The Sport Psychologist, 2014, 28, 323-333
http://dx.doi.org/10.1123/tsp.2013-0029
© 2014 Human Kinetics, Inc.

THE SPORT PSYCHOLOGIST
www.TSP-Journal.com
APPLIED RESEARCH

Group Norms in Youth Sport: Role of Personal and Social Factors

Mark W. Bruner and Jeremie M. Carreau
Nipissing University

Kathleen S. Wilson
California State University, Fullerton

Michael Penney
Nipissing University

The purpose of this study was to investigate youth athletes' perceptions of group norms for competition, practice, and social setting contexts in relation to personal and social factors. A secondary purpose of this study was to examine the interactions of the personal and situation factors on perceptions of group norms. Participants included 424 athletes from 35 high school sport teams who completed a survey assessing team norms in competition, practice, and social settings. Multilevel analysis results revealed differences in group norms by gender as well as gender by team tenure and gender by sport type interactions. Female teams held higher perceptions of norms for competition, practice, and social settings than male teams. Interactions between gender and team tenure and gender and sport type revealed significant differences in practice norms. No differences were found in norms by group size. The findings suggest that examining the characteristics of the team members (i.e., gender, team tenure) and team (i.e., type of sport) may enhance our understanding of group norms in a youth sport setting.

Keywords: group norms, gender, team tenure, group size, sport type, youth sport

Group norms are behavioral standards that become expected of group members through the reinforcement of acceptable and unacceptable behaviors (Carron & Eys, 2012). The cultivation of shared beliefs and attitudes among members of a group thus results in the emergence of norms (Patterson, Carron, & Loughead, 2005). Once established, norms serve informational and integrative functions within teams (Kiesler & Kiesler, 1969). That is, members can validate their opinions, attitudes, and behaviors against these behavior standards; those who accept the norms are drawn into the group while those who do not are rejected. It is important to note that group norms are not created all at once, but, rather, develop over time and through ongoing interactions between all members of a team, coaches and athletes included (Carron & Eys, 2012).

Group norms in sport have been examined primarily in relation to performance (e.g., Høigaard, Säfvenbom, & Tønnessen, 2006; Kim & Sugiyama, 1992; Patterson et al., 2005) and moral behaviors (e.g., Shields, Bredemeier, Gardner, & Bostrom, 1995; Shields, Bredemeier, Lavoi, & Power, 2005, 2007; Silva, 1983; Tucker & Parks, 2001). Similar to other group constructs (e.g., cohesion), group norms have been described as multidimensional in nature with a body of research investigating the different types of norms in sport (e.g., Munroe, Estabrooks, Dennis, & Carron, 1999; Prapavessis & Carron, 1997). Prapavessis and Carron (1997) were among the first to examine the types of norms that might typically develop on sport teams. They found that elite cricket athletes conveyed group norms surrounding effort during training, focus in competition, punctuality and attendance at practices and competitions, and social support for teammates. Building on this work, Munroe and colleagues (1999) examined the perceptions of prescribed (i.e., relating to acceptable behaviors) and proscribed (i.e., relating to unacceptable behaviors) group norms of athletes from 18 different sports surrounding four social contexts: (a) competition, (b) practice, (c) social settings, and (d) off-season. Acknowledging that research on the nature of norms is underdeveloped, Munroe et al. suggested that it would be prudent to consider the potential role personal (e.g., gender) and social factors might play in the development of group norms in sport. In light of

Bruner, Carreau, and Penney are with the School of Physical and Health Education, Nipissing University, Canada. Wilson is with the Dept. of Kinesiology, California State University, Fullerton, CA. Address author correspondence to Mark W. Bruner at markb@nipissingu.ca.

Munroe and colleagues' recommendation, the purpose of this study was to investigate youth athletes' perceptions of group norms for competition, practice, and social setting contexts in relation to personal and social factors. A secondary purpose of this study was to examine the interactions of the personal and situation factors on perceptions of group norms. Conducting such research supports Carron and Brawley's (2008) suggestions highlighting the importance of moving beyond description (first generation research questions) to examine higher order research questions such as the conditions moderating a relationship (second generation research question).

Factors Impacting Norms

Carron (1980) identified two classes of conditions that influence conformity to group norms: *personal* and *situational* factors. Despite this early acknowledgment, there remains minimal research examining the influence of various factors on the development of and conformity to group norms in sport. One personal factor that has received increasing attention in group dynamics in the activity literature is gender (e.g., Bruner & Spink, 2011; Carron, Colman, Wheeler, & Stevens, 2002; Eys, Ohlert, Evans, Wolf, Martin, & Vanbussel, 2014). Colman and Carron (2001) investigated gender in an individual sport context as a potential predictor of athletes' perceptions of norms for competition, practice, social setting, and off-season contexts. Among their findings, the researchers demonstrated that females endorsed normative expectations for concentrating during practices significantly more than males; however, gender was not a significant predictor of norms in any of the other contexts. An important future direction of their work was to examine gender as a predictor of perceptions of group norms in interactive rather than individual team sport contexts. Given that females generally value belongingness in group contexts more than males (Deaux, 1976), investigating gender as a potential moderator of the perception of normative expectations in interactive team sport contexts may be insightful.

A second identified personal factor which may impact an athlete's perceptions of normative behavior within that team is team tenure—the length of time an athlete has been with a team (Colman & Carron, 2001). In their study, examining group norms in individual sport teams, Colman and Carron (2001) hypothesized that first year (i.e., rookie) athletes on a team should have fewer opportunities to be aware of and follow the norms of the group. As such, rookie athletes would have lower perceptions of team norms in practice, competition, and social situations in comparison with returning (i.e., veteran) athletes (Colman & Carron, 2001). Although no significant differences in team norms were found between rookie and veteran athletes in the study by Colman and Carron (2001) with university individual sport athletes, the absence of a significant finding may have been a function of the small sample size (e.g., rookies = 48, veterans = 49) and the individual sport context (swimming, track and field, wrestling, rowing). Other group dynamics research in sport supports team tenure as a salient factor impacting perceptions of group processes on sport teams (Eys, Carron, Beauchamp, & Bray, 2003). Eys and colleagues (2003) found that veterans who had greater exposure to the expectations of the team previously had less role ambiguity than first year athletes at the beginning of the season. Based on the hypothesis of Colman and Carron (2001) and findings by Eys et al. (2003), future research examining team tenure as a potential moderator of group norms in an interactive sport team context is warranted.

A situational factor that could influence group norms is group size. It has been postulated that the size of the group has implications on the communication of the group members which may affect the way norms are generated and reinforced (Eys, Hardy, & Patterson, 2006). Expanding on this notion, Carron and Eys (2012) asserted that as group size increases, it becomes more difficult for each member to interact with every other member, thus decreasing process efficiency (e.g., communication among group members) which may decrease knowledge and reinforcement of normative expectations (Carron & Eys, 2012; Eys et al., 2006). Accordingly, it may be easier for smaller groups to develop and maintain shared beliefs regarding normative expectations for behavior.

Another situational factor that could influence group norms is sport type. Tucker and Parks (2001) conducted a study of aggression behaviors among intercollegiate athletes who participated in collision (e.g., ice hockey), contact (e.g., basketball), and noncontact (e.g., volleyball) sports. Their results revealed that athletes who participated in contact and noncontact sports were less accepting of peers' aggressive behaviors than those who competed in collision sports. Shields et al. (2007) also found that unsportspersonlike behaviors occurred more frequently within teams participating in collision sports (e.g., football, hockey) in their investigation into predictors of poor sportspersonship in youth sport. The authors suggested that the level of physical contact for a given sport may be an important predictor for moral behavior norms since it may be more difficult for athletes participating in sports with more extensive levels of physical contact to maintain good sport behaviors (see Bredemeier, Weiss, Shields, & Cooper, 1986). Shields and colleagues (2007) also asserted that coaches, athletes, parents, and spectators all played influential roles in the establishment of a youth team's moral atmosphere (i.e., collective moral norms shared by team members).

The work of Shields and colleagues (2007) supports early research by Silva (1983) who found that athletes participating in sports that are more physical in nature are more likely to perceive rule-violating behavior to be legitimate. Interestingly, researchers have not yet considered whether sport type and athletes' perceptions of norms that develop across broader social contexts (e.g., norms for competition, practice, social settings, and off-season; Munroe et al., 1999) are related. The in-sport socialization of a group culture which, as has been shown, can lead to and even legitimize rule-violating

and unsportspersonlike behaviors for youth athletes may similarly influence perceptions for other prescriptive or proscriptive group norms.

From reviewing the group dynamics literature regarding gender (e.g., Bruner & Spink, 2011; Carron et al., 2002; Deaux, 1976; Eys et al., 2014), it was predicted that adolescent female athletes would have stronger perceptions of group norms than adolescent males (Hypothesis 1).

Drawing on previous hypotheses (Colman & Carron, 2001) and research in group dynamics (Eys et al., 2003), it was hypothesized that veteran athletes with previous exposure to the team would hold higher perceptions of team norms than rookie athletes on a team (Hypothesis 2). Based on the previous suggestions surrounding group size (Carron & Eys, 2012; Eys, Hardy & Patterson, 2006), it was projected that athletes on larger teams would have weaker perceptions of group norms (Hypothesis 3). It was hypothesized that in consideration of previous research on moral behavior norms and the influence of in-sport socialization (e.g., Bredemeier et al., 1986; Shields, Bredemeier, Gardner, & Bostrom, 1995; Shields et al., 2005, 2007; Silva, 1983; Tucker & Parks, 2001), participants on teams with a higher degree of contact would have weaker perceptions of group norms (Hypothesis 4). Based on previous norm research, we expected gender to moderate the effects of the other variables on team norms such that differences between each of the variables on norms would be higher for females than males (Hypothesis 5). Further, we expected team tenure to moderate the effects of the other variables such that differences between each of the variables on norms would be higher for veterans than rookies (Hypothesis 6). Given the exploratory nature of the study and the limited empirical evidence on group norms in sport, specific hypotheses for each group norm were not formulated.

Methods

Participants

The sample consisted of 424 adolescent athletes (266 male, 158 female) ranging in age from 14 to 17 years (M = 15.7, SD = 1.27). The participants were from 35 high school sport teams (n = 139 basketball, n = 86 volleyball, n = 60 football, n = 54 soccer, n = 12 field lacrosse, n = 29 rugby, n = 44 hockey). Two hundred and sixteen of the athletes were rookies on the teams, while 204 of the athletes were veterans.

Measures

Group Norms. The Team Norm Questionnaire (TNQ; Carron, Prapavessis, & Estabrooks, 1999) was designed to estimate the power of collective beliefs for team norms in sport identified by Munroe et al. (1999). The questionnaire employed for the current study contained a total of 44 items that assessed perceived group norms for competition, practice, and social settings. The TNQ has been used in studies examining the nature of norms on individual sports teams (Colman & Carron, 2001), the influence of norms on cohesion and performance (Patterson et al., 2005), and for examining group norms in an exercise environment (Eys et al., 2006).

Norms for Competition. Participants were presented with the question: "What percentage of your teammates would be critical of you if you…." Following the question was a list of 16 situations in competition associated with norms for four subscales: (a) productivity (4 items; e.g., "didn't give 100% during competition."), (b) concentration (4 items; e.g., "lost focus during an important moment in competition."), (c) attendance (4 items; e.g., "arrived late for competition."), and (d) supportive behaviors (4 items; e.g., "didn't stay united when a competition was going poorly."). The participants were asked to score each item on an 11-point Likert-type scale, anchored at extremes of 0% and 100%, indicating the proportion of teammates that would be critical in each situation.

Norms for Practice. With the same lead-in question and scoring system described above, participants were presented with 16 situations that assessed normative expectations in practice under four subscales: (a) attendance (4 items; e.g., "showed up late for practice."), (b) productivity (4 items; e.g., "didn't work hard at practice."), (c) concentration (4 items; e.g., "lost focus during practice."), and (d) supportive behaviors (4 items; e.g., "were negative toward teammates at practice.").

Norms for Social Settings. Again in the same format first described for competition norms, norms for social settings were assessed using three subscales: (a) attendance (4 items; e.g., "didn't attend social functions."), (b) inclusion (4 items; e.g., "'excluded teammates from social activities"), and (c) interaction (4 items; e.g., "weren't in good spirits at social functions").

Group Size. Group size was operationalized by *action unit*: the number of people on the playing surface at one time (Widmeyer, 1971). For example, in ice hockey when teams are competing at full-strength (i.e., no penalties are being served), there are two defensemen, three forward, and one goaltender allowed on the playing surface at any given time, comprising an action unit of 6 members. Two action unit categories were differentiated for this study: (a) teams with action units of less than or equal to six members (i.e., hockey, volleyball, and basketball teams) and (b) teams with action units of greater than six members (i.e., soccer, football, lacrosse, and rugby teams).

Sport Type. Sport type was operationalized by the degree of physical contact (American Academy of Pediatrics, 1988; Rosenbaum, 2007). Three categories were used: (a) noncontact (i.e., volleyball), (b) contact (i.e., basketball, soccer), and (c) collision (i.e., rugby, football, hockey, field lacrosse). This variable was dummy coded into Sport Type 1 (0 = Collision/Contact,

1 = Noncontact) and Sport Type 2 (0 = Collision/Noncontact, 1 = Contact).

Team Tenure. Team tenure was operationalized by the coaches indicating if each athlete on their team was a first year player on the team (i.e., rookie) or was an athlete with previous experience on the team (i.e., veteran).

Procedure

Before conducting this study, ethical approval was obtained from the University and the three school boards that took part in the study. Coaches of sport teams from within the school boards were then contacted, inviting their teams to participate in the study. Contacting coaches involved giving presentations at school board athletic meetings to draw awareness to the opportunity of participating in a research project, followed by soliciting invitations from the interested coaches to speak with athletes at their respective schools. Participants were thus recruited from coaches' high school teams that demonstrated interest.

The lead author or a research assistant provided an explanation of the study at a scheduled practice session at the beginning of the season. Athletes were presented with an information sheet, an athlete assent form, and a parental consent form. Informed assent and parental consent were obtained from all participants. Participants completed the TNQ (Carron et al., 1999) at the end of the regular season, before or following a scheduled practice. Data collection sessions lasted approximately 20 min.

Analysis

Preliminary Analyses. A confirmatory factor analysis was conducted on the TNQ to evaluate the factorial validity. Recommended indicators of model fit provided are: the Satorra-Bentler chi-square (c2); the robust comparative fit index (CFI); the standardized root mean square residual (SRMR); and the robust root mean square error of approximation (RMSEA) (Bentler, 2007). Good fit is achieved when CFI values are close to 0.95, the SRMR is close to 0.08, and the RMSEA is close to 0.06 (Hu & Bentler, 1999). To evaluate the internal consistencies of the norms subscales, Cronbach's alphas were then estimated and descriptive statistics calculated for the study variables.

Main Analyses. To account for the young athletes being nested within their high school sport teams, multilevel analyses were conducted using hierarchical linear modeling software (HLM7; Raudenbush, Bryk, Cheong, Congdon, & duTolt, 2011). A separate model was fit for each of the three norms. First, a null model was computed for each of the norm subscales to determine the level of independence. Next, a model was specified with team tenure entered on the individual level (Level 1) uncentered. On level two, gender, sport type, and group size were included uncentered on the intercept. All slopes were included as fixed. Following the examination of the main effects models, three interaction models were fit for each of the nine norms. The first interaction model examined the moderating role of gender, sport type, and group size on team tenure, the second model examined gender by group size, and the third model examined gender by sport type. As these interactions were exploratory, separate models for each interaction term were performed given the difficulty in identifying interactions due to lower power (McClelland & Judd, 1993). For interactions that were found to be significant, a simple slopes analysis was conducted as outlined by Aiken and West (1991) but using HLM to continue to account for the multilevel nature of the data. Restricted maximum likelihood was used to estimate the models in this study.

Results

Preliminary Analyses

Confirmatory Factor Analysis. An appraisal of indicators for the CFA of the TNQ did not support the factorial validity of the 11 scales of the measure for the adolescent population, χ^2 (858) = 7749.09 ($p < .05$); CFI = .98; RMSEA = .14 (90% CI = .135–.141); SRMR = .22. Based on the high correlations among the items in the subscales for each of the norm measures, the scales were collapsed into the three broader norms (i.e., competition, practice, social). A specification of this more parsimonious model[1] resulted in an acceptable fit, χ^2 (899) = 3333.07 ($p < .05$); CFI = .99; RMSEA = .08 (90% CI = .077–.083); SRMR = .04. Cronbach's alphas were then computed for each of the three norm subscales (see Table 1). All subscales were found to be reliable (i.e., > .70; Nunnally & Bernstein, 1994) ranging from .96 to .98 (see Table 1).

Descriptive statistics and correlations are presented in Tables 1 and 2. Perceptions of team norms ranged from 0–100% with means in the midrange (45–55%; see Table 1). Correlations among the norms were generally strong and positive (see Table 1). Since the analyses were performed separately for each norm variable, multicollinearity was not an issue. To determine if there was group-level variance in the norms, a null model was run for each of the three norms without any predictors. Variances in the norms were separated into variance between teams (Group-level: Level 2) and variance between athletes (Individual level: Level 1) in the null model. The resulting intraclass correlations (ICCs) were .11 (competition norms), .11 (practice norms) and .06 (social norms). This suggests that between 6% and 11% of the variability in the scores can be attributed to the team level. As such, athletes who are on the same team share some similarity in their perceptions of norms.

Four models were conducted for each group norm. Model 1 included team tenure (rookie = 0) as a Level 1 variable and gender (male = 0), group size (small

Table 1 Descriptive Statistics, Correlations, and Scale Reliabilities (*N* = 424)

	Mean	*SD*	Cronbach's Alpha	1	2	3
Competition Norms	54.89	28.52	.98	-		
Practice Norms	47.39	27.22	.97	.83*	-	
Social Norms	45.62	27.97	.96	.74*	.77*	-

*$p < .01$.

Table 2 Descriptive Statistics

	Competition Norms	Practice Norms	Social Norms
	Mean (*SD*)	Mean (*SD*)	Mean (*SD*)
Gender			
male	50.3 (29.1)	44.9 (27.6)	41.7 (27.9)
female	62.6 (25.8)	51.6 (26.1)	52.1 (27.0)
Group Size			
≤6	54.4(28.3)	47.9 (26.5)	46.2 (26.9)
> 6	55.7(29.0)	46.5 (28.5)	44.7 (29.8)
Sport Type			
collision	53.8 (29.2)	46.8 (27.5)	42.9 (29.1)
contact	52.7 (29.0)	45.0 (27.9)	44.2 (27.6)
non-cContact	61.6 (25.7)	53.8 (24.3)	53.2 (25.9)
Team Tenure			
rookie	52.7 (29.6)	46.1 (27.4)	45.1 (28.3)
veteran	57.2 (27.4)	48.7 (27.1)	46.1 (27.7)

Note. Scale varied from 0% to 100%, indicating the percentage of teammates perceived to hold expectations for the respondent's behavior.

groups = 0) and sport type (dummy coded) as Level 2 variables predicting each of the team norms. For competition norm, only gender ($b = 12.9$, $p < .001$) at Level 2 was a significant predictor (Pseudo $R^2 = .06$). Norms during competition were higher on female teams than male teams. Similarly gender was the sole significant predictor for practice norms ($b = 6.01$, $p < .01$; Pseudo $R^2 = .11$) and social norms ($b = 9.6$, $p = .01$; Pseudo $R^2 = .03$) with female teams holding higher perceptions of practice norms and social norms than male teams (see Tables 3–5 for the coefficients for each of the models for the competition, practice, and social norms).

Models 2, 3, and 4 examined the interactions between the variables. Model 2 included team tenure as a Level 1 variable, gender, group size, and sport type as Level 2 variables, and included three cross-level interactions on team tenure to examine the interaction of team tenure with the other predictors. The interaction between gender and team tenure was found to approach significance for practice norms ($b = 12.03$, $p = .10$). Given the difficulty to detect interactions, we interpreted this interaction (McClelland & Judd, 1993). The procedures for a simple slopes analysis outlined by Aiken and West (1991) were used to examine these interactions but performed using a multilevel model. For veterans only, a gender difference was observed with females reporting higher practice norms than males ($b = 12.87$, $p = .10$) but not for rookies ($b = –11.19$, $p = .28$; see Figure 1). There were no differences in the competition and social norms associated with team tenure.

Model 3 examined the gender and sport type interaction. The interaction term was significant for practice norms ($b = –26.25$; $p = .05$). The simple slope analysis revealed that for females the norms for practice were significantly lower in contact sports (e.g., basketball) ($b = –25.97$, $p = .04$) in comparison with collision (e.g., lacrosse) and noncontact (e.g., volleyball) sports (see Figure 2). In collision and noncontact sports, females reported higher practice norms than males ($b = 24.10$, $p = .05$). Gender and sport type were not significant predictors of norms in competition and social settings. Model 4 examined the gender and group size interaction. Interaction terms were not significant for the competition, practice, or social setting norms.

Table 3 Coefficients for Personal and Social Factors Predicting Competition Norms

Fixed Effects	Model 1 Full Model Coefficient (*SE*)	Model 2 Team Tenure Coefficient (*SE*)	Model 3 Sport Type Interaction Coefficient (*SE*)	Model 4 Group Size Interaction Coefficient (*SE*)
Level 1				
intercept	49.42 (5.03)**	47.76 (8.93)**	52.49 (3.74)**	50.35 (2.85)**
team tenure	3.09 (2.51)	4.12 (6.07)		
Level 2 (on intercept)				
gender	12.88 (3.79)**	7.59 (6.41)	23.40 (11.43)*	10.61 (4.90)*
sport type	–3.52 (5.12)	–3.91 (8.17)	–3.44 (9.53)	
sport type 2	–5.95 (4.05)	–6.09 (6.92)	–3.41 (5.00)	
group size	–0.86 (3.57)	–0.77 (7.73)		0.49 (4.37)
gender × sport type			–9.41 (15.04)	
gender × sport type 2			–14.05 (12.69)	
gender × group size				1.75 (6.97)
Level 2 (on team tenure)				
gender		7.58 (6.41)		
sport type		–3.91 (8.17)		
sport type 2		–6.09 (6.91)		
group size		–0.77 (7.73)		
Random effects				
level 1 (r)	742.46	795.47	735.75	734.26
level 2 (u_0)	48.81	49.08	55.46	61.70
Pseudo R^2				
overall	6.0%	6.0%	7.0%	8.0%
level 1	1%	2%	6%	0.4%
level 2	45%	44%	37%	30%
ICC	0.11	0.11	0.11	0.11
-2 × log likelihood	3955.40	3930.49	3987.00	4002.47

**$p \leq .01$; *$p \leq .05$

Discussion

The purpose of this study was to investigate youth athletes' perceptions of group norms for three social contexts in relation to the personal factors of gender and team tenure and the situational factors of group size and sport type. Results supported the hypotheses regarding gender as a significant predictor of athletes' perceptions of group norms, but did not support the hypotheses regarding the predictability of athletes' perceptions of group norms based on team tenure, sport type, and group size. A secondary purpose of the study was to examine interactions among the personal and situational variables. Interactions were found between gender and team tenure and gender and sport type. The significance of these findings is discussed below.

Adolescent female athletes had higher perceptions for norms than males in all three social contexts (i.e., competition, practice, and social settings). This finding, in support of the first hypothesis, was not overly surprising given that previous research has indicated that females hold stronger perceptions for social values such as belongingness than males (Deaux, 1976). Yet, further research into the group norms-gender relationship in youth sport is warranted as this study represents the first to examine gender of youth interactive sport athletes as a significant predictor of perceptions of group norms. Given the general lack of significance of the gender-group norms relationship previously reported in an individual sport-type context (Colman & Carron, 2001), type of sport may be an important area of consideration when seeking to understand the gender-group norms relationship.

The present study examined the role of sport type independently and in relation to gender on group norms. The researchers found that the level of physical contact for a sport (i.e., categorized for differentiating between

Table 4 Coefficients for Personal and Social Factors Predicting Practice Norms

Fixed Effects	Model 1 Full Model Coefficient (*SE*)	Model 2 Team Tenure Coefficient (*SE*)	Model 3 Sport Type Interaction Coefficient (*SE*)	Model 4 Group Size Interaction Coefficient (*SE*)
Level 1				
intercept	47.90 (6.41)**	44.37 (13.82)**	45.32 (3.91)**	45.26 (2.77)**
team tenure	0.68 (2.90)	2.95 (9.39)*		
Level 2 (on intercept)				
gender	6.01 (4.76)**	–11.19 (10.15)	23.40 (11.43)*	6.81 (4.55)*
sport type	–1.00 (6.44)	14.27 (19.18)	–2.87 (9.68)	
sport type 2	–5.67(5.47)	0.15 (14.29)	0.28 (5.18)	
group size	–2.45 (5.06)	9.14 (13.82)		–0.02(4.49)
gender × sport type			-11.27 (15.40)	
gender × sport type 2			-26.25 (13.08)*	
gender × group size				–.30 (8.92)
Level 2 (on team tenure)				
gender		12.03 (7.35)†		
sport type		–10.71 (13.10)		
sport type 2		–3.95 (9.35)		
group size		–8.05 (10.03)		
Random effects				
level 1 (*r*)	666.31	666.87	662. 20	661.42
level 2 (u_0)	83.97	88.34	68.50	88.54
Pseudo R^2				
overall	11.0%	13.0%	9.0%	12.0%
level 1	1%	1%	0.2%	0.1%
level 2	2%	1%	20%	3%
ICC	0.12	0.12	0.12	0.12
-2×log likelihood	3901.50	3875.92	3928.78	3947.59

**$p \leq .01$

*$p \leq .05$

†$p \leq .1$

sport types) did not play a significant role in independently predicting the perceptions of group norms for youth athletes in the current study. Although higher scores were held by athletes competing in noncontact sports, the norms were not significantly different from contact and collision sports. This finding did not support Hypothesis 4 and previous literature on perceptions of moral behavior norms in sport (Bredemeier et al., 1986; Shields et al., 1995, 2005, 2007; Silva, 1983; Tucker & Parks, 2001). The absence of a significant finding may have been a function of the number of variables in the model and a power issue. While sport type did not emerge as a significant independent predictor of the norms, the gender and sport type interaction terms were significant for practice norms. Females engaging in contact sports (e.g., basketball) held lower perceptions of practice norms in comparison with collision and noncontact sports. A possible explanation to account for the gender-sport type norms findings may be the success of the teams in this particular sample. The female contact teams in the study had a lower winning percentage of 59% while the collision and noncontact teams had higher winning percentages of 67% and 78%. Given previous suggestions linking group norms in competition and successful performance (Kim, 1995; Munroe et al., 1999), the more successful collision and noncontact female teams in this study may have held greater practice norms. This explanation awaits further research.

A somewhat surprising finding was that team tenure did not emerge as a personal factor significantly predicting the athlete norms on its own. It was hypothesized that the veterans would have significantly higher perceptions

Table 5 Coefficients for Personal and Social Factors Predicting Social Norms

	Model 1 Full Model	Model 2 Team Tenure	Model 3 Sport Type Interaction	Model 4 Group Size Interaction
Fixed Effects	**Coefficient (*SE*)**	**Coefficient (*SE*)**	**Coefficient (*SE*)**	**Coefficient (*SE*)**
Level 1				
intercept	43.52 (6.11)**	42.79 (10.29)**	43.68 (3.05)**	42.00 (2.70)**
team tenure	0.34 (2.77)	0.89 (7.80)		
Level 2—On Intercept				
gender	9.62 (4.57)**	–5.34 (10.42)	–1.31 (9.71)	11.67 (3.43)**
sport type	1.05 (7.23)	12.30 (16.82)	–0.51 (8.39)	
sport type 2	–3.05(4.65)	–2.03 (12.06)	–3.49 (4.19)	
group size	–2.16 (4.75)	7.92 (11.30)		–0.25(3.94)
gender × sport type			13.22 (13.01)	
gender × sport type 2			11.53 (10.79)	
gender × group size				–4.00 (5.61)
Level 2 (on team tenure)				
gender		10.52 (6.95)		
sport type		–8.14 (11.60)		
sport type 2		–0.86 (8.50)		
group size		–7.12 (8.32)		
Random effects				
level 1 (r)	744.35	745.27	740.72	740.34
level 2 (u_0)	23.86	26.84	23.30	23.86
Pseudo R^2				
overall	3.0%	3.0%	3.0%	3.0%
level 1	1%	1%	0.3%	0.2%
level 2	47%	40%	48%	47%
ICC	0.06	0.06	0.06	0.06
-2 × log likelihood	3930.21	3904.69	3961.82	3976.07

**$p \leq .01$

*$p \leq .05$

of norms than rookies based on their previous experience with the team. While the norms for each of the settings were higher for the veterans in comparison with the rookies, they were not significantly different. One possibility for the finding may have been the timing of the data collection. The evaluation of the norms was conducted at the end of the regular season. Perhaps if the norms were evaluated at the beginning of the season the results between the rookies and veterans might be more distinct. This explanation is supported by the work of Eys and colleagues (2003) who found significant differences in role perceptions between veteran and rookie athletes at the beginning of the season and not at the end of the season.

Interactions emerged between the two personal factors (i.e., gender and team tenure). Similar to the main effects for gender on the norms, veteran females reported higher norms for practice than veteran males at the end of the season. No differences in norms were found between male and female rookie athletes. The gender-team tenure interaction finding supports Hypotheses 5 and 6 and extends previous literature independently predicting female and veteran athletes holding higher group perceptions for norms (Colman & Carron, 2001; Eys et al., 2003).

Group size was not found to be a significant predictor to perceptions of group norms for the high school sport team athletes considered herein. This finding does not support Hypothesis 3 and is contrary to previous assertions in the group dynamics literature suggesting that smaller teams tend to have stronger perceptions of group norms (e.g., Eys et al., 2006). Two considerations which may help elucidate the finding are worth noting. First, in this study, group size was operationalized by action unit (i.e., the number of people on the playing

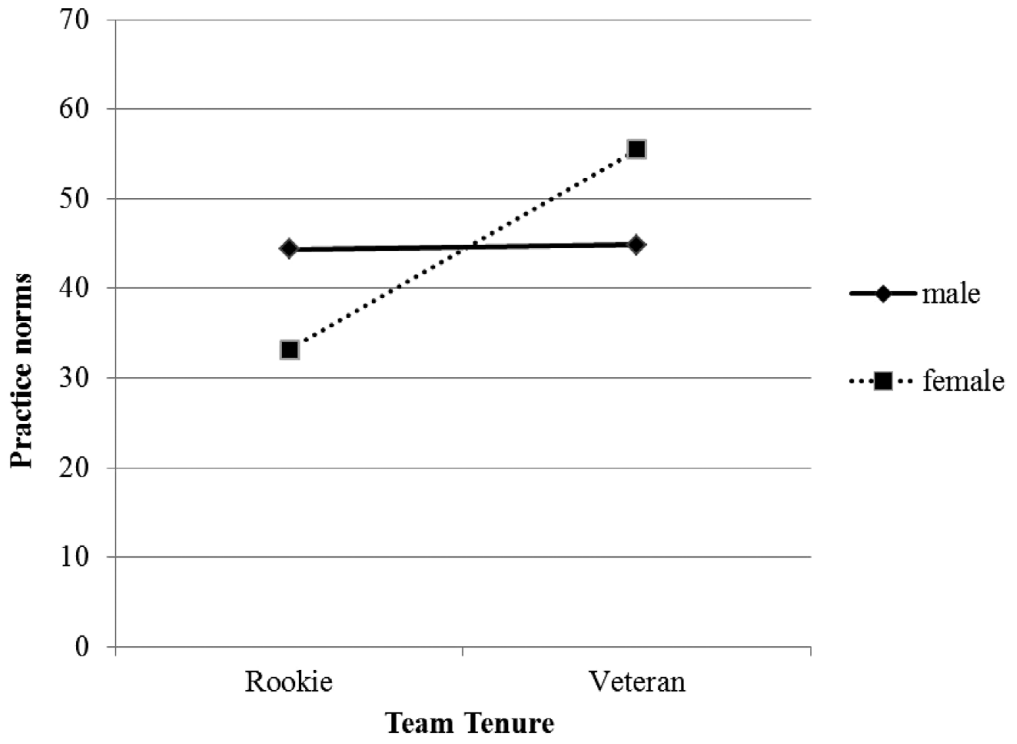

Figure 1 — Gender × team tenure interaction.

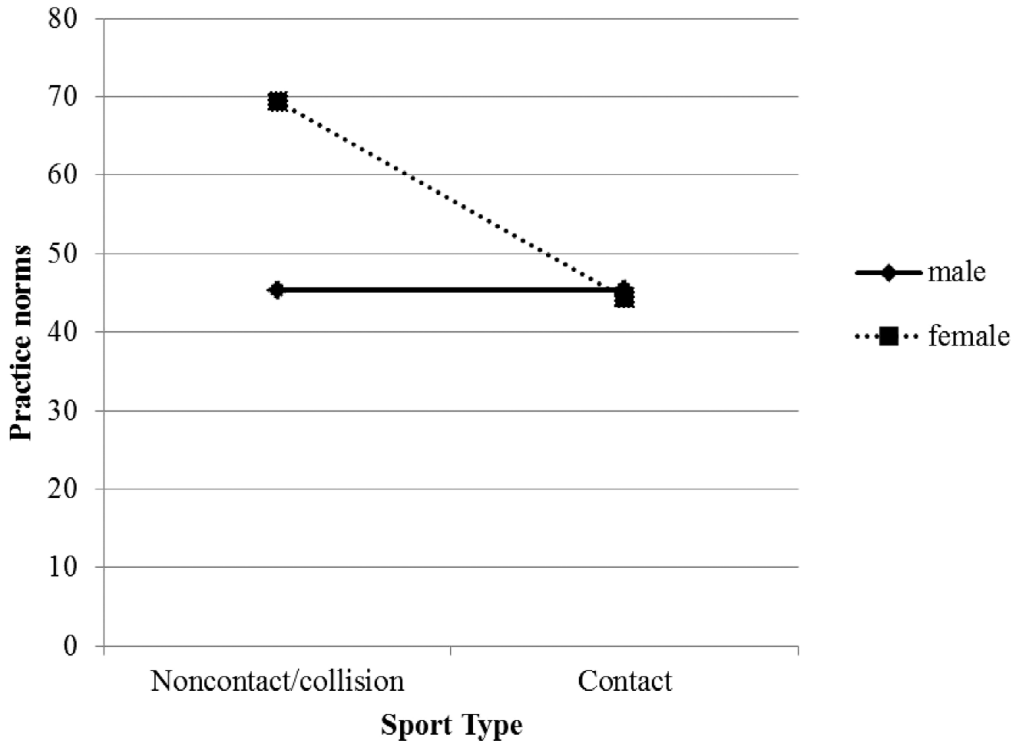

Figure 2 — Gender × sport type interaction.

surface at one time; Widmeyer, 1971). Perhaps another measure of group size would have yielded different results in this study. Widmeyer (1971) identified two other manners of operationalizing group size: (a) dress roster (i.e., the number of players in uniform per team based on the rules of the sport), and (b) team roster (i.e., the total number of players on the team). Furthermore, when evaluating the size of a group, consideration of the existence of subgroups may be essential to understand perceptions of norms. Murrell and Gaertner (1992) undertook a study to further understand high school football group cohesion and team identity. Results showed that on large football teams, subgroups emerged as members identified with offensive or defensive units. The authors and other researchers (e.g., Carron, 1982; Eys et al., 2014) noted that subgroups (i.e., those that emerge from a team's structural design) and cliques (i.e., tight-knit emergent subgroups built upon reciprocal relationships; for a review, see Martin, Bruner, Eys, & Spink, 2014) can damage the formation of a cohesive team. Accordingly, it may thus be important for researchers to consider the existence of subgroups and cliques and whether group norms vary between those subgroups and other operationalizations of group size (e.g., dress or team roster).

To summarize, one of the main factors that was related to norms appeared to be gender with females reporting higher norms for competition and social settings. Team tenure and sport type only appeared to play a role in perceptions of norms when considered in conjunction with gender in practice settings as shown by the interactions. Contrary to the hypothesis, group size did not appear to have an effect on group norms.

Limitations and Future Directions

While the current study represents a significant advancement in the understanding of the role of gender, team tenure, group size, and sport type in perceptions of group norms in youth sport, the authors wish to acknowledge limitations to the current study and highlight several opportunities for future research. First, although the sample population was adequate, there was only one sport (i.e., volleyball) represented in the noncontact sport type category. A larger sample and more variety in the sports represented may thus lead to broader generalizability of the results. Furthermore, while all athletes participated in high school sports programs, researchers should carefully consider the level of competition of teams. That is, some high school sport programs may be considered as high-level competition while others may be more aptly regarded as recreational.

Although previous empirical support for the Team Norm Questionnaire has been reported (Colman & Carron, 2001; Patterson et al., 2005), the nine-factor structure of the measure was not supported with a youth population. Similar to other research involving multidimensional group constructs and an adolescent population in sport (e.g., cohesion; Eys, Loughead, Bray, & Carron, 2009), a more parsimonious three-factor structure for the questionnaire was empirically supported. As this was an initial attempt to evaluate group norms in a youth-sport context using the Team Norm Questionnaire, future research is needed to assess whether the nine-factor structure or three-factor structure should be used in the youth sport context.

The perceptions of norms were evaluated at the end of the regular season only. At first glance, one might wonder why the norms were not higher. However, the norms for the study were comparable to other studies, which also reported the norms to be around the midpoint (e.g., Colman & Carron, 2001). Group norms are complex and take time to develop (Carron & Eys, 2012); therefore, it may be beneficial to evaluate group norms throughout the season and even during the off-season. Such a longitudinal study design may further illustrate how behavioral expectations become established within a team through an evaluation of their consistency, which may further illuminate personal and situational factors such as gender, team tenure, group size, and sport type. As previously highlighted, researchers may consider varied conceptualizations of group size (e.g., dress roster; Widmeyer et al., 1990), the presence of subgroups, and level of competition in future inquiries into youths' perceptions of norms.

Practical Implications

The results of this study indicate that athletes' perceptions of group norms on male teams and in female contact sports are likely to be less established. From an applied perspective, coaches of youth sports teams should be mindful of this finding and thus consider strategies that promote desired behavior norms within the team. One such strategy may be for coaches to facilitate a teambuilding intervention such as goal setting or the development of a team covenant (Bloom & Stevens, 2002) that encourages members to discuss and reinforce the prescriptive and proscriptive norms that promote or support desired task and social targets. Moreover, including the whole group in a teambuilding intervention such as goal setting or the development of a team covenant would help to set clear guidelines on how to act and may help to avoid unique sets of norms for the various subgroups within a team (e.g., offensive and defensive units) that may lead to ambiguous or conflicting expectations.

[1] During the specification of the more parsimonious model, five problematic items were identified and removed from the model and analysis. The five items are available upon request from the lead author.

Acknowledgments

The authors wish to thank all of the school boards, schools, coaches, and young athletes who participated in the study.

References

Aiken, L.S., & West, S.G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

American Academy of Pediatrics. (1988). Committee on sports medicine: Recommendation for participation in competitive sports. *Pediatrics, 81,* 737–739. PubMed

Bentler, P.M. (2007). On tests and indices for evaluating structural models. *Personality and Individual Differences, 42*, 815–824

Bloom, G.A., & Stevens, D.E. (2002). A team building mental skills training programme with an intercollegiate equestrian team. *Athletic Insight—The Online Journal of Sport Psychology, 4*(1), 1–16.

Bredemeier, B., Weiss, M., Shields, D., & Cooper, B. (1986). The relationship of sport involvement with children's moral reasoning and aggression tendencies. *Journal of Sport Psychology, 8,* 304–318.

Bruner, M.W., & Spink, K.S. (2011). Effects of team building on exercise adherence and group task satisfaction in a youth activity setting. *Group Dynamics, 15,* 161–172. doi:10.1037/a0021257

Carron, A.V. (1980). *Social psychology of sport*. Ithaca, NY: Movement.

Carron, A.V. (1982). Processes of group interaction in sport teams. *Quest, 33,* 245–270. doi:10.1080/00336297.1981.10483757

Carron, A.V., & Brawley, L.R. (2008). Group dynamics in sport and physical activity. In T. Horn (Ed.), *Advances in sport psychology* (3rd ed., pp. 211–237). Windsor, ON: Human Kinetics.

Carron, A.V., Colman, M.M., Wheeler, J., & Stevens, D. (2002). Cohesion and performance in sport: A meta-analysis. *Journal of Sport & Exercise Psychology, 24,* 168–188.

Carron, A.V., & Eys, M.A. (2012). *Group dynamics in sport* (4th ed.). Morgantown: Fitness Information Technology.

Carron, A.V., Prapavessis, H., & Estabrooks, P. (1999). *Team norm questionnaire*. Unpublished manuscript, University of Western Ontario, London, Ontario, Canada.

Colman, M.M., & Carron, A.V. (2001). The nature of norms in individual sport teams. *Small Group Research, 32,* 206–222. doi:10.1177/104649640103200204

Deaux, K.A. (1976). A perspective on the attribution process. In J. Harvey, W. Ickes, & R. Kidd (Eds.), *New direction in attribution research* (pp. 335–352). Hillsdale, NJ: Erlbaum.

Eys, M.A., Carron, A.V., Beauchamp, M.R., & Bray, S.R. (2003). Role ambiguity in sport teams. *Journal of Sport & Exercise Psychology, 25,* 534–550.

Eys, M.A., Hardy, J., & Patterson, M.M. (2006). Group norms and their relationship to cohesion in an exercise environment. *International Journal of Sport and Exercise Psychology, 4,* 43–56. doi:10.1080/1612197X.2006.9671783

Eys, M.A., Loughead, T.M., Bray, S.R., & Carron, A.V. (2009). Development of a cohesion questionnaire for youth: The Youth Sport Environment Questionnaire. *Journal of Sport & Exercise Psychology, 31,* 390–408. PubMed

Eys, M.A., Ohlert, J., Evans, B., Wolf, S., Martin, L.J., & VanBussel, M. (2014). Cohesion in female and male sport teams. *Manuscript submitted for publication.*

Høigaard, R., Säfvenbom, R., & Tønnessen, F.E. (2006). The relationship between group cohesion, group norms, and perceived social loafing in soccer teams. *Small Group Research, 37,* 217–232. doi:10.1177/1046496406287311

Hu, L. & Bentler, P.M. (1999). Cutoff criteria for fix indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1–55.

Kiesler, C.A., & Kiesler, S.B. (1969). *Conformity*. Reading, MA: Addison-Wesley.

Kim, M.S. (1995). Performance norms and performance by teams in basketball competition. *Perceptual and Motor Skills, 80,* 770. doi:10.2466/pms.1995.80.3.770

Kim, M.S., & Sugiyama, Y. (1992). The relation of performance norms and cohesiveness for Japanese school athletic teams. *Perceptual and Motor Skills, 74,* 1096–1098. doi:10.2466/pms.1992.74.3c.1096

Martin, L.J., Bruner, M.W., Eys, M.A., & Spink, K.S. (2014). Group dynamics in sport: New developments and future directions. *International Review of Sport & Exercise Psychology, 7*(1), 87–105. doi:10.1080/1750984X.2014.885553

McClelland, G.H., & Judd, C.M. (1993). Statistical difficulties of detecting interactions and moderator effects. *Psychological Bulletin, 114,* 376–390. PubMed doi:10.1037/0033-2909.114.2.376

Murrell, A.J., & Gaertner, S.L. (1992). Cohesion and sport team effectiveness: The benefit of a common group identity. *Journal of Sport and Social Issues, 16,* 1–14. doi:10.1177/019372359201600101

Munroe, K., Estabrooks, P., Dennis, P., & Carron, A.V. (1999). A phenomenological analysis of group norms in sport teams. *The Sport Psychologist, 13,* 171–182.

Nunnally, J., & Bernstein, I. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

Patterson, M.M., Carron, A.V., & Loughead, T.M. (2005). The influence of team norms on the cohesion-self-reported performance relationship: A multi-level analysis. *Psychology of Sport and Exercise, 6,* 479–493. doi:10.1016/j.psychsport.2004.04.004

Prapavessis, H., & Carron, A.V. (1997). Sacrifice, cohesion, and conformity to norms in sport teams. *Group Dynamics, 1,* 231–240. doi:10.1037/1089-2699.1.3.231

Raudenbush, S.V., Bryk, A.S., Cheong, Y.F., Congdon, R.T., & du Tolt, M. (2011). *HLM 7: Linear and nonlinear modelling*. Lincolnwood, IL: Scientific Software International Inc.

Rosenbaum, A. (2007). *An examination of the knowledge about and attitudes toward concussion in high school athletes, coaches, and athletic trainers*. Unpublished manuscript. Department of Psychology, Pennsylvania State University.

Shields, D., Bredemeier, B., Gardner, D., & Bostrom, A. (1995). Leadership, cohesion and team norms regarding cheating and aggression. *Sociology of Sport Journal, 12,* 324–336.

Shields, D.L., Bredemeier, B.L., Lavoi, N.M., & Power, C.F. (2005). The sport behavior of youth, parents, and coaches: The good, the bad, & the ugly. *Journal of Research in Character Education, 3,* 43–59.

Shields, D.L., Bredemeier, B.L., Lavoi, N.M., & Power, C.F. (2007). Predictors of Poor sportspersonship in youth sports: Personal attitudes and social influences. *Journal of Sport & Exercise Psychology, 29,* 747–762. PubMed

Silva, J.M. (1983). The perceived legitimacy of rule violating behavior in sport. *Journal of Sport Psychology, 5,* 438–448.

Tucker, L.W., & Parks, J.B. (2001). Effects of gender and sport type on intercollegiate athletes' perceptions of the legitimacy of aggressive behaviors in sport. *Sociology of Sport Journal, 18,* 403–413.

Widmeyer, W.N., Brawley, L.R., & Carron, A.V. (1990). The effects of group size in sport. *Journal of Sport & Exercise Psychology, 12,* 177–190.

Widmeyer, W.N. (1971). *The size of sport groups with special implications for the triad*. Unpublished manuscript. University of Illinois, Champlain, IL.

Copyright of Sport Psychologist is the property of Human Kinetics Publishers, Inc. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.