQ was designed to assess socialization tactics in sport teams. This study suggests it is an effective measure for youth sport populations. This study also demonstrates the ability of the STSTQ to predict levels of team cohesion and social identity. Coaches of adolescent sport teams should aim to increase the frequency of conversations with players about their roles, and also aim to schedule as many external social events as possible. Implementation of these tactics appears to hold the potential to improve the environment of the adolescent sport team for all involved.

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Appendix A: Demographic Questionnaire

As mentioned, **anonymity** will be assured and all data will be treated confidentially. In order to still be able to match the various data**, I would like you to code this questionnaire according to the following scheme**:

Code = Day you were born – number of sisters you have – Initial of your middle name

e.g., 7-0-J

Your code: _____

Circle what applies to you…

What is your age?

13 14 15 16 17

What is your gender?

M F You don't have an option that applies to me. I identify as _____

What position do you play?

F D G

How many years have you been playing ice hockey?

12+ 10-11 8-9 6-7 5 or less

Were you a member of this team AND skill level in your last season? (I.e. 2002 London Jr. Knights AAA)

Y N

How many seasons have you been a member of this team and skill level?

1 2 3 4 5+

Are you a formal captain of this team?

C A No

Appendix B - The Sport Team Socialization Tactics Questionnaire (Benson & Eys, 2017)

Directions: This questionnaire is designed to assess your thoughts on how new team members are integrated into your existing athletic team. Please rate the extent to which you agree or disagree with the following statements by circling the number that best corresponds to your team's overall approach to integrating newcomers

When new athletes join this team...

1. They are given personal preseason instruction from the coach on how to prepare for the season.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

2. More experienced teammates are there to assist in helping them improve their skill-set.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

3. They all participate in similar social activities together.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

4. The coaching staff ensures there are learning opportunities designed to give newcomers an understanding of their task responsibilities.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

5. More experienced group members are there to give advice on how to improve their skills.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

6. Coaches clearly state what newcomers need to accomplish to acquire a more prominent role in competitive situations.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

7. Group social events are scheduled for all new members to participate in.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

8. The coaching staff communicates a general timeframe it will take to achieve more prominent task responsibilities in the group.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

9. More experienced team members go out of their way to make sure that newcomers understand their task responsibilities.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

10. The amount of time it will take to achieve more task responsibilities in the group is clearly communicated to them.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

11. Team-oriented social outings are scheduled

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

12. Our coach outlines a timeline of when they will progress in their responsibilities.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

13. Acquiring new task responsibilities follows a distinct series of steps.

1	2	3	4	5	6	7	8	9
Strongly Disagree								Strongly Agree

Appendix C - Relationship Conflict Questionnaire (Behfar, Mannix, Peterson, & Trochim, 2011)

The following four questions are designed to assess levels of conflict within your team. Please circle the answer that best describes your team.

1. How much friction is there among members of your team?

(*None/not at all*) 1 2 3 4 5 6 7 8 9 (*Always/totally)*

2. How much are personality conflicts evident in your team?

(*None/not at all*) 1 2 3 4 5 6 7 8 9 (*Always/totally)*

3. How much tension is there among members of your team?

(*None/not at all*) 1 2 3 4 5 6 7 8 9 (*Always/totally)*

4. How much emotional conflict is there among members of your team?

(*None/not at all*) 1 2 3 4 5 6 7 8 9 (*Always/totally)*

Appendix D - Social Identity in Sport Questionnaire (Bruner & Benson, 2017)

The following questions are designed to reflect how you feel about being a part of your team. Please CIRCLE a number from 1 (strongly disagree) to 7 (strongly agree) to indicate your agreement with each of the statements.

1. I feel strong ties to other members of this team.

1	2	3	4	5	6	7
Strongly Disagree						**Strongly Agree**

2. I find it easy to form a bond with other members in this team.

1	2	3	4	5	6	7
Strongly Disagree						**Strongly Agree**

3. I feel a sense of being "connected" with other members in this team.

1	2	3	4	5	6	7
Strongly Disagree						**Strongly Agree**

4. Overall, being a member of this team has a lot to do with how I feel about myself.

1	2	3	4	5	6	7
Strongly Disagree						**Strongly Agree**

5. In general, being a member of this team is an important part of my self-image.

1	2	3	4	5	6	7
Strongly Disagree						**Strongly Agree**

6. The fact that I am a member of this team often enters my mind.

1	2	3	4	5	6	7
Strongly Disagree						**Strongly Agree**

7. In general, I'm glad to be a member of this team.

1	2	3	4	5	6	7
Strongly Disagree						**Strongly Agree**

8. I feel good about being a member of this team.

1	2	3	4	5	6	7
Strongly Disagree						**Strongly Agree**

9. Generally, I feel good when I think about myself as a member of this team.

1	2	3	4	5	6	7
Strongly Disagree						**Strongly Agree**

Appendix E- Youth Sport Environment Questionnaire (Eys et al., 2009)

The following questions ask about your feelings toward **your team**. Please **CIRCLE** a number for 1 to 9 to show how much you agree with each statement.

1. We all share the same commitment to our teams goals.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

2. I invite my teammates to do things with me.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

3. As a team, we are all on the same page.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

4. Some of my best friends are on this team.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

5. I like the way we work together as a team

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

6. I <u>do not</u> get along well with the members of my team.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

7. We hang out with one another whenever possible.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

8. As a team, we are united.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

9. I contact my teammates often (phone, text message, internet).

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

10. This team gives me enough opportunities to improve my own performance.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

11. I spend time with my teammates.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

12. Our team <u>does not</u> work well together.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

13. I am going to keep in contact with my teammates after the season ends.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

14. I am happy with my team's level of desire to win.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

15. We stick together outside of practice.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

16. My approach to playing is the same as my teammates.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

17. We contact each other often (phone, text message, internet).

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

18. We like the way we work together as a team.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

Appendix F- Letter of Information

Group Integration in Elite Adolescent Ice Hockey Players
Letter of Information and Consent

Principal Investigator: Dr. Craig Hall
Co-Investigators: Jeff Chamberlain & Dr. Alex Benson

1. **Invitation to Participate**
   You are being invited to participate in a research study about how teammate interactions contribute to youth sport experiences. Your ice hockey team is being invited to participate because adolescence is a timeframe in which relationships with peers (e.g., teammates) become increasingly important.

2. **Why is this study being done?**
   Studying how teammates interact is critical to the understanding and improvement of youth sport environments. Previous research shows that close friendships provide adolescent athletes with information about themselves that impact feelings of global self-worth (Keeler, 1992) and that teammates interaction in sport are associated with athletes' perception of team cohesion and developmental outcomes (Benson & Eys, 2017; Benson & Bruner, 2018). Through this research we hope to gain valuable information regarding how to foster positive youth development through sport experiences.

   How long will you be in this study?
   You will be asked to complete a questionnaire approximately 20 minutes in length, once at the beginning of the season and once in the middle of the season. You will technically be involved in the study over approximately four months, but your total time commitment will be 40 minutes.

3. **What are the study procedures?**
   If you agree to participate you will be asked to complete a questionnaire using paper and pencil at a mutually agreed upon location (likely before a practice at the practice arena). The questionnaire will contain five sections: a demographic questionnaire, the Socialization Tactics in Sport Teams Questionnaire (Benson & Eys, 2017), the Youth Sport Environment Questionnaire (Eys et al., 2009), the Social Identity Questionnaire for Sport (Bruner & Benson 2018) and relationship conflict (Behfar et al., 2011).

4. **What are the risks and harms of participating in this study?**
   There are no known or anticipated risks or discomforts associated with participating in this study.

5. **What are the benefits of participating in this study?**

Although you may not directly benefit from participating in this study, the information gathered from this study is anticipated to provide researchers with further information regarding teammate interactions in adolescent sport teams and therefore improve youth sport experience. Finally, all participants will be able to receive a summary of the study findings by writing their e-mail in the space provided at the bottom of the consent form.

6. **Can participants choose to leave this study?**
   If you decide to withdraw from the study, you have the right to request withdrawal of information collected about yourself. If you wish to have your information removed please let the researcher know. In order to withdraw from the study, you will need to remember your three-digit code that you used in the questionnaire so we can access and remove your data. The data will be fully anonymized as of August 2019 and thus participants will no longer be able to withdraw their data past this date.

7. **How will participants information be kept confidential?**
   Your name will not be included or in any other way associated with the data collected in the study, which is why we ask for a personalized code at the beginning of both questionnaires. Therefore, data provided by the participants will be kept confidential and accessible only to the investigators of the study. While we do our best to protect your information there is no guarantee that we will be able to do so. Investigators will store the study data both in electronic and paper files. Electronic files will be stored on a Western University password-protected hard drive, and password protected devices (i.e., laptop, and memory stick). The paper files will be stored in a locked cabinet in a secured room on Western University premises. Identifying information (i.e., e-mail, letters of consent) will be retained for a period of 7 years after the completion of the study. No other potentially identifiable information will be collected in this study. Representatives of The University of Western Ontario Non-Medical Research Ethics Board may require access to study-related records to monitor the conduct of the research. After the study is completed and once the de-identified data from the questionnaires are matched up across the two time points, a separate anonymized dataset will be created, where the personalized code will be removed from the data set and replaced with a unique code.

8. **Are participants compensated to be in this study?**
   Gatorade and or Timbits will be provided when the researcher meets with the team to administer the questionnaires, but players will be provided with food/drink regardless of their consent to participate in the study, so there is no direct compensation.

9. **What are the rights of participants?**
   Your participation in this study is voluntary. You may decide not to be in this study. Even if you consent to participate, you have the right to not answer individual questions or to withdraw from the study at any time. If you choose not

to participate or to leave the study at any time, this will have no effect on you. We will give you new information that is learned during the study that might affect your decision to stay in the study. You do not waive any legal right by signing this consent form. If you withdraw from the study, please email Dr. Alex Benson, Dr. Craig Hall, or Jeff Chamberlain to obtain a project summary. If you withdraw from the study, we will have to ask you for the unique code you used for the questionnaire in order to remove your data because questionnaire responses are never linked to any identifying information. After the entire study is completed (August 1, 2019), these data will be anonymized (i.e., the personalized code will be removed from the data set and replaced with a unique code).

10. **Whom do participants contact for questions?**
    If you have questions about this research study please contact the Principal Investigator Dr. Craig Hall, Dr. Alex Benson, or Jeff Chamberlain. If you have any questions about your rights as a research participant or the conduct of this study, you may contact The Office of Research Ethics.

This letter is yours to keep for future reference.

Western
Health Sciences
School of
Kinesiology

Appendix G- Consent Form

Group Integration in Elite Adolescent Ice Hockey Players
Consent Form

Contact Information:
Principal Investigator: Dr. Craig Hall
Co-Investigators: Jeff Chamberlain, & Dr. Alex Benson

I have read the Letter of Information, have had the nature of the study explained to me and I agree to participate. All questions have been answered to my satisfaction.

_____
Player's Name

_____
Player Print:

_____
Player Sign:

_____
Date *(DD-MMM-YYYY)*

_____

Print Name of Person Obtaining Assent

_____
Signature

Date (DD-MMM-YYYY)
_____

Appendix H- Coach Invitation

Hello Coach _____,

My name is Jeff Chamberlain and I'm a Master's student In the School of Kinesiology at Western University, working under the supervision of Dr. Craig Hall (Principal Investigator) and Dr. Alex Benson.

We are interested in how sport experiences in competitive hockey provide adolescents with opportunities to set and achieve challenging goals, develop supportive relationships, and experience personal growth. We are planning to conduct a study next fall to examine how teammates interact with one another. Dr. Benson, with colleagues, has developed a questionnaire titled The Sport Team Socialization Tactics Questionnaire. It has recently been demonstrated to be effective with university-aged athletes, but there is a lack of data regarding its effectiveness with adolescents.

I'm emailing today to see if your team would be interested in participating in our study this upcoming season. The commitment on your end is quite minimal; your players would be required to complete the questionnaire (about 20 minutes in length) at the beginning of the season and once more in the middle of the season. Snacks/Gatorade will be provided when I meet with the players to administer the questionnaires in person.

We hope that you will have your team participate in our study. Please contact me if you are interested and I can provide you with more details about the study and answer any questions you might have. You can either telephone me or send me an email.

Looking forward to hearing from you.

Jeff Chamberlain, Master's Candidate, Western University

Appendix I- Curriculum Vitae

Jeff Chamberlain

Burlington, Ontario

EDUCATION

2017 **Bachelor of Arts**, Honours Specialization Kinesiology, Minor in Psychology
Western University, London, Ontario

ACADEMIC HONOURS AND AWARDS

2016, 2017 Dean's Honour List

2012 Valedictorian, Robert Bateman High School (Burlington) Class of 2012

SCHOLARLY ACTIVITIES

2017-2019 Graduate Teaching Assistant, Western University 2276 Psychology of Exercise, 3474 Psychological Interventions in Sport, Exercise and Injury Rehabilitation, 3347 Growth and Development

2017-present Member, Exercise Health and Psychology Laboratory, Western University

2018-present Member, Group Experiences Laboratory, Western University