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Investigating cohesion as a mediator in the norms for aggression and perceived belonging relationship in youth minor hockey.

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INVESTIGATING COHESION AS A MEDIATOR IN THE NORMS FOR AGGRESSION AND PERCEIVED BELONGING RELATIONSHIP IN YOUTH MINOR HOCKEY

by
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Abstract

Through interactions with teammates, collective expectations regarding the appropriateness of behaviors emerge, known as team norms. Individuals adhere to the team's norms because it fulfills a fundamental need—to belong. It is not surprising that this need may motivate players to conform to an important team norm, such as aggression in hockey, and is related to an important group variable—cohesion. Therefore, the purpose of this study was to determine whether cohesion mediated the relationship between norms for aggression and perceived belonging. The participants consisted of 322 youth male ice hockey players. Two specific mediation relationships were found: a) GI-T mediated the relationship between norms for physical aggression and perceived belonging, and b) GI-S mediated the relationship between norms for physical aggression and perceived belonging. Coaches who wish to curb physical aggression and improve perceptions of belonging should implement interventions that focus on improving group task and social cohesion.

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"Our deepest fear is not that we are inadequate. Our deepest fear is that we are powerful beyond imagination. It is our light, not our darkness that most frightens us. We ask ourselves, who am I to be brilliant, beautiful, talented and fabulous? Actually, who are you not to be?"

~ Marianne Williamson

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Introduction

When an athlete joins a team, it is likely this person may have feelings of uncertainty about how he or she should behave (Shaw, 1981). However, collective expectations surrounding the appropriateness of behaviours will emerge as result of his/her interactions with other teammates (Colman & Carron, 2001). This phenomenon is known as group norms and is defined as "the emergent of consensual standards that regulate group members' behaviours" (Forsyth, 1999, p.121). In other words, group norms can be viewed as guidelines that group members adopt to regulate their own behaviours (Feldman, 1984). As a result, expectations regarding members' behaviour are created in the minds of group members, which subsequently become the standard for behaviour that is expected of all group members (Carron, 1988). In many cases, individuals adhere to the norms of their group because it fulfills a fundamental human need for belongingness (Baumeister & Leary, 1995; Cialdini & Trost, 1998). In fact, several authors have noted that the need to belong may motivate athletes to conform to the norms of their team and that it is related to one of the most important small group variables—cohesion (Allen, 2006; Carron, Hausenblas, & Eys, 2005).

Carron's (1982) conceptual framework of cohesion (see Figure 1) was used to guide the examination of norms, cohesion, and the need to belong. The framework is a linear model comprised of inputs, throughputs, and outputs. The inputs are viewed as the antecedents of cohesion and have been classified into four categories. The first category influencing cohesion is environmental factors which consist of two major components: contractual responsibility (e.g., transfer of rules and/or eligibility, geographical restrictions for amateur participation), and organizational orientation (e.g., age). The second category influencing cohesion is personal factors. Personal factors are comprised of, but are not limited to,

individual orientation (e.g., task motivation, affiliation motivation and self motivation), satisfaction, and individual differences (e.g., gender, race). The third category is leadership. Within this category, there are two main factors that influence cohesion: leadership behaviour and leadership style (Schriesheim, 1980). The final category is team factors, which includes group norms, group orientation, team ability, team stability, and group success.

The four antecedents of Carron's (1982) conceptual framework are hypothesized to influence perceptions of cohesion. Carron, Brawley, and Widmeyer (1998) defined cohesion as "a dynamic process that is reflected in the tendency of a group to stick together and remain united in the pursuit of its instrumental objectives, and/or for the satisfaction of member affective needs" (p. 213). Using this definition as a guide, Carron et al. (1998), and Carron, Widmeyer, and Brawley (1985) conceptualized cohesion within the context of four dimensions (see Figure 2): (a) individual attractions to the group-task (ATG-T), which reflects an athlete's perceptions about his/her personal involvement with the group task; (b) individual attractions to the group-social (ATG-S), which reflects an individual member's perceptions about his/her acceptance and social interaction with the group; (c) group integration-task (GI-T), which reflects an individual's perceptions about the similarity, closeness and bonding within the group as a whole around the task; and (d) group integration-social (GI-S), which reflects an individual member's perceptions about the similarity, closeness, and bonding within the group as a whole around social concerns.

The final component of Carron's (1982) conceptual model is the outputs. According to Carron the outputs can be viewed as the consequences of cohesion such as performance, athlete satisfaction, and intention to return. In fact, research has shown that athletes who perceived higher levels of cohesion are more likely to perform better (e.g., Carron, Colman,

Wheeler, & Stevens, 2002), are more likely to be satisfied with their athletic experience (e.g., Kamphoff, Gill, & Huddleston, 2005; Widmeyer & Williams, 1991), and are more likely to return to their team in subsequent seasons (e.g., Spink, 1998). Although, several different outcomes have been examined in the cohesion-output relationship (Carron et al., 1998; Kamphoff et al.; Spink), there is a need to examine other outcomes, such as the need to belong, to determine whether they are influenced by cohesion. In fact, based on self-determination theory (Deci & Ryan, 1985), Vallerand (1997) suggested that cohesion is a factor that should lead to perceptions of relatedness (i.e., perceptions of belonging). Further, Allen (2006) found a significant relationship between social cohesion (ATG-S & GI-S) and perceived belonging in university sport participants.

It has been suggested that group norms are one of the most powerful sources of social influence on team members (Munroe, Estabrooks, Dennis, & Carron, 1999). In fact, researchers have suggested that team cohesiveness is positively associated with team members' conformation to normative expectations of the team. The more team members conform to normative expectations, the more cohesive the team will be (Festinger, Schachter, & Back, 1950). Overall, research examining the group norms-cohesion relationship in sport has shown that group norms positively influence an athlete's perceptions of cohesion. In particular, the results have shown that norms for productivity in competition were positively associated with ATG-T (Hoigaard, Safvenbom, & Tonnessen, 2006), norms for social interaction in competition were positively related to GI-S and ATG-S (Patterson, Carron, & Loughead, 2005), norms for social interaction in team social situations were positively related to GI-S and ATG-S (Patterson et al.), norms for inclusion in team social situations

were positively related to ATG-S (Colman & Carron, 2001), and norms for interaction in team social situations were positively associated with GI-S (Colman & Carron).

Despite the evidence that there is a positive relationship between cohesion and group norms that are highly desirable by teams and their members (e.g., work harder, interact with teammates), there is also the possibility for group norms to develop around behaviours that are more negative in nature. As such, there is evidence to suggest that under some circumstances it is expected that athletes break the rules of their sport (Carron et al., 2005). Silva (1983) suggested that norms pertaining to rule violating behaviours have become increasingly important and that athletes must not only learn the written rules, but also the unwritten normative rules of their sport. Further, Carron et al. noted that the "good penalty" taken by players is a clear example of a rule violating behaviour that has become a normative expectation by players and coaches. Ice hockey is one sport where rule violating behaviour has become common. Seminal research by Vaz (1976) has indicated for example, that aggressive behaviours such as fighting and rough play have become normative, expected forms of behaviour. Although these types of aggressive behaviours contradict the social norms in society, they are frequently rewarded within the context of ice hockey (Stephens, 1998). Moreover in hockey, under certain conditions, failure to act aggressively is viewed unfavorably by coaches and teammates (Smith, 1979; Weinstein, Smith, & Wiesenthal, 1995; Vaz). Some researchers have suggested that aggressive behaviours in ice hockey have become just as important as any offensive or defensive tactic in order to be successful (Cullen & Cullen, 1975; Dorsch, 1997; Smith; Weinstein et al.; Vaz).

Given the perceived importance of aggression in hockey, researchers have attempted to understand the determinants and causes of this behaviour. However, the majority of

research has examined aggression from an individual perspective (Loughead & Leith, 2001; Ryan, Williams, & Wimer, 1990; Silva, 1983; Smith, 1979; Tucker & Parks, 2001). This is somewhat unfortunate since individual behavior is also influenced by situational characteristics (i.e., group influences). To date, the small amount of research on aggression from a group perspective has examined norms for aggression. Shields, Bredemeier, Gardner, and Bostrom (1995) examined the influence of team norms for aggression (operationalized as cheating and aggression) on leadership and cohesion in collegiate and high school baseball players and softball players. The results with respect to the relationship between leadership and norms for aggression indicated those team members who perceived their coach to use a more autocratic leadership style had norms sanctioning cheating and aggression. According to these researchers, this finding was not surprising as autocratic behaviour tends to decrease the likelihood that athletes will think independently and critically, and increase the likelihood that they will adhere to strategic considerations from the coach. Second and more importantly for the present study, the results concerning the relationship between cohesion and norms for aggression indicated that task cohesion was positively related to expectations that peers would aggress and cheat, and that the coach would condone cheating.

Although the limited research has indicated a positive relationship between cohesion and group norms for aggression, several shortcomings should be highlighted. First, the examination of the norms for aggression has utilized a general measure of this construct. For instance, Shields et al. (1995) did not distinguish between the physical or psychological components of aggression. As Silva (1980) noted, aggression can be viewed as an overt verbal or physical action that is intended to psychologically or physically injure another person. Therefore, it is important to measure both the physical and psychological components

of this construct in order to determine which component (physical and/or psychological) is most salient to athletes.

Second, Shields et al. (1995) used a composite score for both task and social dimensions of cohesion. That is, the authors combined the ATG-T and GI-T subscales into a single dimension measuring task cohesion. Similarly, they also combined ATG-S and GI-S into a single dimension measuring social cohesion. The four dimensions were combined into two because of low Cronbach's alpha levels (ATG-T = .60, GI-T = .68, ATG-S = .61, GI-S = .60). However, Carron, Brawley, and Widmeyer (2002) have suggested that since the four dimensions of cohesion are conceptually different combining the dimension should not be done. As Carron et al. (2002) contended, combining the dimensions should only be done if there is a high degree of relationship within the task or social factors. However, Shields et al. provided no rationale as to why the dimensions of cohesion were collapsed other than poor alpha levels. Nonetheless by collapsing the subscales into task and social dimensions, Shields et al. achieved acceptable levels of consistency (i.e., task cohesion, $\alpha = .72$; social cohesion, $\alpha = .71$)

Lastly, although research has examined the relationships amongst norms for aggression, cohesion, and the need to belong, these relationships have been studied independently (e.g., norms to cohesion, cohesion to perceived belonging). However, inherent in Carron's (1982) conceptual framework, it is hypothesized that cohesion serves as a mediator between the antecedents (e.g., norms for aggression) and the outputs (e.g., perceived belonging). The importance of mediational research is in its ability to establish "how" and "why" one variable predicts an outcome variable (Frazier, Tix, & Barron, 2004). More specifically, a mediator explains the relation between a predictor (e.g., norm for

aggression) and an outcome (e.g., perceived belonging) (Baron & Kenny, 1986). As such, the information derived from a mediator is important when developing and evaluating interventions. In addition, conducting mediational analyses is a sign of a maturing discipline when after direct relationships have been identified; researchers focus on explanation and theory testing regarding those relations (Hoyle & Kenny, 1999).

Although, the examination of cohesion as a mediating variable is in its infancy, the limited research has found cohesion to be a mediating variable. Specifically, Spink (1998) examined whether social cohesion (ATG-S and GI-S) would mediate the relationship between leadership behaviour and intention to return. The results from this study indicated that ATG-S served as a mediator. In addition, Loughead and colleagues (Loughead & Carron, 2004; Loughead, Colman, & Carron, 2001; Loughead, Patterson, & Carron, in press) conducted several studies examining whether cohesion mediated the relationship between leadership behaviour and several exercise-related outcomes (i.e., participant satisfaction, adherence, and affect). Results indicated that both task dimensions of cohesion (e.g., ATG-T and GI-T) mediated the relationship between leadership and exercise-related outcomes. While these results were important in establishing cohesion as a mediating variable, the only antecedent examined to date has been leadership. However, Carron's (1982) model clearly indicates that other input variables may influence cohesion, such as norms for aggression. As well, while a variety of outcome variables have been examined, perceived belonging may be another important outcome of cohesion. In fact, several researchers (Allen, 2003; Baumeister & Leary, 1995) have noted that individuals will attempt to satisfy this need to belong and sport provides an ideal social context in which to satisfy this need.

Therefore using Carron's (1982) model as a guide, the purpose of the present study was to determine whether cohesion mediated the relationship between norms for aggression and perceived belonging in youth minor ice hockey. Based on the research findings of Spink (1998), it was hypothesized that social cohesion would mediate the relationship between norms for aggression (operationalized as norms for physical and psychological aggression) and perceived belonging. Secondly, based on Loughead and colleagues' findings (Loughead & Carron, 2004; Loughead et al., 2001; Loughead et al., in press), it was hypothesized that task cohesion would mediate norms for aggression and perceived belonging.

Method

Participants

The participants were 322 male youth ice hockey players from 29 teams from a medium sized city in southern Ontario. The mean age of the participants was 14.90 years (*SD* = 1.62) ranging in age from 13-20 years. The players had been playing organized hockey for 8.6 years (*SD* = 5.10).

All of the players were playing in the Bantam (ages 13-14) or Midget (ages 15-20) select level of organized ice hockey. The select level of ice hockey is between travel and house league levels of play. That is, players at the select level typically try out for travel teams and if they are unsuccessful will compete at this level. With respect to the players position, centers represented 20.1% of the participants (n = 67), right wing represented 16.5% of the participants (n = 55), left wings represented 15.3% of the participants (n = 51), defense represented 31.8% of the participants (n = 106), goalies represented 8.7 % of the participants (n = 29) and all (operationalized as not having a set position) represented 2.2% of the participants (n = 7). There were 18 participants who did not respond to this question.

The Bantam and Midget select levels of ice hockey were chosen based on the fact that body checking is allowed at this level. Research has shown that the likelihood of aggression increases as players are allowed to body check one another (Vaz, 1976). In addition, younger players are discouraged from playing aggressively, however, by the age of the 13 the evaluation for player criteria changes. Coaches will look for players that can withstand illegal physical play (Goode, 1975). Finally, previous research has also indicated that in general, male athletes are more aggressive than female athletes (Tucker & Parks, 2001).

Measures

Cohesion. Cohesion was measured using a modified version of the Group Environment Questionnaire (GEQ; Carron et al., 1985). The modified GEQ (see Appendix A) is an 18-item self-report inventory that measures four dimensions of cohesion. ATG-T (four items) assesses an individual team member's feelings about his/her personal involvement with the group task, goals, objectives, and productivity. An example item is "I am happy with the amount of playing time I get". ATG-S (five items) assesses an individual member's feeling about his/her acceptance and social interaction with the group. An example item is "Some of my best friends are on this team". GI-T (five items) assesses team member's feelings about the similarity, closeness, and bonding within the team as a whole around the group's task. An example item is "Our team is united in trying to reach its goals for performance". GI-S (four items) assesses team member's feelings about the similarity, closeness, and bonding within the team concerning social matters. An example item is "Our team would like to spend time together in the off-season".

A few studies have shown that the GEQ has been affected by lower scale reliability (e.g., Gardner, Shields, Bredemeier, & Bostrom, 1996; Westre & Weiss, 1991). Two reasons

may explain the low reliability levels. One reason for the lower reliability may be related to the sample used (i.e., participants younger than 18 years of age). In fact, Weems, Onwuegbuzie, Schreiber, and Eggers (2003) examined respondents' characteristics (e.g., age) and the relationship of these factors to responses in regard to positively and negatively worded items. The results showed that age was one of the factors influencing whether an individual could differentiate between positively and negatively worded items. The second reason may be related to the wording of the items in the GEQ. More specifically, in the original version of the GEQ, 12 of the 18 items are negatively worded. Recently, Eys, Carron, Bray, and Brawley (2003) showed that a modified version of the GEQ, containing all positively worded items, had significantly higher internal consistency values for three of the four dimensions (ATG-S, GI-T, GI-S). Based on the above, a decision was made to use a modified version of the GEQ containing all positively worded items. Responses on the GEQ were anchored at 1 (strongly disagree) to 9 (strongly agree). Higher scores on a particular subscale, reflect higher perceptions of cohesion.

Perceived belonging. Perceived belonging was assessed using the Perceived Belonging in Sport Scale (PBS; Allen, 2006). The PBS (see Appendix B) is an 11-item unidimensional inventory that assesses athlete's perceptions of belonging to his/her respective team. The PBS was developed from Goodenow's (1993) psychological sense of school membership inventory. The wording of the items used in the PBS was modified to reflect a sport context. A sample item is "I am included in lots of the team activities". The results of a factor analysis indicated adequate fit, which reflects good construct validity (Scaled χ^2 (44, 201) = 88.25, p <.001, BBNNFI = .93, RCFI = .95, SRMR = .05, RMSEA =

.07). In addition, Allen (2006) found the PBS to have excellent internal reliability (α = .89) and demonstrated both convergent and discriminant validity.

Norms for aggression. Norms for aggression was measured using Dorsch's (1997) inventory that assesses both psychological and physical collective expectations of aggression in ice hockey (see Appendix C). The inventory includes 16 items (eight psychological norms and eight physical norms) pertaining to athletes' perceptions of their teams acceptability of aggression in ice hockey. Responses are rated on a 0 ("Never acceptable") to 100 ("Always acceptable") scale. An example item from the psychological subscale is "In general, our team believes it is acceptable to attempt to verbally or physically intimidate opposing players in order to defend other teammates". An example of a physically aggressive item is "In general, our team believes it is acceptable to attempt to physically harm opposing players in order to stop a scoring chance". Although Dorsch developed eight items for both psychological and physical norms for aggression, only the physical subscale has been analyzed for internal reliability (α = .85). However, experts from ice hockey reviewed the inventory and subsequently provided feedback regarding the content validity of all the items.

Procedures

Upon receiving ethical clearance, the president of the Windsor Minor Hockey Association was contacted via email outlining the purpose of the study and asking permission to test the players. Once approval was granted from the association's president, the researcher contacted the coaches to arrange a time to meet with the parents (or guardians) and players. At this meeting, parents and players were informed as to the purpose of the study and to obtain parental consent (Appendix D) and player assent (Appendix E). If both parental consent and player assent was obtained, athletes completed the modified GEQ (Carron et al.,

1985), the PBS (Allen, 2006), and the norms for aggression inventory (Dorsch, 1997) in the arena locker room following or before a game or practice. The inventories were given to participants by the researcher and returned to the researcher following their completion to ensure confidentiality. Athletes completed the inventories towards the end of the season in order to ensure that norms for aggression and perceptions of cohesion had the opportunity to develop. The questionnaires took approximately 15 minutes to complete.

Data Analyses

Unit of analysis. The present study utilized a cross sectional non-experimental design. An issue that often arises in group dynamics research pertains to the unit of analysis. That is, whether the individual athlete or the intact team be used as the unit of analysis. Two estimates were calculated to determine whether the analyses should proceed at the individual or the team level. Table 1 indicates the results from the two estimates, the intra-class correlation (ICC) and the index of agreement ($r_{wg(j)}$). Additionally, Table 1 also shows the *F* test values from a one-way random effects ANOVA where the dependent variables were the four dimensions of cohesion, the two dimensions of norms for aggression and perceived belonging and the independent variable was the team.

With respect to the first estimate to determine the level of analysis, Bliese, Halverson, and Schriersheim (2002) noted that the ICC estimate corresponds to the amount of variance in individual level responses that can be explained by group level membership. In other words, ICC allows for the determination of how much of the total variability is due to group membership and whether this variability results in reliable group means. This estimate is not influenced by group size or by the number of groups (Bliese, 2000). The ICC statistic is calculated as follows:

$$ICC = (m_{sb} - m_{sw}) / [m_{sb} + ((n_g - 1)\, m_{sw})]$$

where m_{sb} is the between-group mean square, m_{sw} is the within-group mean square, and n_g is the group size.

The second estimate, the index of agreement ($r_{wg(j)}$), represents the amount of interrater agreement, and is typically used to determine the appropriateness of aggregating the data to higher levels of analysis (James, Demaree, & Wolfe, 1984). That is, $r_{wg(j)}$ index determines whether aggregation is justified by comparing the variability of the variable of interest (e.g., cohesion) to an expected variance. Unlike the ICC, the $r_{wg(j)}$ index assesses separate within-group consensus for each group or team that is not based on inter-group variability. As such it is calculated separately for each team and is calculated as follows:

$$r_{wg(j)} = \frac{J[\,1 - (sx^2_j \,/\, \sigma^2_E)]}{J[1 - (sx^2_j \,/\, \sigma^2_E)] + (sx^2_j \,/\, \sigma^2_E)}$$

where $r_{wg(j)}$ is the within-group interrater reliability based on J items, sx^2_j is the mean of the observed variances on J items, and σ^2 is the expected variances (James et al., 1984). It should be noted that an adjusted index of agreement was calculated for present study. James et al. acknowledged that there are instances where the assumption of a rectangular distribution might be violated. A rectangular distribution implies that each option on a particular measurement scale (i.e., 9 choices on the GEQ) have an equal likelihood of being selected by the respondents. However, as Carron et al. (2003) indicated in a sample of 192 teams representing 2,107 athletes, the four dimensions of cohesion were all positively skewed with athletes responding to a greater degree at the top end of the scale. Therefore, the adjusted

index of agreement that reflects this statistical bias was taken into account when computing the expected variance (σ^2_E).

Table 1 indicates that the team on which athletes participated was a significant predictor of the four dimensions of cohesion as indicated by the significant *F* ratios. The ICC values were quite low, ranging from .11 to .30, indicating that there is individual level variability in the scores. Similarly, with respect to the index of agreement, $r_{wg(j)}$, all the values (ranging from .18 to .57) were below the cut-off value of .60. Given these low values, aggregation of the variables to the group level was not appropriate since there was no group level variability in the scores. Although Moritz and Watson (1998) proposed that values between .50 and .80 were sufficient for aggregation, other researchers (e.g., Bliese et al., 2002; George, 1990) have suggested a cut-off value between .60 to .70, noting that this type of criterion level is commonly used for other estimates such as Cronbach's alpha (Nunnally, 1978). Despite the noted cut-offs, adequate support and justification for any cut-off value has not been fully provided (Castro, 2002). Given that there was little support for aggregation, individual level analyses were conducted.

Baron and Kenny (1986) suggested that a series of regression models should be used to test for mediation. Prior to testing for mediation, five assumptions concerning regression analyses were computed. To detect multivariate outliers, Mahalanobis distance was computed and no outliers were found. The second assumption of homoscedasticity was met by computing a scatter plot showing the studentized residuals against the predicted values, the scatter plot revealed no specific pattern in the spread of the residuals; thus, the threat of Type II error was reduced (Ntoumanis, 2001). Thirdly, in order to test for the assumption of normality, a Q-Q plot was computed and the residuals clustered around the straight line, thus

indicating normality. Fourthly, given the values of the regression coefficients, the assumption of the absence of multicollinearity was satisfied. Finally, given the values from the ICC and $r_{wg(j)}$, the assumption of independence was satisfied.

Testing for mediation. According to Baron and Kenny (1986), a variable functions as a mediator when it satisfies the following four conditions:

Condition 1: The predictor variable (i.e., norms for aggression) is significantly related to the mediator variable (i.e., cohesion).

Condition 2: The predictor (i.e., norms for aggression) variable is significantly related to the output variable (i.e., perceived belonging).

Condition 3: The mediator (i.e., cohesion) is significantly related to the outcome variable (i.e., perceived belonging) when regressed with the predictor variable (i.e., norms for aggression).

Condition 4: Baron and Kenny (1986) noted that if the preceding three conditions are present, the effect of the predictor variable (i.e., norms for aggression) on the outcome variable (i.e., perceived belonging) must be less pronounced when regressed with the mediator than when regressed without it. From a theoretical perspective, a reduction demonstrates that the mediator is present.

Results

Descriptive Statistics

Internal consistencies were computed for the four dimensions of cohesion (ATG-T, ATG-S, GI-T, GI-S), the two dimensions of norms for aggression (norms for physical aggression, norms for psychological aggression) and for perceived belonging. The Cronbach's alpha values for all the dimensions were excellent based on Nunally's (1978)

recommendation (ATG-T, α = .75; ATG-S, α = .79; GI-T, α = .81; GI-S, α = .83; norms for physical aggression, α = .89; norms for psychological aggression, α =.93; perceived belonging, α = .90).

A summary of the descriptive statistics can be found in Table 2. With respect to the four dimensions of cohesion, athletes reported moderate levels with ATG-T rated the highest (M = 6.47 on a 9 point scale, SD = 1.56), followed by GI-T (M = 6.05, SD = 1.63), then ATG-S (M = 5.84, SD = 1.74), and lastly GI-S (M = 5.04, SD = 1.81). In terms of perceived belonging, athletes had a high perception of belonging to their teams (M = 4.15 on the 5 point scale, SD = .71). Lastly, with respect to norms for aggression, athletes reported moderate levels of both physical (M = 61.82 on an 11-point scale, SD = 22.86) and psychological aggression (M = 62.80, SD = 23.93).

A summary of the bivariate correlations amongst the variables can be found in Table 3. The results showed that the correlation coefficients amongst the four dimensions of cohesion were significant and ranged from r = .59 to r = .72. With respect to norms for aggression, Pearson correlation coefficients were significant between physical and psychological aggression (r = .80). Given these values, there was no evidence of multicollinearity (Tabachnick & Fidell, 2001).

Given that previous research (e.g., Loughead & Leith, 2001; Smith, 1979) has shown that level of play influences aggression, a MANOVA was computed in order to determine whether level of play differed between the dimensions of cohesion (e.g., ATG-T, ATG-S, GI-T, GI-S), norms for aggression (e.g., norms for physical aggression, norms for psychological aggression) and/or perceived belonging. The results of the MANOVA indicated a significant effect for level of play, Pillai's trace F (7, 304) = 3.62, p = .001. Post-hoc ANOVAs

indicated that the only significant difference occurred between level of play and norms for psychological aggression, $F(1,312) = 10.64$, $p = .001$. In particular, the results indicated that Midget level players had a greater acceptance of psychological aggression ($M = 67.05$, $SD = 21.69$) than their Bantam level ($M = 58.31$, $SD = 25.62$) counterparts. Consequently, when testing for mediation, Bantam and Midget levels were analyzed independently in regard to norms for psychological aggression. *Tests for Mediation*

Given Baron and Kenny's (1986) requirements needed for mediation, only two mediating relationships were found in the current study. Each of these are highlighted below.

Influence of norms for physical aggression and GI-T on perceived belonging. Insofar as Baron and Kenny's (1986) condition 1 is concerned, norms for physical aggression were significantly related to GI-T, $F(2,316) = 3.45$, $p < .05$ ($\beta = -.23$, $p < .05$). With respect to Baron and Kenny's condition 2, norms for physical aggression were significantly related to perceived belonging, $F(2,315) = 3.66$, $p < .05$ ($\beta = -.25$, $p < .05$). As for Baron and Kenny's condition 3, GI-T was significantly related to perceived belonging when regressed with norms for physical aggression, $F(2, 316) = 91.99$, $p < .05$. Inspection of the standardized beta weights revealed that GI-T was the most significant predictor of perceived belonging ($\beta = .61$, $p < .05$) while norms for physical aggression was not a significant predictor of perceived belonging ($\beta = -.01$, $p > .05$). The final condition was then considered. Specifically, the effect of norms for physical aggression were not as pronounced in condition 3 ($\beta = -.01$, $p > .05$) as in condition 2 ($\beta = -.25$, $p < .05$) suggesting that GI-T served to completely mediate the relationship between norms for physical aggression and perceived belonging (see Figure 3).

Influence of norms for physical aggression and GI-S on perceived belonging. Insofar as Baron and Kenny's (1986) condition 1 is concerned, norms for physical aggression were significantly related to GI-S, F (2,315) = 3.38, $p < .05$ ($\beta = -.24$, $p < .05$). With respect to Baron and Kenny's condition 2, norms for physical aggression were significantly related to perceived belonging F (2, 315) = 3.66, $p < .05$ ($\beta = -.25$, $p < .05$). As for Baron and Kenny's condition 3, GI-S was significantly related to perceived belonging when regressed with norms for physical aggression, F (2, 316) = 59.35, $p < .05$. Inspection of the standardized beta weights revealed that GI-S was the strongest predictor of perceived belonging ($\beta = .52$, $p < .05$), while norms for physical aggression were not a significant predictor of perceived belonging ($\beta = -.04$, $p > .05$). The final condition was then considered. Specifically, the effect of norms for physical aggression was not as pronounced in condition 3 ($\beta = -.04$, $p > .05$) than in condition 2 ($\beta = -.25$, $p < .05$). This reduction suggests that GI-S served to completely mediate the relationship between norms for physical aggression and perceived belonging (see Figure 4).

Discussion

The general purpose of the present study was to examine the relationships amongst norms for aggression, cohesion, and perceived belonging. More specifically, the purpose was to determine whether cohesion mediated the relationship between norms for aggression and perceived belonging. Based on previous research, it was hypothesized that both task and social cohesion would mediate the relationship between norms for aggression and perceived belonging. In general, the results indicated that both task and social cohesion mediated the relationship between norms for aggression and perceived belonging. Specifically, there were two mediating relationships: a) GI-T served to mediate the relationship between norms for

physical aggression and perceived belonging, and b) GI-S mediated the relationship between norms for physical aggression and perceived belonging. Beyond these specific findings, a number of aspects associated with the results should be highlighted.

The first such associated aspect concerns the finding of a negative relationship between norms for physical aggression and GI-T. That is, athletes who perceived they played on a team with lower norms for physical aggression reported higher perceptions of their team's task cohesion compared to those athletes who had higher perceptions of their team's norms for physical aggression. Interestingly, this finding is in contrast to Shields et al.'s (1995) finding that task cohesion was positively related to expectations that peers would aggress and cheat. However, the results are similar to Dorsch (1997) where a negative relationship between norms for physical aggression and GI-T was found. A possible explanation may be related to the samples that were tested. Shields et al.'s participants consisted of high school and college level baseball and softball players, whereas Dorsch's consisted of Junior level male hockey players. Nonetheless, the negative relationship between cohesion and norms for aggression are surprising given that research regarding type of sport and aggression (Silva, 1983; Tucker & Parks, 2001) has suggested that collision sports, such as ice hockey, should endorse aggression to a greater extent than non contact sports, such as baseball and softball.

Another result that should be highlighted pertains to the negative relationship between norms for physical aggression and GI-S. In other words, athletes who perceived their team to endorse lower norms for physical aggression reported greater perceptions of social cohesion. Previous research has indicated that norms that are positive in nature (e.g., developing tight social relationship) were positively related to GI-S (Patterson et al., 2005).

The findings from the present study expand the norms-cohesion relationship to indicate that norms that are more negative in nature (e.g., norms for physical aggression) are negatively related to social cohesion. A possible explanation for the current finding can be associated with findings from previous research examining ice hockey coaches' aggressive beliefs. Previous research (e.g., Luxbacher, 1987; Smith 1979; 1988; Vaz, 1982) found that players who perceived their coach to value aggression expressed greater levels of aggression. Given this finding, it could be speculated that the hockey players sampled in the current study had coaches that did not value aggression which consequently influenced the players to adopt a similar philosophy.

A third related point concerns the negative relationship found between norms for physical aggression and an athlete's perceptions of belonging. This finding indicates that athlete's who perceive their team to endorse low norms for physical aggression perceive greater belongingness to their team. This finding can be related to Smith's (1979) finding that hockey players had a lower approval of aggression but perceived their teammates to be in favor of aggression, and behaved in accordance to these perceptions. Therefore it could be suggested that athletes who participate on teams with a lower approval of physical aggression may feel that they belong because their team's philosophy of aggression parallels their own personal beliefs. In fact, Moreland, Levine, and Wingert (1996) indicated that when group members are dissimilar, conflicts among them are more likely to arise, weakening group cohesion and as a result the members will leave the group because they do not belong.

A fourth related point concerns the positive relationship between perceived belonging and the cohesion dimensions of GI-T and GI-S. Allen (2006) found that both social dimensions (ATG-S, GI-S) of cohesion were related to perceived belonging for varsity

athletes. However, it should be noted that Allen did not measure task cohesion in her study. Thus, the results of the present study would tend to suggest that not only is social cohesion important but also task cohesion in relation to perceived belonging. In fact, research has shown that task cohesion has been related to other social outcomes such as satisfaction and jealousy (Kamphoff, Gill, & Huddleston, 2005), mood (Terry & Carron, 2000), personally liking teammates (Widmeyer & Williams, 1991), and communication (Widmeyer & Williams).

The results of the present study offer additional support of Carron's (1982) conceptual model for the study of cohesion. More specifically, the conceptual model suggests that cohesion will serve as a mediating variable. Only recently have researchers (e.g., Loughead & Carron, 2004; Loughead et al., 2001; Loughead et al., in press; Spink, 1998) tested whether cohesion served as a mediating variable. The results from this body of research have shown that both task and social cohesion serve as mediators between leader behaviours and several related outcomes. The results of the present study expand previous research by indicating that not only is the input variable of leadership important but the input variable of team factors (operationalized as group norms in the present study) in the Carron framework is also an important construct to consider when developing perceptions of cohesion. Similarly, the results of the present study also indicated that perceived belonging may be an important outcome. Previous research has shown that cohesion influences a variety of outcomes such as satisfaction (Loughead & Carron), intention to return (Spink), and performance (Patterson et al., 2005). Baumeister and Leary (1995) proposed that a fundamental human need is to belong, and that groups provide a forum for satisfying this

need. The results of the present study support this proposition by indicating that if athletes perceive their team to be cohesive, they will feel a stronger sense of belongingness.

Another interesting finding from the present study pertains to the result that GI-T and GI-S acted as mediating variables. The majority of previous research has found that ATG-T (e.g., Loughead & Carron, 2004; Loughead et al., 2001; Loughead et al., in press) and ATG-S (Spink, 1998) dimensions of cohesion served as mediating variables. The differences in the findings may be related to the nature of the variables tested. In the Loughead and colleagues, and Spink studies participants were asked about their *individual* perceptions of the leader and how this influenced their *individual* perceptions of adherence, satisfaction, and intention to return. However, in the present study, the participants were asked about the team environment. That is, both the norms for aggression and perceived belonging reflected a more group oriented perspective. Nonetheless, the results of the present study, combined with previous research, suggest that all dimensions of cohesion (ATG-T, ATG-S, GI-T, GI-S) are mediators in Carron's (1982) framework.

While the results of the present study are encouraging, some caution should be exercised when interpreting the results. First, the sample consisted of select level ice hockey players. Research examining aggression in hockey has indicated that higher competitive levels of hockey endorse aggression to a greater extent. Therefore, it is possible that had travel teams been used the results may have indicated a stronger norms for aggression. Secondly, the results of the present study cannot be generalized to female players. In a study conducted by Shapcott, Bloom, and Loughead (in press), it was found that varsity female hockey players used psychological aggression as a method of intimidating their opponents. It

could be suggested that males tend to use more physical aggression and women tend to use psychological aggression to a greater extent.

Given the above limitations, future research should consider using travel teams or higher levels of ice hockey in order to maximize the possibility of finding higher levels of aggression and a stronger consensus for the norms for aggression to examine these norms at a group level. Secondly, although inherently Carron's model (1982) posits mediation, research concerning cohesion as a mediator has been sparse. Furthermore, aside from Spink's (1998) study, research that has examined cohesion as a mediator has generally examined it in an exercise setting. Therefore, future research should consider examining cohesion as a mediator in other sport settings. Lastly, Carron's conceptual model contains other factors – environmental, and personal, that influence group cohesiveness. An attempt should be made to determine how these factors influence cohesion in sport settings, and through cohesion influence important outcomes such as perceived belonging, performance, and intention to return.

The findings of the present study lend themselves to several practical implications. Athletes in the present study had perceptions of aggression that negatively influenced their perceptions of team cohesiveness and belonging despite the known prevalence and acceptance of aggression in ice hockey (Dorsch, 1997; Goode, 1975; Silva, 1983). Therefore, coaches who want to curb physical aggression on their team should consider implementing interventions that focus on developing group task and social cohesion. This type of intervention would not only improve cohesion levels of the team, but increase athlete's individual perceptions of belonging. Moreover, research has consistently shown a positive relationship between cohesion and performance (Carron, Colman, Wheeler, & Stevens,

2002), intention to return (Spink, 1995), and satisfaction (Loughead & Carron, 2004), thus the benefits of this type of intervention serve more than one purpose. As such, minor hockey administrators, coaches, and parents should consider improving a team's cohesion in order to reduce aggression and increase a player's sense of belonging.

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Table 1

The F Ratio and Estimates of Agreement for Each Dimension of Norms for Aggression, Cohesion, and Perceived Belonging.

	F ratio	ICC	$r_{wg(j)}$
Norms for physical aggression	2.64*	.12	.57
Norms for psychological aggression	2.67*	.12	.29
ATG-T	4.42*	.23	.24
ATG-S	4.14*	.21	.49
GI-T	5.93*	.30	.35
GI-S	5.29*	.27	.18
Perceived belonging	2.54*	.11	.42

Note: ATG-T = individual attractions to the group-task; ATG-S = individual attractions to the group-social; GI-T = group integration-task; GI-S = group integration-social;

* $p < .05$

Table 2

Descriptive Statistics for Demographic Variables, Cohesion, Norms for Aggression, and Perceived Belonging.

	N	Mean	Standard Deviation
Age in years	316	14.90	1.62
Years in hockey	313	8.65	5.10
Norms for physical aggression[a]	322	61.82	22.86
Norms for psychological aggression[a]	326	62.80	23.92
ATG-T[b]	330	6.74	1.56
ATG-S[b]	330	5.84	1.74
GI-T[b]	329	6.04	1.63
GI-S[b]	327	5.04	1.81
Perceived belonging[c]	326	4.15	.71

Note: ATG-T = individual attractions to group-task; ATG-S = individual attractions to the group social; GI-T = group integration-task; GI-S = group integration-social.

a. Assessed on an 11- point scale ranging from 0-100

b. Assessed on a 9-point scale ranging from 1-9

c. Assessed on a 5-point scale ranging from 1-5

Table 3

Bivariate Correlations Between the Dimensions of Norms for Aggression, Cohesion, and Perceived Belonging.

Dimensions	1	2	3	4	5	6	7
1. Norms for physical aggression	-	.80**	-.10	-.04	-.12**	-.07	-.08
2. Norms for psychological aggression		-	-.08	.02	-.06	.03	.00
3. ATG-T			-	.60**	.72**	.55**	-.53**
4. ATG-S				-	.59**	.71**	.59**
5. GI-T					-	.69**	.61**
6. GI-S						-	.52**
7. Perceived belonging							-

Note: ATG-T = individual attractions to the group-task; ATG-S = individual attractions to the group-social; GI-T = group integration-task; GI-S = group integration-social;

** Correlation significant at the .01 level.

Figure Captions

Figure 1. Conceptual model for cohesiveness in sport (Carron, 1982).

Figure 2. A conceptual framework for the study of cohesion in sport (Carron, Widmeyer, & Brawley, 1985).

Figure 3. Path coefficients showing the cohesion measure of group integration-task mediating the relationship between norms for physical aggression and perceived belonging.

*$p < .05$.

Figure 4. Path coefficients showing the cohesion measure of group integration-social mediating the relationship between norms for physical aggression and perceived belonging.

*$p < .05$.

Figure 1

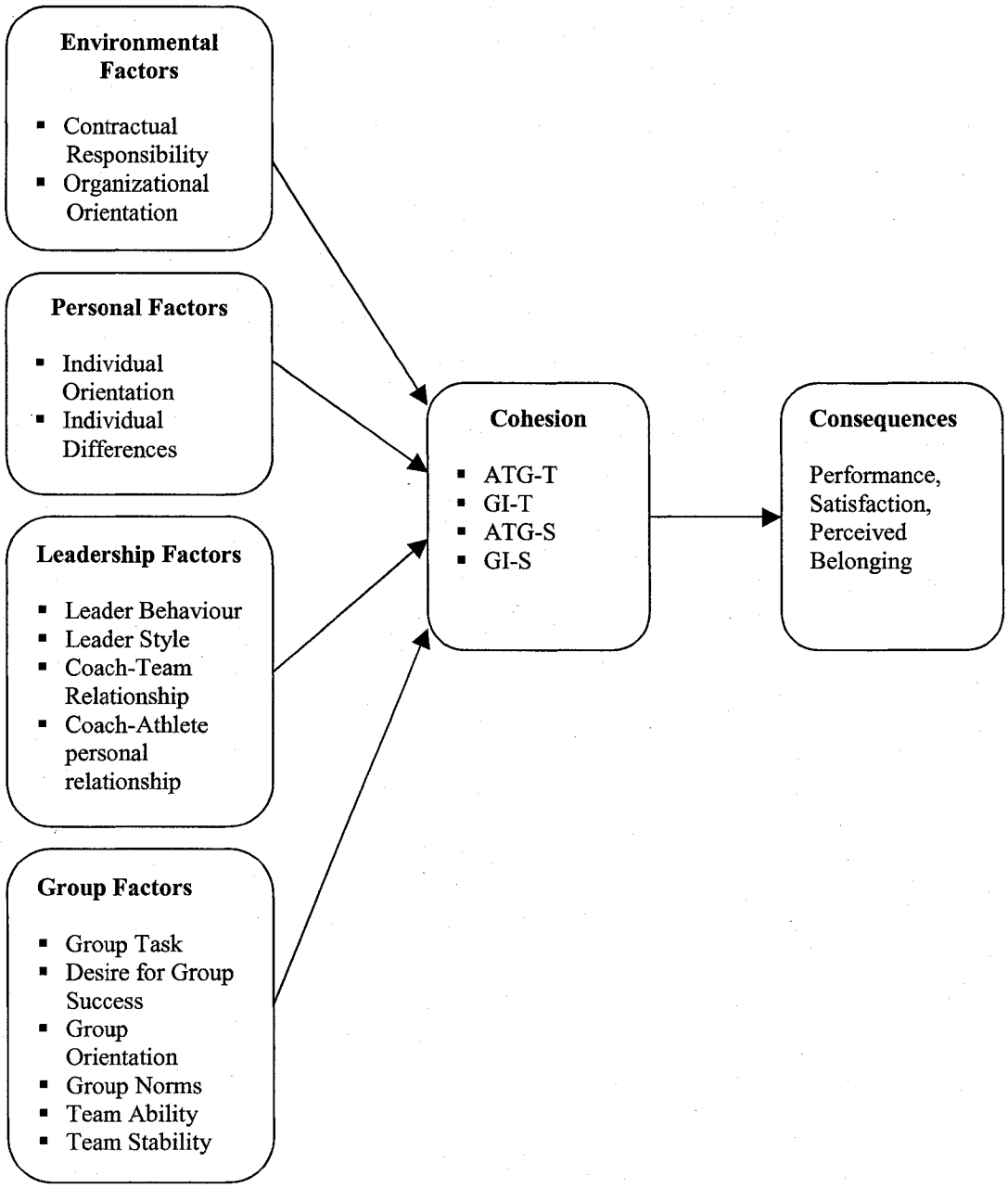


Figure 2

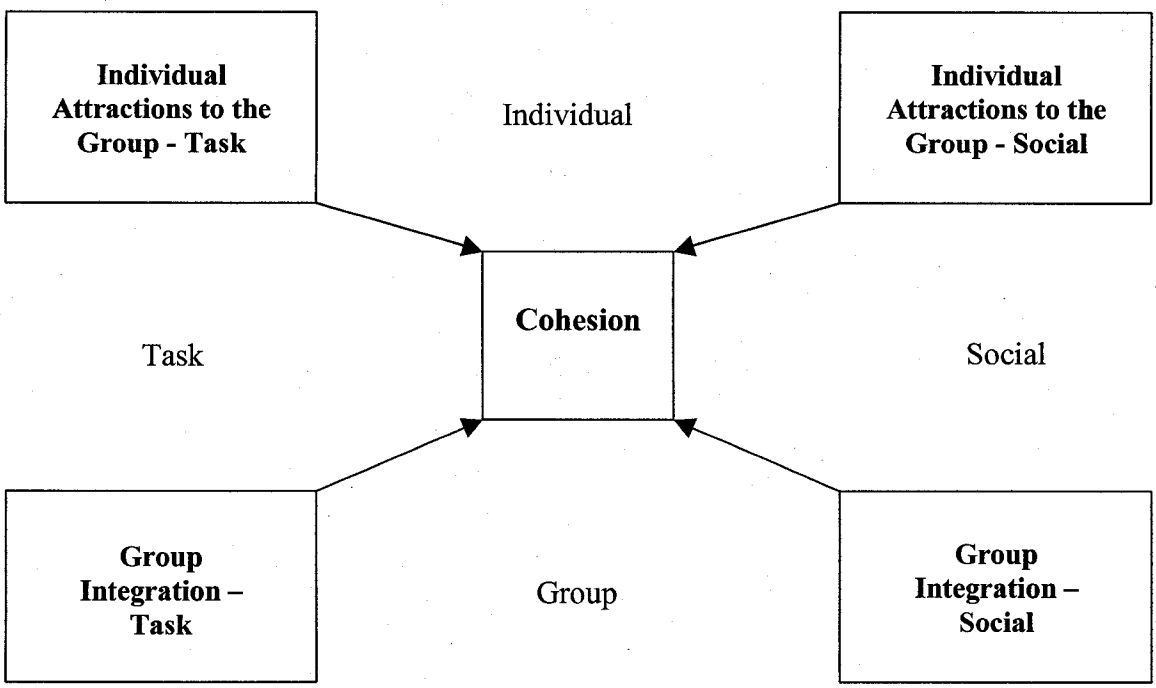


Figure 3

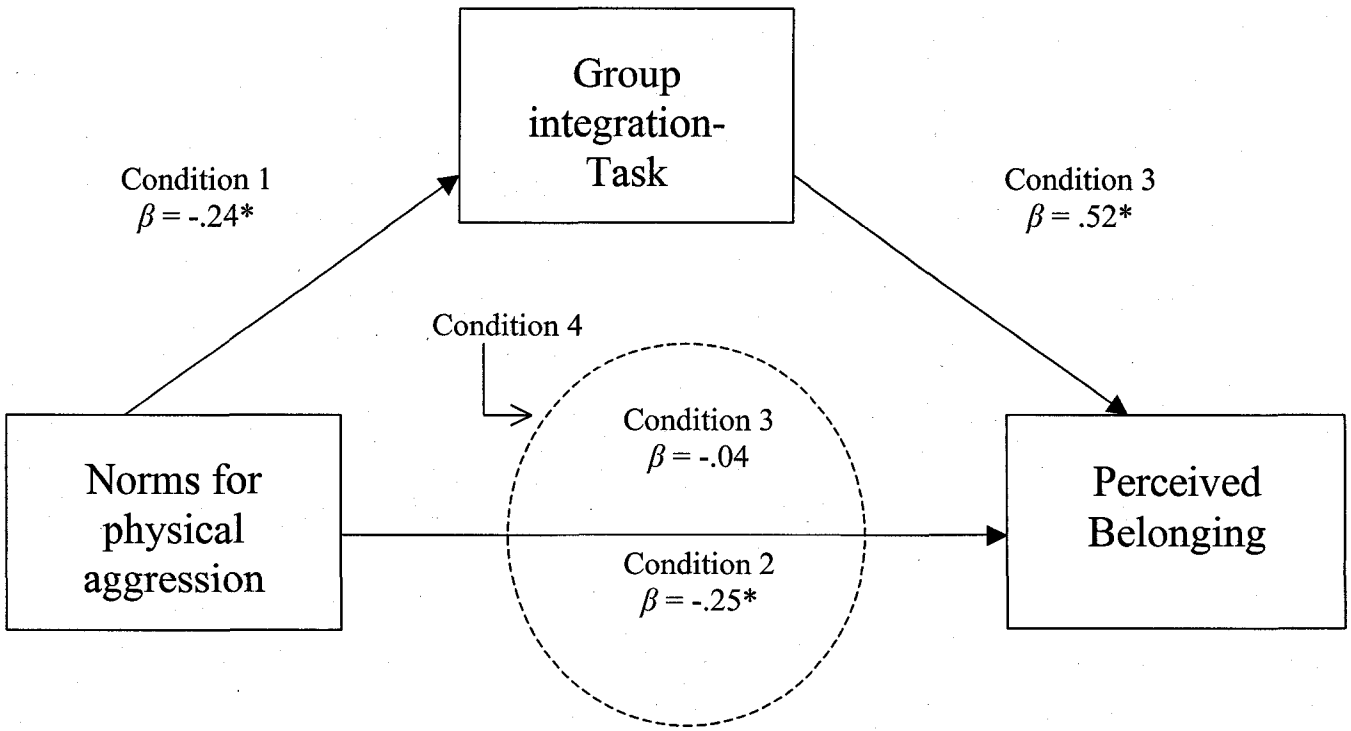
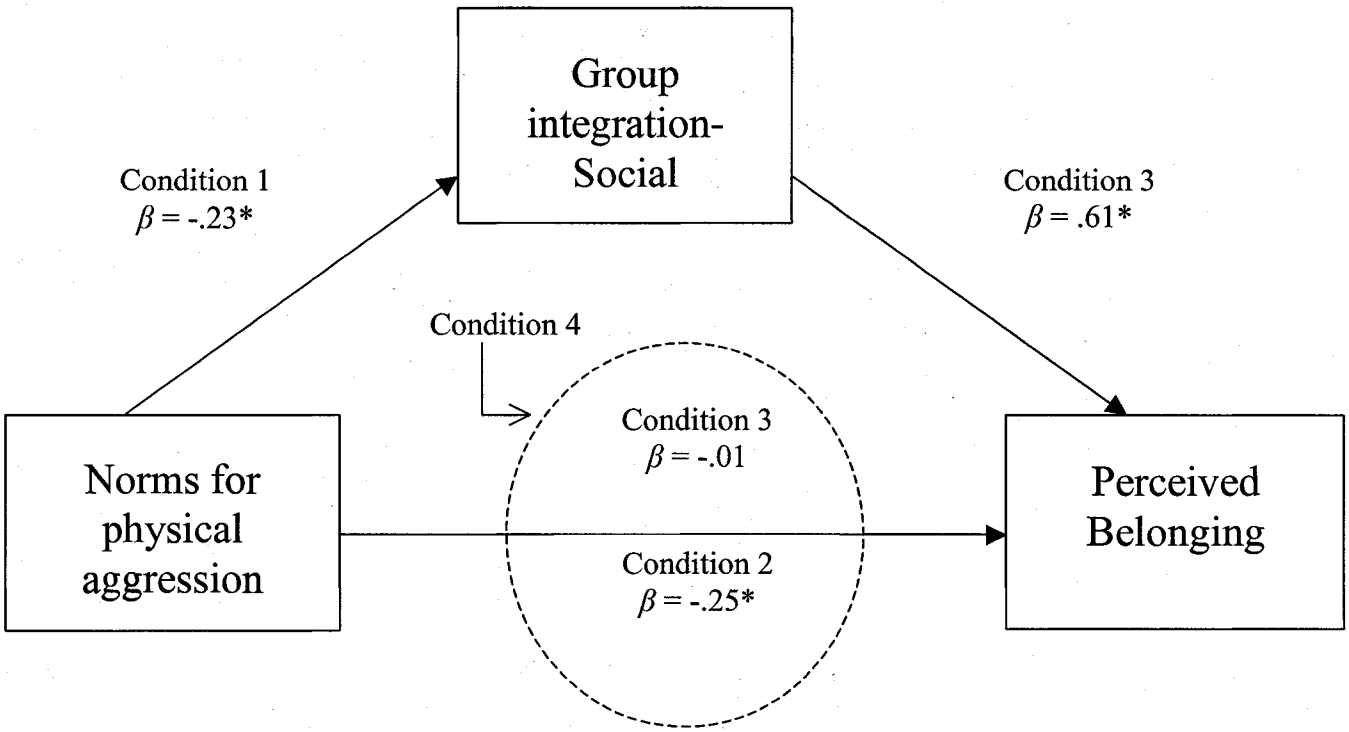


Figure 4



Appendix A

Modified Group Environment Questionnaire (GEQ; Carron et al., 1985)

The following statements are designed to assess your feelings about YOUR PERSONAL INVOLVEMENT with this team. Please CIRCLE a number from 1 to 9 to indicate your level of agreement with each of these statements.

1. I enjoy being a part of the social activities of this team.

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

2. I like the amount of playing time I get.

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

3. I am going to miss the members of this team when the season is over.

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

4. I'm happy with how much my team wants to win.

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

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

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

6. On this team, I get a lot of opportunities to improve my skills.

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

7. I would rather hang out with other friends than with my teammates.

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

8. I like the style of play on this team.

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

9. Personally, this team is one of the most important groups I belong to.

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

The following statements are designed to assess your perceptions of YOUR TEAM AS A WHOLE. Please CIRCLE a number from 1 to 9 to indicate your level of agreement with each of these statements.

10. Our team is united in trying to reach its goals for performance.

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

11. Members of our team would rather hang out on their own than get together as a team.

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

12. When we lose, or play badly, we take responsibility as a team for our performance.

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

13. Our teammates rarely hangout together.

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

14. Our teammates have different goals for how we want the team to play.

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

15. Our team would like to spend time together in the off season.

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

16. If our teammates have problems in practice, everyone wants to help them so we can play better as a team.

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

17. Our teammates stick together outside of practice and games.

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

18. Members of our team talk openly about our roles during competition and practice

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

Appendix B

Perceived Belonging in Sport Scale (PBS; Allen, 2006)

The following statements are designed to assess your feelings about YOUR BELONGINGNESS with this team. You are encouraged to think broadly about your involvement with this team and all the people involved in it including teammates, and coaches. Please CIRCLE a number from 1 to 5 to indicate your level of agreement with each of these statements.

1. I feel like a part of my team

1	2	3	4	5
Strongly Disagree				Strongly Agree

2. Other players in my team take my opinions seriously

1	2	3	4	5
Strongly Disagree				Strongly Agree

3. I am included in lots of the team activities

1	2	3	4	5
Strongly Disagree				Strongly Agree

4. I can really be myself on this team

1	2	3	4	5
Strongly Disagree				Strongly Agree

5. Other players here like me the way I am

1	2	3	4	5
Strongly Disagree				Strongly Agree

6. People in my team are friendly to me

1	2	3	4	5
Strongly Disagree				Strongly Agree

7. Others on the team notice when I'm good at something

1	2	3	4	5
Strongly Disagree				Strongly Agree

8. I am treated with as much respect as others

1	2	3	4	5
Strongly Disagree				Strongly Agree

9. People know I can perform well

1	2	3	4	5
Strongly Disagree				Strongly Agree

10. I feel proud of belonging to this team

1	2	3	4	5
Strongly Disagree				Strongly Agree

11. Other players on my team respect me

1	2	3	4	5
Strongly Disagree				Strongly Agree

Appendix C

Norms for Aggression Inventory (Dorsch, 1997)

This questionnaire is designed to assess your team's beliefs regarding the acceptability of the following acts.

Please CIRCLE an answer on the 100% scale to estimate your response as to how often each act is considered acceptable.

The first set of questions deal with your team's beliefs of the acceptability of physically INJURING opponents.

1. In general, our team believes it is acceptable to attempt to physically harm opposing players.

0 10 20 30 40 50 60 70 80 90 100

Never Acceptable — Acceptable 50% of the time — Always Acceptable

2. In general, our team believes it is acceptable to attempt to physically harm opposing players in order to stop a scoring chance.

0 10 20 30 40 50 60 70 80 90 100

Never Acceptable — Acceptable 50% of the time — Always Acceptable

3. In general, our team believes it is acceptable to attempt to physically harm opposing players in order to defend oneself.

0 10 20 30 40 50 60 70 80 90 100

Never Acceptable — Acceptable 50% of the time — Always Acceptable

4. In general, our team believes it is acceptable to attempt to physically harm opposing players in order to defend our goaltender.

0 10 20 30 40 50 60 70 80 90 100

Never Acceptable — Acceptable 50% of the time — Always Acceptable

5. In general, our team believes it is acceptable to attempt to physically harm opposing players in order to defend other teammates.

0 10 20 30 40 50 60 70 80 90 100

Never Acceptable — Acceptable 50% of the time — Always Acceptable

6. In general, our team believes it is acceptable to attempt to physically harm opposing players in retaliation for something they've done.

0 10 20 30 40 50 60 70 80 90 100

Never Acceptable — Acceptable 50% of the time — Always Acceptable

7. In general, our team believes it is acceptable to attempt to physically harm opposing players if we are frustrated.

0 10 20 30 40 50 60 70 80 90 100

Never Acceptable — Acceptable 50% of the time — Always Acceptable

8. In general, our team believes it is acceptable to attempt to physically harm opposing players if they are among our opponents' best players.

0 10 20 30 40 50 60 70 80 90 100

Never Acceptable — Acceptable 50% of the time — Always Acceptable

The next set of questions deal with your team's beliefs of the acceptability of physically or verbally INTIMIDATING opponents.

9. In general, our team believes it is acceptable to attempt to verbally or physically intimidate opposing players

0 10 20 30 40 50 60 70 80 90 100

Never Acceptable — Acceptable 50% of the time — Always Acceptable

10. In general, our team believes it is acceptable to attempt to verbally or physically intimidate opposing players in order to stop a scoring chance.

0 10 20 30 40 50 60 70 80 90 100

Never Acceptable — Acceptable 50% of the time — Always Acceptable

11. In general, our team believes it is acceptable to attempt to verbally or physically intimidate opposing players in order to defend oneself.

0 10 20 30 40 50 60 70 80 90 100

Never Acceptable — Acceptable 50% of the time — Always Acceptable

12. In general, our team believes it is acceptable to attempt to verbally or physically intimidate opposing players in order to defend our goaltender.

0 10 20 30 40 50 60 70 80 90 100

Never Acceptable — Acceptable 50% of the time — Always Acceptable

13. In general, out team believes it is acceptable to attempt to verbally or physically intimidate opposing players in order to defend other teammates.

0 10 20 30 40 50 60 70 80 90 100

Never Acceptable — Acceptable 50% of the time — Always Acceptable

14. In general, our team believes it is acceptable to attempt to verbally or physically intimidate opposing in retaliation for something they've done.

0 10 20 30 40 50 60 70 80 90 100

Never Acceptable — Acceptable 50% of the time — Always Acceptable

15. In general, our team believes it is acceptable to attempt to verbally or physically intimidate opposing players if we are frustrated.

0 10 20 30 40 50 60 70 80 90 100

Never Acceptable — Acceptable 50% of the time — Always Acceptable

16. In general, our team believes it is acceptable to attempt to verbally or physically intimidate opposing players if they are among our opponents' best players.

0 10 20 30 40 50 60 70 80 90 100

Never Acceptable — Acceptable 50% of the time — Always Acceptable

Appendix D

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Parent/Guardian Consent and Letter of Information

The influence of norms for aggression and cohesion on perceived belonging in youth hockey

Your child is being asked to participate in a research study conducted by Natalia Bessette under the supervision of Dr. Todd Loughead from the Faculty of Human Kinetics at the University of Windsor. The study will examine the influence of cohesion and the norm for aggression on a hockey player's perceived belonging. Results of the study will be contributing to a research program investigating aggression in minor hockey and the Social Sciences Humanities Research Council funds this research.

If you have any questions or concerns about the research, please feel free to contact Natalia Bessette at (519) 253-3000 x. 4273 bessettn@uwindsor.ca or Dr. Todd Loughead at (519) 253-3000 x. 2450 loughead@uwindsor.ca.

Purpose of the Study
The purpose of the study is to better understand the influence of team cohesion and the norm for aggression on a hockey player's perceived belonging.

Procedures
If you volunteer your child to participate in this study, he will be asked to fill out a short questionnaire after one of their practices. This questionnaire will assess various perceptions of cohesion, norms for aggression, and perceived belonging. The questionnaire will take approximately 20-30 minutes to complete.

Potential Risks and Discomforts

There are no known PHYSICAL OR PSYCHOLOGICAL risks associated with this research.

Potential Benefits to subjects and/or to Society
The information gained from this study may be used in subsequent studies. The researchers may gain valuable insight into the factors that may influence aggression in minor hockey. Moreover, the young athletes will have the opportunity to benefit by thinking about the factors influencing aggression in hockey.

Payment for Participation
Subjects will not be compensated for their involvement in the project.

Confidentiality
Any information that is obtained in connection with this study will remain confidential. All completed questionnaires are anonymous and scores from these questionnaires will be kept in strict confidence. The information obtained from the study will not be used for any purpose other than the present research and the communication of the results. All completed questionnaires will be kept in a locked cabinet in the investigator's office. There is no access to this cabinet by anyone other than the investigator. The questionnaires will be destroyed once the study is completed.

Participation and Withdrawal
Participation in this study is voluntary. Your child can choose whether to be in this study or not. If your child volunteers to be in this study, he/she may withdraw at any time. Your child may also refuse to answer any questions and still remain in the study.

Feedback from the Study

The investigator will provide feedback to the head of your child's minor hockey organization. Feedback will then be disseminated to you via the minor hockey organization. If you have any additional concerns or questions you can email or call the investigator at the address or number above. Please keep this letter of information.

Subsequent use of Data
This data may be used in subsequent studies.

Rights of Subjects
You may withdraw your consent at any time and discontinue participation without penalty. If you have questions regarding your rights as a research subject, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario N9B 3P4; telephone: 519-253-3000, ext. 3916; e-mail: lbunn@uwindsor.ca.

SIGNATURE OF PARENT OR GUARDIAN

I understand the information provided for the study "The influence of the norm for aggression and cohesion on perceived belonging in youth hockey" as described herein. My questions have been answered to my satisfaction, and I agree to allow my child to participate in this study. I have been given a copy of this form.

Name of Child

Name of Parent/Guardian

Signature of Parent/Guardian Date

SIGNATURE OF INVESTIGATOR

In my judgment, the subject is voluntarily and knowingly giving informed consent to participate in this research study.

Signature of Investigator Date

Appendix E

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Assent for Minor Hockey Player

I am a researcher, and I am doing a study on aggression in hockey. I would like to ask you to fill in a survey about your feelings on aggression in hockey. There are no right or wrong answers so please tell me what you think about each question.

When I am finished gathering all the surveys with all the hockey players who agree to be in my study, I will write a report on what I have learned. The report might be put in a journal, but no one will know who the players are that answered the surveys.

I want you to know that I will not be telling your coaches or parents or any other players what you answer.

Your mom and/or dad have said that it is okay for you to complete the questionnaire. Do you think that you would like to do this? You won't get into any trouble if you say "no". Even if you decide you would like to start completing the question, you can stop at any time. You don't have to answer any questions you do not want to answer. It's entirely up to you.

I understand what I am being asked to do to be in this study, and I agree to be in this study.

_____ _____

Signature Date

_____

Witness

Review of Literature

The present thesis was designed to examine the influence of cohesion and the norm for aggression on a hockey player's perceived belonging. More specifically, the purpose of the present thesis was to determine whether aggression (operationalized as the norm for aggression) moderated the cohesion-perceived belonging relationship. Consequently, the review of literature will be divided into three parts: (a) cohesion, (b) team norms, and (c) aggression.

Cohesion

This section of the thesis will review the literature pertaining to cohesion. First, the construct of cohesion will be defined. Second, a conceptual model of cohesion along with the measurement of cohesion will be presented. Third, Carron's (1982) conceptual framework for the study of cohesion will be explained.

Defining Cohesion

Historically, cohesion has been identified as the most important small group variable (Golembiewski, 1962; Lott & Lott, 1965). As such, cohesion has been defined in a variety of ways. Festinger, Schachter, and Back (1950) were one of the first to propose a definition for cohesion stating that it was "the total field causing members to remain in the group" (p. 164). Along with this definition, Festinger et al. suggested that cohesion was driven by two forces: attractiveness to the group, which represented the degree to which members demonstrated social and affiliative behaviours; and means control, which encompassed the task, performance, and productive concerns of a group (Paskevich, Estabrooks, Brawley, & Carron, 2001). Although the Festinger et al. definition was easy to operationalize there was a major limitation. The definition focused solely on the individual component of cohesion and

ignored the group aspect; therefore failing to capture the true essence of group cohesion (Mudrack, 1989). In order to overcome this limitation, Gross and Martin (1952) advanced another definition of cohesion that considered the group as a totality and defined cohesion as "the resistance of the group to destructive forces" (p. 553). Gross and Martin argued that their definition was better than Festinger et al. because it focused on what keeps a group together. However there were some shortcomings with both the Festinger and colleagues, and the Gross and Martin definitions. The main problem with both definitions is that they operationalized cohesion solely as the attraction of the group to its members. In operationalizing cohesion as a unidimensional construct, several shortcomings should be highlighted. First, these two definitions limited researchers to examine only one aspect of group cohesion, thus, reducing the ability to generalize results among varying groups (Cota, Evans, Dion, Kilik, & Longman, 1995). Second, the narrow conceptualizations of cohesion inhibited the integration of empirical findings (Cota et al.). Consequently, a definition and conceptualization of group cohesion was needed that reflected its multidimensional nature.

Carron (1982) was one of the first to advance a multidimensional definition of cohesion. Carron defined cohesion as the "dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit of its goals and objectives" (p. 164). This original definition was later revised to include an affective component and consequently defined cohesion as the "dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs" (Carron, Brawley, & Widmeyer, 1998, p. 213).

The revised definition highlighted four important characteristics of cohesion. The first characteristic is that cohesion can be viewed as a multidimensional construct. That is, there are several factors that cause a group to stick together and remain united (Loughead & Hardy, 2006). For example, an ice hockey team may exhibit strong social cohesion, however in their task objectives they may not be as united. Conversely another ice hockey team may display high task cohesion, but on a social level their cohesion may be limited. The second characteristic of cohesion is that it is dynamic in nature. Carron et al. (1998) noted that "cohesion is not as transitory as a state, but neither is it as stable as a trait" (p. 213). Cohesion can change over a period time, meaning, factors contributing to cohesion at one point may not be relevant at another stage of the group's development (Loughead & Hardy). For example, a hockey team may exhibit greater task cohesion during the season, but once the season is over and the players are not as task driven, they may exhibit greater social cohesion as it could be more important to them at that particular moment. The third characteristic of cohesion reflects the instrumental nature of this construct; denoting that all groups come together for a particular purpose (Loughead & Hardy). Instinctively, sport teams come together for task oriented reasons, however, even groups that appear to form for social reasons such as a social club, have an instrumental base; that is to fulfill the need to belong on a social level. The fourth characteristic highlights the affective dimension of cohesion. Bonding within a group for either task or social reasons is satisfying to the group's members (Carron & Brawley, 2000).This bonding is related to positive affect and is a fundamental human need to belong to some type of group (Baumeister & Leary).

Conceptual Model and Measurement of Cohesion

With the development of a definition of cohesion, Carron, Widmeyer, and Brawley (1985) advocated for the development of a new conceptual framework that differentiated between task and social concerns of the group and its respective members, and between the individual and the group. Given that cohesion in itself is a group property, a conceptual model that was grounded in group dynamics theory was required Carron et al., 1985). More specifically, Carron et al.'s model was based on three fundamental group dynamics assumptions. The first assumption was based on social cognitive theory which suggested that cohesion can be evaluated through perceptions of individual group members (Carron et al., 1998). Given that groups have observable properties, such as norms, people within a certain group will experience different social situations and develop certain beliefs about the group which then foster their perceptions concerning the group. The second assumption was based on the need to differentiate between the group and the individual (Loughead & Hardy, 2006). The third assumption was based on distinguishing between task- and social-oriented concerns of the group and its members (Cota et al., 1995). In fact, Mikalachki (1969) advocated that for both individual and group components, cohesion should conceptualized into task (e.g., group goals) and social (e.g., social relationships) aspects.

Based on these three assumptions, the Carron et al. (1985) model proposed two broad conceptual components: Group Integration (GI), which involves how the group functions as a total unit, and Individual Attractions to the Group (ATG), which refers to the reason that personally attract individuals to a group. In addition, the model also contained two more components that distinguished between the task and social aspects of cohesion. Taken together, these components resulted in a model comprised of four dimensions of cohesion

which were labeled: Individual Attractions to the Group-Task (ATG-T), Individual Attractions to the Group-Social (ATG-S), Group Integration-Task (GI-T) and Group Integration-Social (GI-S) (see Figure 1). The ATG-T dimension reflects the individual's feelings about his or her personal involvement with the group's task objectives. The ATG-S dimension reflects the individual's feeling about his or her personal involvement in the social interactions within the team. The GI-T dimension reflects the individual's feelings about the closeness and bonding within the team surrounding the group's collective task. Finally, the GI-S dimension reflects the individual's feelings about the team's similarity, closeness and bonding as a social unit.

Using the conceptual model as a basis, Carron et al. (1985) then developed the Group Environment Questionnaire (GEQ) to measure cohesiveness. The GEQ is an 18 item inventory that measures four dimensions of cohesion. The ATG-T dimension contains four items and a sample item is: "I like the amount of playing time I get". The ATG-S dimension contains five items and an example item is: "I enjoy being a part of the social activities on this team". The GI-T dimension contains five items and an example item is: "Our team is united in trying to reach its goals in performance". Finally, the GI-S dimension contains four items and an example item is: "Our team would like to spend time together in the off season". Each item is scored on a 9-point Likert scale anchored by 1 (strongly disagree) to 9 (strongly agree). Higher scores on the inventory reflect stronger perceptions of cohesion. The validity and reliability of the questionnaire have been established through various research studies from over the last 20 years. Research has shown that the GEQ is internally consistent (Hoigaard, Safvenbom, & Tonnessen, 2006; Patterson, Carron, Loughead, 2005), and has demonstrated good content (Carron et al., 1985), construct (Carron et al.) concurrent and

predictive (Paskevich, Estabrooks, Brawley, & Carron, 2001), , and factorial validity (Carron et al., 1985).

Conceptual Framework for the Study of Cohesion

Carron (1982) developed a conceptual framework for the study of the antecedents and consequences of cohesion. Specifically, the Carron framework is a linear model comprised of inputs (antecedents of cohesion), throughputs (cohesion), and outputs (consequences of cohesion) (see Figure 2). Given that the throughput of cohesion has been discussed earlier, a brief review of the antecedents and outputs will occur in the following section.

Antecedents and Consequences of Cohesion

There are four categories of antecedents that are believed to influence cohesion: environmental, personal, leadership, and team factors.

Environmental. The first category of antecedents contributing to the cohesiveness of a team is environmental factors (Carron & Chelladurai, 1981b), which is comprised of factors such as contractual responsibility (e.g., eligibility), organizational orientation (e.g., age, gender, level of play of the team as a whole), and group size (e.g., number of athletes on a roster).

Personal. The next category influencing cohesion is personal factors. Carron (1982) noted that an all-inclusive list of personal factors would be difficult to generate, however, the following variables have been highlighted: motivation (e.g., task, affiliation), individual satisfaction, race, socioeconomic status, religion, work output, mood, and sacrifice behavior (Carron, 1982; Loughead & Hardy, 2006).

Leadership. The third category influencing cohesion is leadership. Previous research has supported that leadership behaviour and leadership style (Schriesheim, 1980), the coach-

athlete relationship (Carron & Chelladurai, 1981), and the coach-team relationship (Schachter, Ellertson, McBride, & Gregory, 1951) are four components of leadership that contribute to cohesiveness in a group. More specifically if the coaching behaviour and style is such that the coach-team relationship is positive, it is more likely that positive cohesion amongst all participants will develop (Westre & Weiss, 1991). For example, Westre and Weiss examined the relationship between perceived coaching behaviours and cohesion in high school football teams. The results showed that the athletes high in task cohesion perceived their coaches to engage higher levels of training and instruction, democratic behaviour, social support, and positive feedback. Moreover, a study conducted by Gardner, Shields, Bredemeier, and Bostrom (1996) indicated that an autocratic coaching style was negatively related to task cohesion (ATG-T and GI-T).

Team factors. Within this category, Carron (1982) highlighted that group orientation, team ability, team stability, desire for group success, and team norms are constructs that could influence cohesion. Group orientation, includes two components: social and task forces. The next component of team factors is team stability. Team stability is identified as the length of time a team has been together. The longer a team has been together the greater their opportunities to develop task and social cohesion (Carron, 1982). A team's ability during games to produce successful performances will undoubtedly affect the group's task cohesion in that they are likely meeting objectives.

The desire for group success was proposed by Zander (1971) to reflect the motivation behind a team to achieve group success in a challenging task. Success in a challenging task is most viewed in a strong group with a high level of cohesion. Given that team norms is a

major component of the present thesis, there is a separate literature review of this topic following a description of the consequences of cohesion.

Consequences. Research examining the consequences of cohesion have highlighted its effects on performance, satisfaction, intention to return, and perceived belonging. In order to examine the cohesion-performance relationship in sport, Carron, Colman, Wheeler, and Stevens (2002) conducted a meta analysis on 46 studies from a sport context. The results revealed that there was a strong positive relationship between performance and cohesion (*ES* = .66). In addition, the authors also examined some of the moderating variables. The results showed that the cohesion-performance relationship was not moderated by level of competition, sport type, and playing experience. However, gender was found to be a moderator in the cohesion-performance relationship with females being more influenced than males. With respect to satisfaction, Widmeyer and Williams (1991) found that member satisfaction was correlated with each dimension of cohesion (ATG-T, ATG-S, GI-T, GI-S). When satisfaction with one's team is high, their likelihood to return to the team the following season is increased (Widmeyer & Williams). Thus, Spink (1995) examined satisfaction through intention to return to sport the following season and general findings indicated that those athletes wishing to return for another season experienced greater social cohesion (ATG-S, GI-S) with their team than were those who did not wish to return. More recently, another consequence of cohesion has been identified—perceived belonging, which can be viewed as a "sense of psychological connection with others in the sport setting and characterized by a sense of caring and security where individuals feel that they are included and respected for who they are" (Allen, 2006, p. 388). To date, only one study (Allen, 2006) has examined the relationship between cohesion and perceived belonging. The results

showed that perceived belonging was moderately correlated to social cohesion (ATG-S, r = .51; GI-S, r = .39). Although research examining the cohesion-perceived belonging relationship is in its infancy, additional research is warranted since an argument could be made that one's perceptions of their belonging to the team may impact their intention to return to sport.

Team Norms

This section of the thesis will review the literature pertaining to team norms. First, the construct of norms will be defined. Second, the development and function of norms will be discussed. Third, the examination of group norms in sport will be discussed followed by a discussion of rule violating norms.

Defining Team Norms

As noted above, within Carron's (1982) conceptual framework for the study of cohesion, team norms are classified under the category of team factors. As such, group norms can be defined as "the emergent of consensual standards that regulate group members' behaviors" (Forsyth, 1999, p.121). That is, group norms can be viewed as guidelines that its members adopt to regulate their own behaviours (Feldman, 1984).

Characteristics of Norms

All norms can be characterized as being descriptive, evaluative, informal, unobtrusive, flexible, internal, and stable (Carron, Hausenblas, & Eys, 2005). Each of these noted characteristics will be discussed briefly. The first characteristic of norms refers to the descriptive nature of norms and is viewed as the standards of behaviour on a team. Moreover, they reflect the group's consensus on what behaviours are appropriate (or not appropriate). For instance, new team members may initially observe veteran players in order to obtain

information about what behaviours are normalized within the team as a way to decide courses of action in situations that are new or ambiguous (Sherif, 1936). The second characteristic of norms refers to the evaluative nature which establishes priorities for various behaviours, affording some norms more importance than others (Carron et al., 2005). Norms are therefore not established around every behaviour or situation, only around matters that are considered most important to the particular team (Munroe, Estabrooks, Dennis, & Carron, 1999). The third characteristic of norms is that they are informal in nature. That is, norms are not formal rules, but are adopted by the group as a result of gradual changes in behaviour, until consensus is reached within the group.

The fourth characteristic of norms refers to its unobtrusive nature, which denotes that norms are taken for granted and only become important when violated. If attending practice is deemed important and a player arrives late, the importance of this norm is enforced when the coach and teammates sanction this behaviour (e.g., athlete required to skate extra laps).

The fifth characteristic of norms involves its flexible nature. The flexibility of norms indicates that minor deviations from the norm are permitted. For instance, if an athlete knew he was to going to be late for practice and told his coach in advance, then it would be unlikely that the athlete would have to skate laps when he arrived to practice late. The sixth characteristic is that norms are internalized. Opp (1982) proposed that norms evolve from behaviours that were performed and rewarded; therefore the group member was able to internalize the behaviour which then became the preferred responses to certain situations. Lastly, norms are stable. They develop over a period of time and are very difficult to change. Therefore, regardless of whether the norm is positive or negative, correct or incorrect and

despite changes in the composition in the group (Levine & Moreland, 1998); once established, norms will be resistant to change.

Types of Norms

In all groups (e.g., sport teams, military units, and business teams) the development of norms contributes to a stable group structure, and increases overall effectiveness (Mullen & Copper, 1994). Given the persuasiveness of norms, Mott (1965) identified four types of norms. The first type is prescribed norms, which refers to the type of behaviour that is appropriate and expected of group members. Prescriptive norms motivate behaviour by promising social rewards (Forsythe, 1999). Appropriate behaviours can be rewarded verbally; can elevate the athlete's prestige, and increase acceptance and recognition by the group (Carron et al., 2005).The second type of norm is proscribed norms which are behaviours that are forbidden or unacceptable to the group. In essence, a proscribed norm is the opposite of a prescribed norm. If for example, a prescribed team norm is wearing a suit to the games, then the proscribed norm would be not to arrive at games wearing casual clothing. The third type of norm is permissive norms which are viewed as patterns of behaviour that are permitted but not required by group members, such as play off beards in the National Hockey League, although many of the Edmonton Oilers are playing with beards, it is not a requirement for the team. The fourth is preference norms which can be described as behaviours that are preferred but not required, such as shinny hockey for example, every penalty could be called but it could disrupt the flow of the game..

Development and Function of Group Norms

Robbins (1992) indicated that norms are developed in one of four ways. First, norms can be stated explicitly by an individual who holds a certain amount of influence over other

group members. In sport, this could often be a coach or an influential athlete on the team. Second, norms develop as a result of an event in the team's history. For instance, players on a hockey team start wearing visors following an eye injury to a teammate. The third way norms develop is through a process labeled primacy which refers to the first behavioural pattern that emerges within the team. For example, when players sit in a certain spot in the dressing room and continue to sit there throughout the season. The fourth way norms develop is through carryout behaviours. For instance, team members may carryover expectations from last year's teams that may be incompatible with the current team's norms. Therefore norms will need to be explicitly stated to ensure deviations from the norm do not continue.

The development of norms serves two important functions (Carron et al., 2005). The first function is informational whereby norms help existing team members gain insight into the group, and provide new team members with a standard to conform their attitudes and behaviours (Carron et al., 2005; Cialdini & Trost, 1998). The second function of norms is integrational. Norms provide individual team members who adhere to the norms acceptance onto the team. In contrast, team members who do not adhere to the norms are rejected or removed from the team.

The Examination of Group Norms in Sport

To date, research has examined a wide variety of norms in team sports. The majority of research has examined the various team norms in four specific contexts: competition, practice, off-season, and social situations.

Early research examining norms in sport primarily examined them within the context of competition. One of the first studies examining norms in sport was conducted by Shields, Bredemeier, Gardner, and Bostrom (1995). The authors examined the influence of team

norms for aggression (operationalized as cheating and aggression) on leadership and cohesion in collegiate and high school baseball players (n = 182) and softball players (n = 116). Of interest, the authors developed specifically for this study the norms questionnaire pertaining to aggression. The questionnaire contained six items designed to assess four components of team norms. Two questions asked athletes to estimate how many of their teammates would violate a team rule if it would help them win (Peer Cheat). Two questions asked athletes if they would deliberately hurt an opponent if it would help their team win (Peer Aggress). The final two questions asked, in the athletes' opinion, if the coach would want the athlete to cheat (Coach Cheat) or injure an opponent (Coach Aggress) if it would help the team win.

First, the results from Shields et al's. (1995) study with respect to the relationship between leadership and team norms indicated that teams that had tended to adopt a more autocratic leadership style had norms sanctioning cheating and aggression. According to the researchers, this finding was not surprising as autocratic behaviour tends to decrease the likelihood that athletes will think independently and critically, and increase the likelihood that they will adhere to strategic considerations from the coach. Second, the results concerning the relationship between cohesion and team norms indicated that task cohesion was positively related to expectations that peers would aggress and cheat, and that the coach would condone cheating.

In another study examining competition team norms, Hoigaard, Safvenbom, and Tonnessen (2006), investigated the relationship between group cohesion, team norms, and perceived social loafing among soccer players. Participants were 118 junior league soccer players from 12 different teams in Norway, ranging in age from 15.5 to 19.6 years. The Team

Sport Competition Norm Questionnaire (TSCNQ; Hoigaard, 2002) was used to assess the team norm for competition. The TSCNQ contains a total of nine items measuring three norms of competitions: role involvement (e.g., "In my team, we accept our team role in competition"), social support (e.g., "In my team, we support teammates when they fail"), and productivity (e.g., "In my team, we don't give up during adversity in a competition"). The results concerning cohesion and norm variables with respect to social loafing indicated that only individual attractions to the group-task (ATG-T), norm for productivity, and norm for social support were significant predictors of social loafing.

In terms of examining norms in the context of the off season, Gammage, Carron, and Estabrooks (2001) examined the moderating effect of the norms for productivity and effort in the off season on the cohesion-performance relationship in team sports. Participants included 324 undergraduate students who responded to one of eight scenarios. In the eight scenarios, the level of cohesion, standards for productivity and the identifiability of an athlete's effort on the team was systematically varied (i.e., high vs. low levels for each variable). To assess personal effort, three questions pertaining to the probability that the athlete in the scenario would train at least once per week, at least three times per week, or daily were provided. Responses were marked on an 11-point scale anchored at *completely uncertain* (0%) to *completely certain* (100%).

Results from the Gammage et al. (2001) study indicated that the norm for productivity was associated with a high probability of training in the off season. It was also indicated that the interaction between cohesion and the norm for productivity was consistent with past research showing that this norm is a significant moderator in the cohesion-performance relationship. Specifically, the results indicated that when cohesion was high,

there were higher team norms that lead to a greater probability of training in the off season. Conversely, when cohesion was low, the influence of high and low team norms for productivity and effort was identical in terms of influencing the likelihood of training during the off season. This result supported the contention that high norms and high cohesion lead to the greatest performance, high cohesion and low norms lead to the worst performance, and low cohesion with either high or low norms lead to intermediate levels of performance.

Although the results examining group norms from the competition and off season contexts were informative, Munroe et al. (1999) highlighted four limitations. The first limitation revolved around the limited number of norms that have been investigated, namely the legitimacy of rule violations (e.g., cheating and aggression). The second limitation was that research had tended to focus on cultural values, not team norms. Although cultural values and team norms are similar, cultural values influence behaviour at the macro (societal) level and team norms influence behaviour at the micro (team) level. The third limitation was that research had focused on normative behaviours that were important to researchers but not athletes. Studies implementing a quantitative method of data collection impose the thoughts of importance of the researchers, but fail to capture the opinions and ideas of their participants. The fourth limitation was that norms have been mainly investigated within only one context—competition.

Based on these limitations, Munroe et al. (1999) sought to identify other contexts in which norms would be present in sport. The participants were 87 males and 53 females, aged 14 to 25 years, competing in sport from the high school to national level. Of these participants, a number of them were athletes in a third year undergraduate kinesiology class, and the remaining athletes were members of Junior A and Midget Triple A hockey teams,

and provincial and national women gymnastics clubs. The student athletes in the kinesiology class were provided with a definition and general description of a group norm and then given a questionnaire containing the following question "List some important expectations that you and most of your teammates feel that members of the team should do. In other words, list some important behaviours that you and most of your teammates would exert peer pressure on the other teammates to do" (Munroe et al., 1999, p. 174). There were three subsections that followed: at games, during the off season, and when you socialize together, under which the participants were to list their team's expectations. To measure proscribed norms, members of the male Junior A and Midget Triple A hockey teams, and national women gymnastics clubs were given examples of expected behaviours that groups develop and explained that when these expectations were not met, those who violated them were often criticized. Following this explanation, participants were asked to list the proscribed behaviours of their team under three subsections: at games, during the off season, and when you socialize together. In short, the first questionnaire required participants to identify the prescribed norms within their team and the second questionnaire required participants to identify the proscribed norms within their team. Responses to both these questionnaires yielded either positive or negative statements concerning the same behaviour. For example, if a prescribed norm was: "Be on time for practice", then the proscribed norm would be: "Don't be late for practice". Munroe and colleagues then collapsed the responses into a generalized group norm.

From the raw data, meaning units were derived and then given a tag for classification. Four investigators independently tagged the meaning units so as to compare and contrast their assigned classifications and a consensus of 94% was attained. Tags with similar

meanings were grouped into categories, and the categories were organized into higher order components. This resulted in four specific situations in which a sport team could develop expectations for individual behaviour: during competitions, practice, off season, and social situations (Munroe et al., 1999).

The results indicated that within competition norms, four factors were highlighted. The first factor was game preparedness, which represented the expectations of the team's behaviour just prior to a competition. The second factor was work ethic during the event, which reflected the team's expectations surrounding the task, performance, and work output during competition. The third factor was team behaviour, which reflected the expectations associated with interpersonal behaviour during competition. The fourth factor was mindset, which reflected an athlete's attitude during competition (Munroe et al., 1999).

Insofar as the norms for practice are concerned, four components were highlighted. The first component was mindset, which reflected the expectations for team member's behaviour during practice. The second component was practice preparation, which reflected the expectations of athletes prior to practice. The third component was team behaviour and reflected the team's expectations of behaviour during practice. The fourth component was work ethic and represented the teams expectations associated with effort during practice (Munroe et al., 1999).

Under the norms for off-season, three components were derived. The first component was group-set (13.7%), which represented the team's attitude during the off season. The second component of off season norms was mindset (12.6%), which represented an individual athlete's attitude in the off-season. The third component was training (72.7%),

which represented the teams' expectations about training in the off season (Munroe et al., 1999).

With respect to social norms, two components were derived. The first component was interaction, which reflected the team's expectations concerning the interaction of team members in social situations. The second was participation, characterized as participating in social events with the team (Munroe et al., 1999).

Taken together, the results from Munroe et al. (1999) concluded that the strongest team norms were associated with work output. Teams placed significant pressure on teammates to work hard. Furthermore, it was indicated that unless team members attended social functions, the team either ceased to function or did not function well, indicating that norms revolving around social aspects of the team were just as important as norms surrounding the task.

In a subsequent study using the Munroe et al. (1999) findings that there are team norms in four contexts (i.e., competition, practice, social situations, off-season), Patterson, Carron, and Loughead (2005) examined whether team norms in each of the contexts moderated the cohesion-performance relationship. The participants were 298 varsity athletes (112 male, 186 female) ranging in ages from 18 to 32 (M = 20.58, SD = 1.92) from a variety of interdependent and independent sport teams (n = 24). The Team Norm Questionnaire (TNQ; Carron et al., 1999) was used in order to estimate the strength of collective expectations for team norms. The TNQ is a 52-item questionnaire that focuses on norms for competition, practice, the off-season and social situations and is anchored at the extremes by 0 and 100%. It was hypothesized that teams with stronger norms and higher levels of cohesion would have stronger performances (operationalized as effort), and teams with

weaker norms and higher levels of cohesion would report lower levels of effort. Moreover, it was also hypothesized that these relationships would vary across practice, competition, the off-season, and in social situations.

The index of agreement ($r_{wg(j)}$; James, 1982; James, Demare, & Wolf, 1984) was used to determine which norms reflected a shared belief. An index of agreement value of .50 was used for consensus regarding team norms. The specific norms under the context of practice were derived from the results of Munroe and colleagues' (1999) study. Within the context of norms for practice, the average levels of consensus were as follows: attendance ($r_{wg(j)}$ = *0.41),* effort ($r_{wg(j)}$ = 0.60), concentration ($r_{wg(j)}$ = 0.61), and supportive behaviours ($r_{wg(j)}$ = 0.41). Therefore only effort and concentration remained for further analysis. Under the context of competition, the levels of consensus for team norms were: attendance ($r_{wg(j)}$ = 0.26), effort ($r_{wg(j)}$ = 0.40), concentration ($r_{wg(j)}$ = 0.71) and supportive behaviours ($r_{wg(j)}$ = 0.29). As such, solely the norm for concentration was kept for further analysis. Within the context of social situations, average levels of consensus regarding team norms were: attendance ($r_{wg(j)}$ = 0.47), inclusion ($r_{wg(j)}$ = 0.45), and social interactions ($r_{wg(j)}$ = 0.50) (Patterson et al., 2005). Therefore, only the norm for social interactions was considered for subsequent analysis.

The results indicated that within the contexts of competition and practice, there were no significant interactions. Therefore the prediction that team norms within practice and competition would have the greatest impact on performance was not supported. With respect to the hypothesis that in teams with stronger norms and higher team cohesion athletes would report giving greater effort and teams with weaker norms and higher team cohesion athletes would report lower levels of effort, only partial support was found. Specifically, the norm for

social interactions influenced the relationship between the cohesion dimensions of GI-S and ATG-S and effort within the context of practice.

To date, the majority of studies examining norms have sampled both interdependent and individual team sports. However, Colman and Carron (2001) wanted to examine only individual team sports and in the four contexts of the off-season, practice, competition, and in social situations. Participants consisted of 97 athletes (30 male, 67 female) from four university-level individual sport teams (swimming, track and field, wrestling, and rowing). The results concerning the strength of norms in the four contexts indicated that the strongest norm was the expectation to attend competition (59.5%). In the context of team social functions, a weak generalized expectation was related to the social interaction norm (51.1%). Furthermore, the norm for productivity also reflected a weak generalized expectation among athletes from individual sport teams during competition (55.2%), practice (49.0%) and off-season training (37.8%). Off-season norms were also weak; only 41.1% of athletes supported the norm to maintain contact with teammates in the off-season, and only 37.8% supported the norm to train hard. Using the Shaw (1981) criterion that more than half of a group's members must accept a behaviour for it to be considered a norm, it was concluded that within individual sport teams, normative expectations were weak because they fell below the 50% criterion.

Prapavessis and Carron (1997) investigated whether cohesion served to mediate the relationship between sacrifice behaviour and conformity to group norms in 13 high level cricket teams. Participants consisted 127 male cricket players from New Zealand who ranged in age from 16 to 43 years ($M = 23.83$, $SD = 4.57$). The authors developed inventories to measure sacrifice behaviour and conformity to group norms. As for sacrifice behaviours, they

operationalized this construct around two dimensions. The first dimension refers to the context in which the sacrifice occurs, which is either inside (e.g., playing out of position) or outside (e.g., reducing work commitment to allow more practice). The second dimension involves who is making the sacrifice, which is either the individual (e.g., I give up my social life for this team) or teammates (e.g., my teammates give up their social life for the team). With respect to norms, athletes were asked to list norms that were initiated within the team for athletes to follow. They were then asked to rate their individual conformity to the norms. In addition, they also rated their teammate's level of conformity to the norms they had listed. The results showed that the cohesion dimensions of GI-S and GI-T mediated the relationship between teammate's social sacrifice and teammate's conformity.

Rule Violating Norms

In sport, the most common normative expectation is in the form of formal rules that govern that particular sport (Carron et al., 2005). This is not surprising since it is these formal rules that ensure the competition between teams is fair. However, there is some evidence to suggest that athletes are, under some circumstances, legitimized and expected to break these rules. For instance, in the game of ice hockey, aggressive behaviours are often considered acceptable and a desirable quality that coaches look for in selecting players (Dorsch, McGuire, & Widmeyer, 1994). Silva (1983) stated that norms pertaining to rule violating behaviours are important, in that, "athletes in many sports must learn not only the written rules, but the unwritten normative rules of their sport to be successful" (p. 438). Moreover, researchers have suggested that aggressive behaviours are as important as any offensive or defensive tactic in order to be successful (Cullen & Cullen, 1975). Similarly Dorsch (1997)

stated that since aggression has become associated with successful performance outcomes in ice hockey, these behaviours are deemed acceptable in certain situations.

Although aggressive behaviours have become acceptable within the sport of ice hockey, teams develop norms and evaluate aggressive behaviours and judge them as being acceptable or unacceptable (Dorsch, 1997). Moreover, due to the strong motivation in younger ice hockey players to advance through the minor ice hockey system to the professional ranks, players are compelled to conform to the norms of the game (Goode, 1975). In a study conducted by McIntosh (1979), participants were comprised of soccer players 15-18 years of age from Finland, England, and Sweden. The participants were asked, 'if an opponent was in good position to score, would you take them down unmercifully?' Seventy percent of professional athletes and 54% of amateurs indicated that yes they would take down an opponent in good scoring position. Although the act of purposefully taking someone down may be in violation of formal rules, the act may be condoned if it prevents a scoring opportunity from an opposing team. Regardless of whether this act would be condoned by teammates under certain circumstances, it remains an aggressive act.

Aggression

This section of the thesis will review the literature pertaining to aggression. First, the construct of aggression will be defined. Second, explanations for aggression will be addressed. Third, the relationship between type of sport and aggression will be discussed. Fourth, the relationship between the level of play and aggression will be discussed. Fifth, group factors and aggression will be explained.

Definition and Types of Aggression

Aggression is defined as overt verbal or physical actions that are intended to psychologically or physically injure another person or oneself (Silva, 1980). The critical aspect of aggression is an individual's intent to injure. Furthermore, the behaviour must be directed at another individual, not an inanimate object (Maxwell, 2004). Throwing one's hockey stick into the penalty box would not be classified as an aggressive behaviour since the action was not targeted at another individual.

The literature has identified two types of aggression: instrumental and hostile (Kirker, Tenenbaum, & Mattson, 2000). On the one hand, instrumental aggression is characterized by an act of hurting an individual as a means to an end (Kirker et al.). For instance, winning an ice hockey game could be grounds for slashing an opponent to prevent him or her from scoring. The injury that results is impersonal and merely designed to limit the effectiveness of the opponent (Russell, 1993). On the other hand, hostile aggression is characterized as an act driven by anger and is retaliatory or reactive in nature with the intent to injure the other person (Kirker et al.). For example, the act of fighting an opponent would be an example of hostile aggression.

Another type of behaviour that is sometimes confused with aggression is assertiveness (Cox, 1990). The intent to injure is what separates an aggressive behaviour from an assertive one. Similar to aggression, assertive behaviour can be displayed through psychological or physical actions and can result in injury (Kirker et al, 2000). However, the resulting injury is not intentional. Moreover, unlike aggression, assertive behaviours are in accordance with the rules of the game (Vanier, Bloom, & Loughead, 2005). Thus, a body

check in men's professional ice hockey is for the most part not intended to harm an opponent, and it is allowed by the rules of the sport.

Explanations of Aggression

Over the last century, many researchers have proposed various theories to explain why aggression occurs in sport. In order to facilitate their understanding, Widmeyer et al. (2002) forwarded ten different theoretical explanations. Each one of these explanations will be reviewed briefly.

The first explanation refers to the occurrence of aggression as related to the instinct theory of aggression. According to this theory, people have inborn tendencies that cause them to act aggressively. Within the context of sport, instinct theorists (Freud, 1925; Lorenz, 1966) believe that observing aggressive behaviour or acting aggressively releases pent up aggressive tendencies, this release is known as catharsis. Instinct theory was prominent at the turn of the 20th century. However with the widespread recognition of the existence of human reason and volition, instinct theory has little support in explaining aggressive behaviour (Widmeyer et al., 2002).

The second theoretical explanation for aggression concerns the biological theories of aggression. More simply, these theories view athletes as having too much testosterone. Researchers (Widmeyer et al., 2002) who suggest that aggression is primarily physiological, identify two supportive mechanisms: brain pathology (i.e., aggressive behaviour as a result of a brain tumor) and blood chemistry (i.e., aggression as a result of high levels of testosterone through the use of steroids). Support for biological theories is limited, as females who have little or no testosterone can be aggressive and there has been no conclusive

evidence to suggest that aggressive acts in competition are due to heightened testosterone levels (Widmeyer et al., 2002).

The third explanation concerns frustration. It was originally proposed that all aggression was the result of frustration and that frustration always lead to aggression (Dollard et al., 1939). Since the time that this original theory was advanced, Berkowitz (1989) has reformulated this theory highlighting the fact when a frustrating event occurs, it generally produces an emotional reaction of anger, however it does not automatically produce aggression but the readiness to aggress. Although this reformulation has helped the theory gain some prominence, it still implies that an inborn mechanism accounts for the frustration-anger relationship. Moreover, opponents of this theory highlight that the frustration hypothesis theory does not explain instrumental aggression.

The fourth explanation for aggression is retaliation. Retaliation is not typically listed as an explanation for aggression, although the act of retaliation is quite common in contact sports (Sanzole, 1995). Although retaliation has been supported as a possible explanation for aggression in certain sports, it does not explain why an opponent initially aggressed (Widmeyer et al., 2002).

Annoyance is the fifth explanation as to why aggression occurs. This explanation suggests that there are times when athletes may want to hurt or injure an opponent for the mere fact that they were annoying throughout the game. Taunting by opponents, inconsistent calls from officials, and mannerisms can all be classified as annoyances. Although none of these annoyances has ever been empirically studied in sport, there has been some anecdotal evidence from athletes who have suggested that their aggressiveness was a result of being annoyed by their opponent (Widmeyer et al., 2002).

Social learning theory is the sixth explanation for aggression and can be simply explained as "they believed it was going to help them". According to social learning, aggression, like any other behaviour, is learned either through direct or indirect (vicarious) reinforcement (Bandura, 1977). Thus, individuals will learn and perform a behaviour that they believe they will be rewarded for because someone they have seen has been rewarded for that behaviour, or they themselves have been rewarded for that behaviour. Social learning theory not only suggests that people learn to aggress, but when and against whom to aggress.

The seventh explanation refers to individual difference theories of aggression. An appropriate example is "it's the type of people who play those sports". This explanation uses achievement motivation theory, and moral development to study aggression in sport. Achievement motivation theory proposes that in achievement situations, subjective success is determined by two factors: ego and task involvement (Nicholls, 1989). Athletes who perceive their ability to be a result of task involvement focus on improving their skills and mastering task. On the other hand, athletes who perceive their ability to be a result of ego, compare their performance to others' performances. Athletes who are ego-oriented have been suggested to be more predisposed to display aggressive behaviour or bend the rules in an attempt to "win at all costs". Moreover, especially those athletes who may not be as skilled will use brute force and will achieve success when it would otherwise be unattainable. Overall, it has been concluded that ego-oriented athletes are more aggressive than task-oriented athletes. Moral development suggests that individuals who have not matured enough to recognize that they are doing something wrong will be more likely to aggress than their matured counterparts (Bredemeier,1994).

Self-presentation is the eighth explanation of aggression and involves individuals disclosing aspects of themselves in order to appear more attractive. It has been proposed that athletes in contact sports will behave more aggressively in order to make a favorable impression on coaches, teammates, and fans, with the objective to potentially intimidate their opponent, secure a position on the team, be noticed by scouts, or to give themselves an identity that they are pleased with (Wann, 1997). From a group perspective, teams have been known to promote the image that they were aggressive (i.e., The National Football League's Oakland Raiders in the 1980s and the National Hockey League's Philadelphia Flyers in the 1970s). However, research on self-presentation in sport is relatively sparse.

Role theories of aggression infer that individuals aggress because it is part of their job (Biddle, 1979). In other words, this theory proposes that individuals behave in a certain manner because they are fulfilling some of their role prescriptions. Roles in sport teams are designed and implemented to create effective offensive and defensive systems (Widmeyer et al., 2005). The 'enforcer' or the 'policeman' in ice hockey is a common example of the aggressive role in ice hockey, and within this context this person is fulfilling a perceived required role for this sport. The 'policeman' or the 'enforcer' role in hockey has been suggested to be as important to effective team functioning as the leading scorer (Widmeyer et al.).

The final explanation for aggression and the one most pertinent to the proposed study involves group influences, inferring that 'they did it for their teammates'. Although a great deal of aggression in sport occurs at the individual level, most of these athletes are members of a team and as such, these individuals' behaviour is highly influenced by their membership in a group (Widmeyer, Brawley, & Carron, 1992). Results from multiple studies have

indicated that one's likelihood to aggress increases when athletes believe that their teammates would play unfairly as well (Stephens, 1995). Consequently, it has been suggested that perceived group norms may influence intended or actual aggressive behaviours (Widmeyer et al., 2002). In fact, the amount of team cohesion has been suggested to possibly influence both norms and actual aggressive behaviour (Dorsch, 1997; Shields & Bredemeier, 1995). Postulations have been made that as teams become increasingly more cohesive, their beliefs regarding aggression become more and more shared amongst team members. Subsequently, consequences for not complying with the team's behavioural standards (i.e., group norms) may become more stringent. Shields et al. (1995) found that task cohesion was positively related to expectations that teammates would aggress and cheat.

Type of Sport and Aggression

Research investigating aggression in sport has examined whether the physicality level of certain sports influenced aggression levels (Silva, 1983; Tucker & Parks, 2001). Silva (1983) compared the perceived legitimacy of rule violating behaviour in male and female athletes (N= 203) from non-contact (baseball, swimming, track and field, volleyball), contact (basketball, field hockey, women's lacrosse, soccer, wrestling), and collision sports (football, ice hockey, men's lacrosse, men's and women's rugby). Silva's main objective in the study was to determine if the perceived legitimacy of rule violating sport behaviour was influenced by gender, physicality level, and years involved in organized sport. Participants were shown a series of eight slides depicting rule violating behaviours of male collegiate or professional athletes in baseball, basketball, football, ice hockey, and soccer. After viewing each slide, participants were asked to rate the legitimacy of each behaviour. Legitimacy of aggressive behaviour refers to the degree to which an individual perceives a particular behaviour or class

of behaviours is acceptable (Conroy, Silva, Newcomer, Walker, & Johnson, 2001). The results indicated that males perceived the behaviours depicted on the slides as more legitimate than their female counterparts. Furthermore, as level of physicality increased from non-contact to collision type sports, males were more accepting of aggressive behaviours contrary to their female counterparts. Overall, results from Silva's study indicated that males legitimized rule violating acts more than women, and that the greater the physicality level the more the males legitimized rule violating behaviours.

Stemming from Silva's (1983) study, Tucker and Parks (2001) also investigated the effects of gender and sport type on athletes' perceptions of aggressive behaviour. Given Silva's (1983) results, it was hypothesized that male athletes would perceive aggressive behaviour as more legitimate than female athletes. Secondly it was hypothesized an effect of in-sport socialization, such that athletes in collision sport would perceive aggression as more legitimate than athletes in non-contact or contact sports. Thirdly, an exploratory question was proposed to determine if gender differences in perceptions of the legitimacy of aggression in sport were greater in some sport types. The participants were collegiate athletes from non-contact (n = 54; woman's softball, gymnastics and volleyball; men's baseball; women's and men's tennis, golf, swimming and track and field), contact (n = 53; women's and men's basketball, and soccer) and collision (n = 55; women's rugby; men's hockey and football) sports. The results indicated that female athletes were less accepting of aggressive behaviours than male athletes. Moreover, in accordance with Silva's (1983) study, athletes in non-contact and contact sports were less accepting of aggressive behaviour than those athletes in collision sports.

Level of Play and Aggression

Research examining level of play and aggression has indicated that as level of play increases, approval of and engagement in both hostile and instrumental aggression increases (Bloom & Smith, 1996). Smith (1979a) examined the following social determinants of violence in ice hockey: the social organization of ice hockey, the mass media's portrayal of professional ice hockey, and reference others (e.g., teammates). For the purposes of the present proposal mass media portrayals of professional hockey will not be discussed.

The social organization of ice hockey revealed that children generally enter organized hockey around the age of seven. Those children that show the most potential are placed onto highly competitive teams where they are trained to act aggressively (Vaz, 1976). Although fighting and other forms of assault tend to be discouraged with younger boys, around the age of 13 the criteria for player evaluation changes, for this is the stage when there is a potential to proceed to junior professional and then to professional hockey. By midget level hockey (i.e., 16 years old) coaches look for players who can withstand illegal physical coercion (Smith, 1979a). Motivation to act aggressively is strong and competition for positions is fierce because the number of available positions and the absolute number of teams decreases as the level of play increases. Therefore, it is the structure of the hockey system that compels players to conform to its standards, which involves being able to apply and withstand at least the minimal of what Goode (1975) called 'force-threat'.

With respect to reference others, research has indicated that teammates are significant for young ice hockey players, and that their perceptions of their teammates' approval or disapproval of aggression affects their behaviour (Smith, 1979a). Smith (1979b) examined players' perceptions of their teammate's approval of ice hockey fighting. The results

indicated that as age increased, so did the approval for fighting. Moreover, those athletes who played on select teams (versus house league) had the strongest levels of approval. For members of ice hockey teams, getting and keeping respect is what counts, and toughness and willingness to fight are what earns a player respect (Smith, 1979b). For ice hockey players this philosophy begins around the age of 12. At around the age of 14, most boys understand the informal norms that regulate violence. Interestingly, Smith (1979b) found that individually players had a significantly lower approval for aggression, but perceived their teammates to be more accepting of aggression. As such, it was speculated that athletes would behave more aggressively regardless of their personal sentiment because they perceived that their team was in favor of this type of behaviour. When asked if they would prefer less fighting, 45% of minor ice hockey league players indicated that they wanted less fighting. Smith (1979b) also examined the aggression beliefs of National Hockey League players. Half of the players indicated that fighting was a part of the job, and that a non fighter was a threat to group cohesiveness for the reason that if a player was being beaten up and there was no one to step in and help. These professional players indicated that a lack of aggression was viewed as a big deal and those players who did not conform to the group standard would not receive as much respect from their teammates. The other half of the professional players reported that fighting was not a requirement per se, but that a player must be able to jump in and grapple with an opponent to prevent a their teammate from being out numbered. For those athletes whose role it is to be the enforcer, they are supposed to protect weaker teammates and lift their team by intimidate opposing players.

Loughead and Leith (2001) examined the effects of level of play in youth ice hockey on actual and perceived aggression of coaches and players. Actual aggression was examined

using penalties from game summary sheets, and perceived aggression was measured using a modified version of the Bredemeier Athletic Aggression Inventory-Short Form (BAAGI-S). The BAAGI-S measures both hostile and instrumental aggression. It was hypothesized that as age and experience increased, athletes and coaches would be more approving of and engage in more hostile and instrumental aggression. Secondly a positive relationship between coaches' and players' perceptions toward hostile and instrumental aggression and actual aggression was hypothesized. Lastly, it was hypothesized that a positive relationship would result between the perceptions of both players and coaches and the actual hostile and instrumental aggression of athletes. Participants were comprised of 30 competitive level minor male ice hockey teams at the Atom (10-11 years old), Peewee (12-13 years old), and Bantam (14-15 years old) levels. The results were congruent with past research indicating that both perceived and actual aggression in players increased with advancing levels of play. Atom players viewed hostile aggression as less acceptable than the Peewee/Bantam counterparts. However, contrary to the hypothesis, Atom players had a higher approval for perceived instrumental aggression.

Ryan, Williams, and Wimer (1990) examined the differences between first year female high school basketball players and females who had played basketball for more than a year. Findings indicated that first year basketball players accepted a greater number of aggressive acts as legitimate prior to the season commencing, than did players with more experience. However, at the end of the season, the first year players' perceptions of legitimacy of aggressive behaviours decreased to the levels of the more experienced players, whose perceptions remained low and constant throughout the season. Ryan and colleagues suggested that this decrease in perceived legitimacy of aggression was due to team norms, in

that the inexperienced players may have been influenced to develop similar values to that of the veteran players. Although this study concluded that first year players at the start of the season legitimized aggression to a greater degree than veteran players, and this legitimization decreased throughout the season to the level of that of the veteran players; subsequent research findings have not been able to unanimously confirm a distinct direction of the aggression and level of play relationship (Dorsch, 1992; Loughead & Leith, 2001; Silva, 1983).

Group Factors and Aggression

In accordance with Ryan et al.'s (1990) study, Stephens and Bredemeier (1996) investigated moral atmosphere and judgments about aggression among female soccer players of 14 years old or younger. Within the study, moral atmosphere was operationally defined in terms of "participants' perceptions of their coach's characteristics and their team's pro-aggressive norms" (p. 169). Therefore, it could be argued that the moral atmosphere within a team is similar to group norms. It was proposed that a moral atmosphere developed uniquely in every team and sport within which decisions were made about appropriate behaviour in particular situations and were perceived by players, influencing their decisions surrounding aggression (Stephens & Bredemeier). It was hypothesized that soccer players who described themselves as more likely to aggress would be more likely to identify a larger number of teammates who would aggress in a similar situation. Participants consisted of 212 female soccer players from 21 different teams between the ages of 9 to 14 years. The results indicated that the athletes' likelihood to aggress was best predicted by how their teammates would act in similar situations. In other words, athletes were likely to act in accordance to

how their teammates would act, conforming to the norms (or moral atmosphere) within their team surrounding aggression.

With respect to group based perceptions of aggression, Dorsch (1997) examined the relationship between aggressive behaviour and norms for aggression. The participants were 389 male ice hockey athletes (*M* age = 17.96, *SD* = 1.43 years) from 23 junior level teams. On average, athletes had 12.6 years (*SD* = 2.6 years) of experience in organized hockey and 1.50 years (*SD* = .92) playing for their current team. In order to measure norms for aggression, athlete's perceptions of the team's acceptability of participating in physically injurious behaviours in ice hockey were assessed. Athletes were given eight scenarios and asked to rate how often, in general, their team believed physically injuring an opponent was acceptable in various situations based on a 0 ("*Never acceptable*") to 100 ("*Always acceptable*") scale. An example of an item is "In general, our team believes it is acceptable to attempt to physically harm opposing players in retaliation for something they've done". Lastly, in order to measure team aggressive behaviour, Dorsch (1997) examined game penalties (operationalized as the number of penalties per team per game for the actions of spearing, butt ending, high sticking, slashing, cross checking, charging, kneeing, elbowing, and checking from behind). The results showed that as team aggressive behaviour decreased, norms for aggression increased. It should be noted the results should be interpreted with caution since penalties are not a true reflection of aggression.

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Figure Captions

Figure 1. Conceptual model for cohesiveness in sport (Carron, 1982).

Figure 2. A conceptual framework for the study of cohesion in sport (Carron, Widmeyer, & Brawley, 1985).

Figure 1

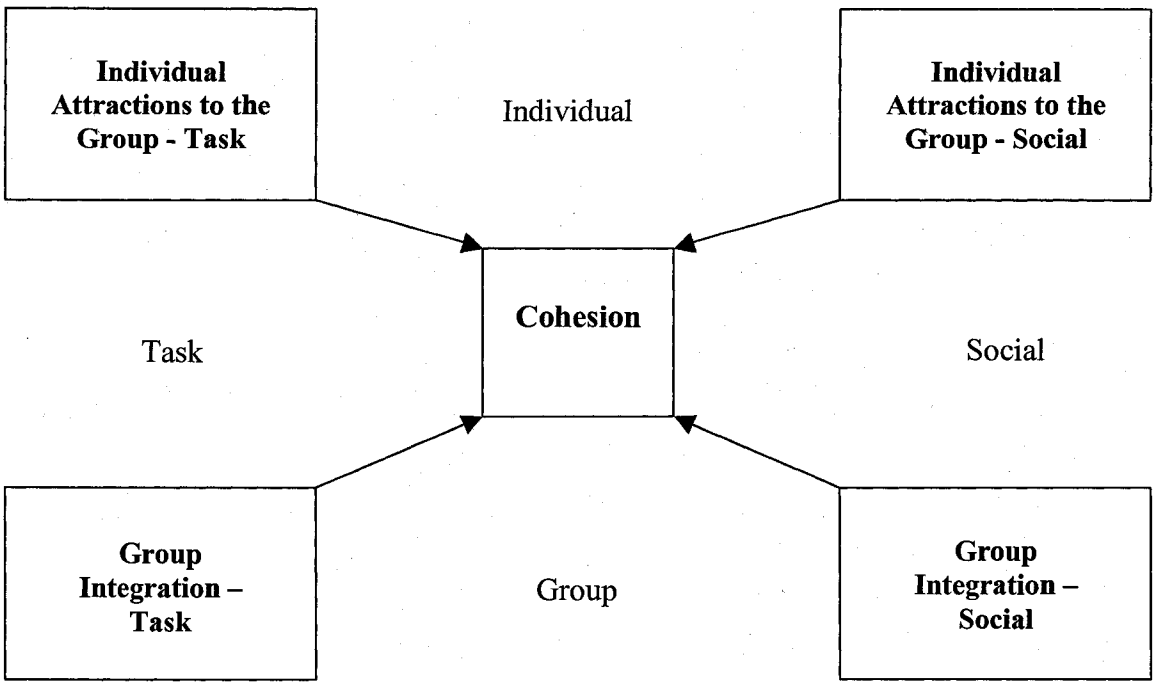
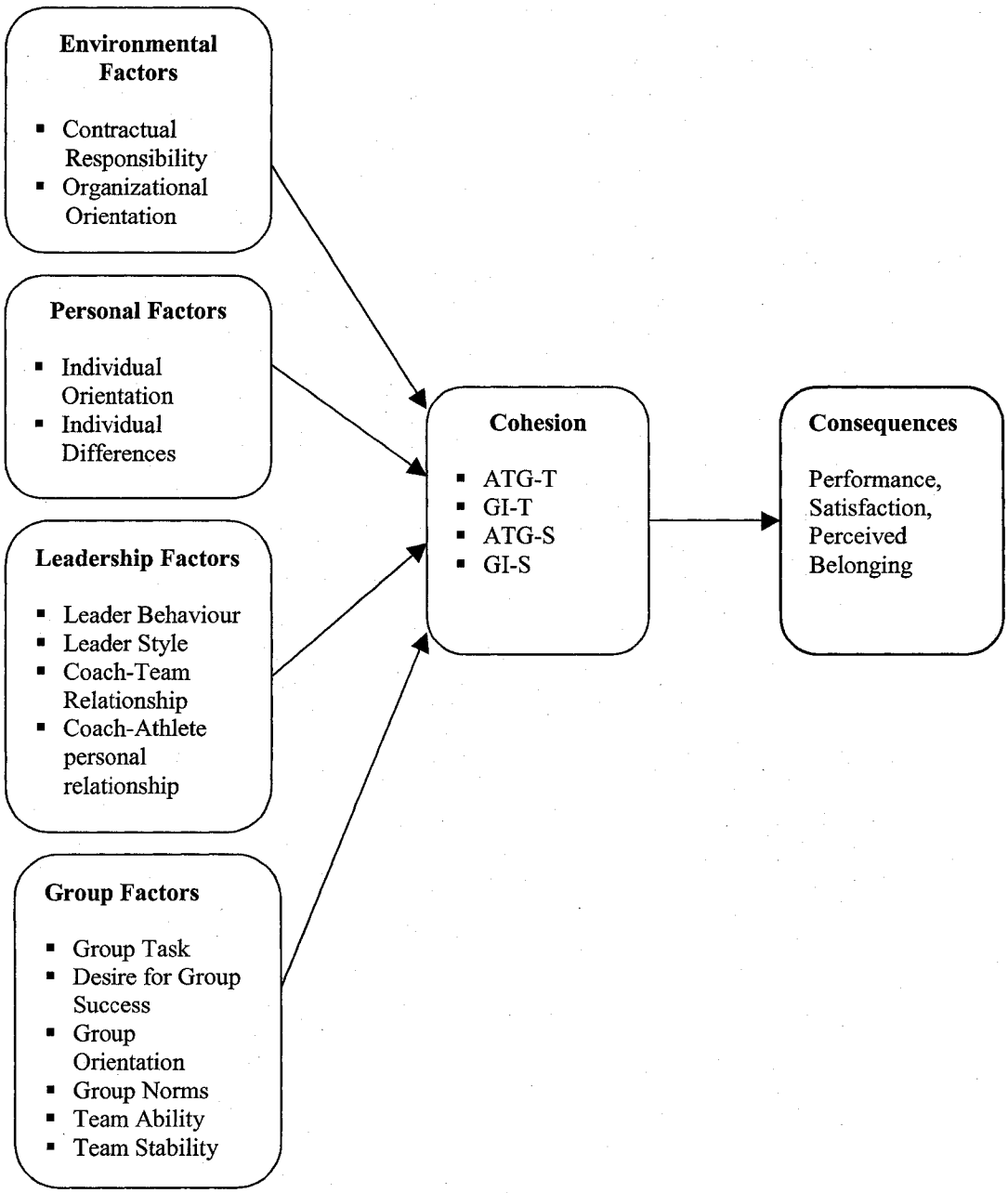


Figure 2



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