

Journal of Applied Sport Psychology



Date: 18 December 2016, At: 17:30

ISSN: 1041-3200 (Print) 1533-1571 (Online) Journal homepage: http://www.tandfonline.com/loi/uasp20

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To cite this article: Luc J. Martin, Danny Balderson, Michael Hawkins, Kathleen Wilson & Mark W. Bruner (2016): Groupness and Leadership Perceptions in Relation to Social Identity in Youth Sport, Journal of Applied Sport Psychology, DOI: 10.1080/10413200.2016.1238414

To link to this article: http://dx.doi.org/10.1080/10413200.2016.1238414

	Accepted author version posted online: 21 Sep 2016. Published online: 21 Sep 2016.
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DOI: 10.1080/10413200.2016.1238414



RESEARCH NOTE

Groupness and Leadership Perceptions in Relation to Social Identity in Youth Sport

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Despite support for a number of consequences emanating from social identity in sport, much less is known pertaining to potential antecedents. This study sought to extend preliminary findings from recent youth sport research (e.g., Bruner et al., 2015) by investigating perceptions of groupness and leadership status in relation to social identity in 480 athletes. Results indicated that perceptions of groupness at the individual and team levels were positively related to social identity, as was being a formal or informal leader. As such, both identifying as a leader and perceiving an increased amount of groupness among teammates increased social identity.

Involvement in sport can afford many opportunities for enhanced youth development, and as such it is not surprising that an extensive amount of research has sought to better understand the determinants and outcomes of participation (e.g., Eime, Young, Harvey, Charity, & Payne, 2013). One area that has received recent attention is the extent to which youth form personal identities based on their sport involvement (e.g., Bruner, Boardley, & Côté, 2014). This concept is termed social identity and refers to the significance that an individual attributes

Received 29 March 2016; accepted 11 September 2016.

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to group membership, as well as the self-perceptions derived from that membership (Tajfel, 1981).

As a preeminent theoretical perspective in social psychology (Brown, 2000), the significance of identifying with a group has been demonstrated across numerous studies (e.g., Lembke & Wilson, 1998; Rubin & Hewstone, 1998). In the sport setting, identifying with a team has been associated with increased team cohesion (De Backer et al., 2011), adherence to team goals (Tauber & Sassenberg, 2012), attributions for team success and failure (Zucchermaglio, 2005), and prosocial athlete behaviors toward teammates (Bruner et al., 2014). Of interest, whereas these studies support the salience of social identity for participating athletes, an equally important question relates to how these identity perceptions can be rendered more or less likely to emerge. In one recent investigation, Bruner, Eys, Evans, and Wilson (2015) demonstrated that outcome interdependence—the extent to which outcomes (i.e., winning) are influenced by all members of the team—significantly predicted social identity. In recognizing the importance of understanding potential precursors that contribute to social identity, the current project extended the preliminary work of Bruner and colleagues (2015) by investigating potential antecedents in the youth sport setting.

Social identity has been conceptualized as a three-dimensional construct comprising *ingroup ties* (IGT; perceptions of bonding and similarity), *ingroup affect* (IGA; feelings associated with team membership), and *cognitive centrality* (CC; importance associated with team membership; Cameron, 2004). Presumably, certain constructs should make these dimensions more or less salient for team members. For example, to identify with a team, a prerequisite may be the degree to which it resembles an entity. Originally introduced as entitativity (Campbell, 1958), Hamilton (2007) purported the perception of an entity to be of equal importance to that of the actual properties of the group. In the physical activity setting, the term used to represent this concept is *groupness*, and it has been positively associated with both adherence (e.g., Spink, Wilson, & Priebe, 2010; Ulvick, Crozier, Spink, Wilson, & Priebe, 2012) and intentions to return (Spink, Ulvick, McLaren, Crozier, & Fesser, 2015). Consequently, the extent to which an athlete perceives that his or her team represents a "group" is likely to influence perceptions of similarity, feelings of association, and membership importance.

Membership within a group can also provide opportunities for self-reflection and understanding (e.g., Hogg, 2006), and sport teams have been described as being among the more prestigious of groups for young individuals (e.g., Sussman, Pokhrel, Ashmore, & Brown, 2007). Consequently, considering that the group forms a portion of an individual's identity, it is expected that the relative status of an individual within that group should also influence those perceptions. A form of status often discussed in the sport literature is leadership status, which is defined as the formal or informal roles occupied by athletes who influence a group and its ability to achieve its objectives (Loughead, Hardy, & Eys, 2006). The implications for social identity and leadership in sport have been acknowledged (e.g., Rees, Haslam, Coffee, & Lavallee, 2015; Slater, Coffee, Barker, & Evans, 2014), and it is probable that athletes who self-identify as leaders will also experience greater perceptions of social identity derived from that membership.

Therefore, the purpose of the current study was to investigate variables that should theoretically influence perceptions of identification with a team in youth sport athletes. Notably, it was hypothesized that perceptions of team groupness and self-identified leadership status would be positively related to athlete social identity with their teams.

METHODS

Participants

Four hundred eighty adolescent athletes ($M_{\rm age} = 14.88$, SD = 1.78, 266 female) from 31 school sport teams, including basketball (14 teams, 150 athletes), rugby (10 teams, 179 athletes), American football (four teams, 111 athletes), baseball (two teams, 31 athletes), and volleyball (one team, nine athletes) took part in the study. Teams were composed of 15.82 (SD = 10.05) members, who had participated on their team for 2.17 years (SD = 1.27) and in their sport for 4.25 years (SD = 2.78).

Measures

Groupness

Groupness was assessed using the five variables (i.e., common fate, social structure, mutual benefit, group processes, and self-categorization) advanced by Carron and Eys (2012) and subsequently utilized as a questionnaire by Spink and colleagues (2010). Each variable is represented by one item (e.g., "When something occurs within the team setting [e.g., somebody needs assistance, facility is closed] is it likely to affect most individuals?"; common fate), answered on a 9-point Likert-type scale anchored at the extremes with 1 (not at all) and 9 (very much so). Responses are averaged to provide a composite score, and previous researchers have demonstrated reliable scores with this scale (e.g., Spink et al., 2010).

Leadership status

Consistent with previous sport research (e.g., Crozier, Loughead, & Munroe-Chandler, 2013), leadership status was obtained by having athletes self-identify as formal (those designated by the team; e.g., captain, assistant captain) or informal (those who emerged informally through teammate interactions) leaders. Specifically two separate questions were asked, whereby athletes selected a "yes" or "no" box beside each (e.g., "Are you one of the formal leaders on this team?"). Athletes who selected both options were categorized as formal leaders, and those who did not select either were categorized as nonleaders. For the current sample, 15.2% self-identified as formal, 36.3% as informal, and 48.6% as nonleaders.

Social identity

Social identity was assessed using a previously adapted sport version (Bruner et al., 2014) of the questionnaire development by Cameron (2004), which includes 12 items that assess three dimensions of social identity (e.g., IGT: "I have a lot in common with other members of this team"; CC: "In general, being a team member is an important part of my self-image"; and IGA: "Generally, I feel good when I think about myself as a team member"). Responses are provided on a 7-point Likert-type scale anchored with 1 (*strongly disagree*) and 7 (*strongly agree*), and researchers have demonstrated adequate factorial validity and reliability with similar populations (Bruner et al., 2014; Bruner et al., 2015).

Procedure

After securing ethical approval from the lead investigator's institution and three participating school boards, invitations were sent to 50 coaches in a province in Western Canada. All teams were within a 200 km radius of the investigator's institution, and 31 teams (62% response rate) agreed to participate. After athlete and parental/guardian consent were obtained, questionnaires were completed at the team facilities (taking approximately 15–20 min).

Analyses

Missing item-responses were imputed via series-mean replacement (representing less than 1% of the data). Data were examined for normality, and a confirmatory factory analysis (CFA) was conducted to evaluate the factorial validity of the dependent variables. In addition, internal consistency (i.e., Cronbach's alpha), as well as descriptive and bivariate correlations, was computed for groupness and the subscales of social identity. Multilevel analyses using hierarchical linear modeling software (HLM7; Raudenbush, Bryk, Cheong, Congdon, & du Tolt, 2011) were utilized, which enabled the researchers to account for the nested nature of the participants. Using restricted maximum likelihood, the first models were computed for IGT, IGA, and CC to determine the level of independence. Leadership status was contrast coded, such that Contrast 1 referred to leaders versus nonleaders, and Contrast 2 referred to formal versus informal leaders (e.g., Cohen, Cohen, West, & Aiken, 2003). The multilevel models were then specified with groupness entered at the individual level (i.e., Level 1) centered around the team mean (group-mean centered) and the two leadership contrast variables entered at the individual level, uncentered in the model. At the group level (i.e., Level 2), the team means for groupness were included on the intercept after being grand-mean centered (e.g., Enders & Tofighi, 2007). The main analyses also involved a comparison of fixed and random slopes, and the assessment of assumptions for multilevel models, such as variance for individualand group-level residuals for IGT, IGA, and CC. Assumptions for multilevel models were assessed, involving normality of the residuals, multivariate normality, misspecification, and homogeneity of variance (Raudenbush & Bryk, 2002).

RESULTS

Preliminary Analyses

Univariate normality of the residuals was evidenced through visual inspection of histograms and Q-Q Plots, and tests for normality, for example, Shapiro-Wilk (480) > .80, p < .001. Multivariate normality of the residuals was supported using chi-square distribution (expected value) and Mahalanobis's distance (observed value) representing a 45° angle in a scatter plot (e.g., Tabachnick & Fidell, 2013). Cronbach's alphas for the social identity dimensions were .74 (IGT), .70 (IGA), and .52 (CC); however, a CFA demonstrated adequate model fit, $\chi^2(39) = 136.25$, p < .001; comparative fit index = .93, Tucker–Lewis index = .90, root mean square error of approximation = .07, standardized root mean square residual = .07. In addition, as the model did not improve when CC was removed from the analysis, the three dimensions were retained for further analyses. Descriptive statistics, reliability, and bivariate correlations can be found in Table 1. Group-level variance was assessed by running a null model without predictors (i.e., groupness, leadership status) for the social identity dimensions. As is reported in Table 2, the intraclass correlations were .29 (IGT), .11 (IGA), and .04 (CC).

Main Analyses

The multilevel analysis results can be found in Table 2, and the slope for groupness and leadership status was identified as fixed. The social identity dimensions (i.e., IGT, IGA, CC) were predicted by groupness and the contrast coding of leadership status as individual-level variables, and team groupness as a group-level variable. At the individual level, increased perceptions of groupness predicted greater IGT (b = 0.24, p < .001), IGA (b = 0.23, p < .001), and CC (b = 0.23, p < .001). Similarly, in comparison to nonleaders, leaders were

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	M	SD	α	1	2	3	4
Groupness	7.44	1.25	.70	_	.43**	.47**	.32**
Ingroup ties	4.93	.90	.74		_	.53**	.24**
Ingroup affect	5.36	.70	.70			_	.41**
Cognitive centrality	4 21	1.06	54				

Table 1
Descriptive and Bivariate Statistics for Study Variables

Note. N = 480. Scores for groupness range from 1 to 9, and IGT, IGA, and CC from 1 to 7. ** $p \le .001$.

1. 2. 3.

significantly more likely to experience increased perceptions of IGT (b=0.43, p<.001), IGA (b=0.13, p<.05), and CC (b=0.29, p<.001). No significant differences were identified between formal and informal leaders. At the team level, team means for groupness demonstrated significant coefficients for IGT (b=0.51, p<.001), IGA (b=0.35, p<.001), and CC (b=0.40, p<.001). With regard to overall variance, 26% ($f^2=0.35$; IGT), 23% ($f^2=0.30$; IGA), and 12% ($f^2=0.14$; CC) were accounted for, indicating the extent to which team groupness influenced social identity. A larger proportion of the variance was accounted for at the group level (IGT = 68%, $f^2=2.13$; IGA = 49%, $f^2=0.96$; CC = 70%, $f^2=2.33$) in comparison to the individual level (IGT = 18%, $f^2=0.22$; IGA = 19%, $f^2=0.23$; CC = 9%, $f^2=0.10$). The score variability can be attributed to team-level differences, meaning that perceptions of social identity among youth athletes were consistent within teams.

DISCUSSION

The purpose of this study was to determine the association between groupness and leadership status in relation to social identity in youth sport. As hypothesized, groupness (at both the individual and team levels) was a significant predictor of perceptions of social identity. Groupness represents the extent to which athletes perceive the team as an entity, and the social

Table 2
Coefficients for Groupness and Leadership Status Predicting Social Identity

Fixed effects	IGT (SE)	IGA (SE)	CC (SE)
Level 1			
Intercept	4.98 (0.05)**	5.37 (0.04)**	4.24 (0.05)**
Groupness	0.24 (0.03)**	0.23 (0.03)**	0.23 (0.04)**
Leader vs. nonleader	0.43 (0.07)**	0.13 (0.06)*	0.29 (0.08)**
Formal vs. informal leader	0.15 (0.09)	0.08 (0.08)	0.13 (0.15)
Level 2			· · ·
Groupness M	0.51 (0.11)**	0.35 (0.09)**	0.40 (0.09)**
Overall	26%	23%	12%
Level 1	18%	19%	9%
Level 2	68%	49%	70%
Intraclass correlation coefficient	0.29	0.11	0.04
-2*log likelihood	1122.11	888.70	1363.31

Note. IGT = ingroup ties; IGA = ingroup affect; CC = cognitive centrality. $^*p \le .05.^{**}p \le .01.$

identity dimensions investigated represent perceptions of close ties (IGT) and the associated feelings derived from (IGA) and importance attributed to (CC) that membership. Consequently, athletes who felt they were members of a team exhibiting a high degree of groupness were also more likely to perceive close ties, derive positive emotions from them, and indicate their importance. This is significant, as the influence of social identity is supported across various populations in activity settings (e.g., Bruner et al., 2014; Zucchermaglio, 2005).

With regard to leadership status, leaders were expected to experience greater perceptions of social identity—and this was the case. One explanation could relate to their various functions or responsibilities, ranging from promoting task objectives, to providing support to teammates (e.g., satisfying social needs), to representing the group to others (e.g., external functions; Loughead et al., 2006). A more theoretically grounded explanation can be gleaned from the social identity theory of leadership (Hogg, van Knippendberg, & Rast, 2012). This theory proposes that not only are prototypical team members those who emerge as leaders but membership for those individuals often shapes a portion of their identity, leading to greater identification with the group (Hogg et al., 2012). As an extension to this point, research involving social hierarchy suggests that individuals will identify with groups that afford opportunities for advantaged social positions (Seta & Seta, 1996). Considering that these athletes were asked to self-identify as leaders, they likely believed that the group provided such opportunities. Of interest, from the sport literature a hierarchy of leadership status depicts formal leaders as having greater status than other team members (e.g., Carron & Eys, 2012), and as such, the lack of difference between formal and informal leaders for identity perceptions is noteworthy. Consequently, the extent to which athletes believe they occupy a leadership role may be of equal importance for social identity to that of having one formally assigned.

As groupness and leadership status appear to be contributors to athlete perceptions of social identity, a discussion pertaining to practical implications is warranted. Improving group perceptions is often an intention when conducting team building activities (e.g., Paradis & Martin, 2012), and recent research with coaches highlights the amount of time and energy spent managing the social environment of their teams (Martin, Evans, & Spink, 2016). By undertaking activities that create clear team boundaries and perceptions of groupness, coaches can improve social identity within their athletes. In addition, our results suggest that *perceptions* of leadership status are as influential as formal designations, which provides opportunities for coaches to enable more athletes to undertake leadership roles. The ideal proportion of informal athlete leaders has been identified as two thirds (Crozier et al., 2013), and although informal leaders appeared to be underrepresented (i.e., one third) in our sample, this nonetheless identifies the large number of team members who can occupy informal leadership roles.

Despite the information obtained from this study, limitations must be recognized. First, we infer that groupness and leadership status are influencing social identity. Although there is conceptual support for this position, the cross-sectional nature of the study does not allow us to suggest causality. Future research could attempt to replicate these findings through prospective or experimental designs. For example, assessing social identity before and after athletes are formally identified as leaders would provide an interesting perspective—are athletes with greater perceptions of social identity typically selected as leaders, or does social identity increase as a result of their selection? Another limitation is the use of self-report leadership status, which assumes athletes were honest and that their interpretations were in concert with the beliefs of their teammates. Future work could utilize sociometry or social network analysis to strengthen the accuracy of leader identification (e.g., Fransen et al., 2015), and by extension our understanding of its relationship to social identity. Given the exploratory nature of this project, there are also a number of demographic variables (e.g., age, team size, sport

type) that could be included in future work. In fact, this information would be beneficial prior to attempting interventions in youth sport populations. Finally, the reliability for the *cognitive centrality* dimension was low, which has been the case in previous sport research (e.g., Bruner et al., 2014). Although we retained the dimension based on theoretical and empirical grounds (i.e., the model fit with the CFA), results pertaining to CC should be interpreted with caution. Future research should consider utilizing a recent positively worded sport version of the social identity measure (e.g., Bruner et al., 2015).

As a summary, this study is among the first to investigate potential antecedents to the development of social identity perceptions in youth athletes. Both experiencing increased amounts of groupness and serving in a leadership role were related to greater social identity, and these results provide implications that are both theoretically and practically relevant.

FUNDING

Funding was provided by the Alberta Center for Child, Family, and Community Research.

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