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Psychosocial Correlates of Overt Aggression in Intercollegiate Athletes

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ABSTRACT - This study examined the relationship between overt aggression and psychosocial adjustment in a sample of Division I intercollegiate athletes. A peer nomination instrument designed to assess overt aggression and sociometric status, and selected subscales of the Personality Assessment Inventory were administered to 105 intercollegiate athletes (49% female) at a large public university in the Southeastern United States. Results show that physical and verbal aggression were positively correlated with peer rejection for men and women, and verbal aggression was positively related to alcohol use for women. Implications of these findings for understanding the implications of overtly aggressive behavior among intercollegiate athletes are discussed.

Keywords: Overt aggression; Intercollegiate athletes; Peer rejection; Psychosocial adjustment; Verbal and physical aggression; Alcohol use

Introduction

Recent advances have been made in the study of peer aggression in both children and adolescents. Overt aggression, defined as physical (e.g., hitting, pushing) and verbal attacks (e.g., name calling, taunting, threatening), has been widely studied because of its deleterious effects on child development (e.g., Crick, 1997). Recently, aggressive behavior by athletes has gained the attention of the media, school and athletic personnel, and applied sport researchers (Kerr, 1999;

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Rowe, 1998; Storch et al., 2003). While such study has provided information regarding the nature of aggression and methods of intervention, little empirical attention has been given to psychosocial correlates of aggressive behavior. As such, the present study was designed to examine the relationship between overt aggression and psychosocial adjustment in a sample of intercollegiate athletes.

It has been suggested that some athletes believe aggression is an acceptable way to achieve instrumental goals (e.g., victory) during competition (Caron et al., 1997; Rowe, 1998). Such beliefs about the utility of aggression may generalize to non-competitive interpersonal relationships resulting in higher rates of aggressive behavior among athletes (Mintah et al., 1999). Despite the potential societal consequences of aggressive behaviors (e.g., team dismissal, suspension, negative public image, arrest), to date, no known published research with athletes has examined the relations of overt peer aggression to psychosocial adjustment in athletes. Investigating these relations is important as aggressive individuals may experience more emotional maladjustment than non-aggressive peers due to greater peer exclusion and rejection, as well as to the internalization of negative peer behaviors (e.g., insults). Supporting this, Nicoli (1987) anecdotally linked physical aggression to depression and substance use in professional athletes. In numerous studies with children and adolescents, overt aggression was associated with emotional and interpersonal difficulties including peer rejection, depression, and low self-esteem (Crick, 1996; Crick et al., 1997; Crick & Grotpeter, 1995; Prinstein et al., 2001). Storch et al. (2003) found that relational aggression, an alternative form of peer maltreatment that harms others by damaging interpersonal relationships, was positively related to peer rejection and alcohol use (women only) among intercollegiate athletes. Similarly, in a study of young adults, Werner and Crick (1999) found relational aggression to be positively related to peer rejection, alcohol use (women only), and borderline personality features, and negatively related to positive peer social interactions. Finally, Kaukiainen et al. (2001) found that physical and verbal aggression by coworkers was positively related to depressive and anxious symptomatology among adults.

The aim of the current study was to examine the association between two forms of overt aggression (verbal and physical) and psychosocial adjustment in a sample of intercollegiate athletes. We included several adjustment indices that have not been extensively examined in previous research to provide a more developmentally accurate assessment of psychosocial problems (e.g., borderline personality features, alcohol use). Based on studies examining relational aggression in college students (Storch et al., 2003; Werner & Crick, 1999) and findings from research examining psychosocial correlates of overt aggression among youth (e.g., Crick, 1996; Prinstein et al., 2001) and adults (Kaukiainen et al., 2001), we predicted that verbal and physical peer aggression would be positively correlated with peer rejection, depression, alcohol use, and borderline personality features, and negatively correlated with peer acceptance, social support, and prosocial behavior.

Method

Participants

One hundred and five intercollegiate athletes (49% female) from a large public university in the Southeastern United States participated in the study. Members from various teams were recruited, with participation as follows: women's soccer (n = 20), women's volleyball (n = 11), women's basketball (n = 4), women's swimming (n = 16), men's swimming (n = 15), men's tennis (n = 4), and football (n = 35). The mean age of participants was 19 years, 9 months for the total sample (*SD* = 19 months). The ethnic distribution was 61.9% Caucasian, 23.8% African American, 6.7% Hispanic, 1.9% Asian, and 5.8% "other."

Measures

Peer assessment of overt aggression and social adjustment. A 24-item peer nomination instrument was used to assess overt aggression and social adjustment (Werner & Crick, 1999). The peer nomination instrument used includes subscales assessing overt aggression, prosocial behavior, and socionomic status. Participants were instructed to nominate up to five teammates whom they believed best fit each behavioral description of an aggressive or prosocial act. Up to ten nominations were allowed for the two socionomic questions assessing peer rejection and acceptance Each participant was provided with a roster of his or her team to assist in the peer nomination process. The number of nominations each athlete received was summed and standardized within teams. Individual scores for the subscales were computed by summing the standardized scores for the items in each scale. For the purpose of the present study, the following subscales were examined: Overt Aggression (8 items; e.g. "This person pushes or shoves other people"); Prosocial Behaviors (9 items; e.g., "This person is dependable"); Peer Acceptance (1 item; "With whom do you like to spend time the most?"); and Peer Rejection (1 item; "With whom do you like to spend time the least?"). The Cronbach' s α for the Overt Aggression and Prosocial Behaviors scales were .72 and .82.

Scales of the Personality Assessment Inventory. The Personality Assessment Inventory (PAI; Morey, 1991) is a self-report instrument that assesses clinical symptomatology, personality features, and adjustment. The PAI has demonstrated reliability and validity in use with both clinical and non-clinical adult populations (see Morey, 1991, for a review). Respondents indicate the degree to which statements are true for them on a scale anchored by 0 (false) and 3 (always). Subscale scores are derived by summing items; higher scores indicate more severe symptomatology. The following subscales of the PAI were used for this study: Depression, Alcohol, Borderline Personality Features, and Nonsupport. These subscales are described below.

Depression. The Depression subscale assesses three dimensions of depressive symptomatology: cognitive (8 items; e.g. "I feel I have let everyone down"), affective (8 items; e.g. "Much of the time I am sad for no reason"), and physiological (8 items; e.g. "I've been moving more slowly than usual"). Subscale scores were calculated by summing items within each dimension. The Cronbach's α for the cognitive, affective, and physiological subscales were .88, .84, and .70.

Alcohol Problems. Alcohol-related behaviors and consequences were assessed using a twelve-item subscale. This subscale examines both the frequency and quantity of alcohol consumption (e.g. "I hardly ever drink alcohol" [reverse coded]) and the consequences of alcohol use, abuse and dependence (e.g. "My drinking has never gotten me into trouble" [reverse coded]). The Cronbach's α for this scale was .80.

Nonsupport. The degree of perceived social support was assessed using responses to eight items (e.g., "Most people I'm close to are very supportive" [reverse coded]; Cronbach's α = .80). Higher items on this scale reflect lower levels of social support.

Borderline Personality Features. Features of borderline personality were assessed with 24 items comprising four symptomatology subscales: affective instability (six items; e.g., "My mood can shift quite frequently"), identity problems (six items; e.g., "Sometimes I feel terribly empty inside"), negative relationships (six items; e.g., "I've made some real mistakes in the people I've picked as friends"), and self-harm (six items; e.g., "When I'm upset, I typically do something to hurt myself"). Cronbach's α for the subscales were .67, .70, .65, and .72.

Procedure

Relevant ethical permissions for this study were obtained. Athletes completed the questionnaires at a group-administration session arranged with the coaches of each sports team. Participants who did not attend the session were not included within the study. Participants were allowed as much time as necessary to complete the materials. A research assistant supervised each session, provided instructions for completing the questionnaires, and obtained informed consent from each participant. All identifying information was removed from the instruments following completion.

Results

Gender differences in social-psychological adjustment are reported and discussed elsewhere (Storch et al., 2003). Briefly, female athletes reported higher levels on all three subscales of the Depression scale – cognitive features, affective features, and physiological features. Women also reported higher levels of identity disturbances, negative relationships, and self-harm.

Pearson correlation coefficients were computed between peer nominations of physical and verbal aggression and adjustment indices. Given the gender differences described above, correlations were computed separately for male and female athletes (see Table 1). The alpha level was set at .01 for these analyses to reduce the probability of making a Type I error. For both men and women, physical and verbal aggression were positively related to peer rejection. Verbal aggression was related to increased alcohol use in women only. Fisher's r to z tests showed a significant difference in the magnitude of the correlations between men and women for alcohol problems ($z = 2.51$, $p < .01$).

Discussion

Consistent with studies examining relational aggression (Storch et al., 2003; Werner & Crick, 1999), higher levels of physical and verbal aggression in intercollegiate athletes were positively

Table 1: Pearson correlation coefficients of dependent variables with physical and verbal aggression

	Women		Men	
Dependent variable	Physical	Verbal	Physical	Verbal
Peer-reports				
Peer acceptance	.24	.05	−.06	−.09
Prosocial behavior	.10	−.02	−.02	−.01
Peer rejection	.29*	.44*	.39*	.35*
Self-reports				
Alcohol problems	.24	.30*	−.25	−.19
Nonsupport	−.08	-.06	−.07	−.13
Depression				
Cognitive	.00	−.06	−.10	−.24
Affective	.07	.00	−.16	−.25
Physiological	.00	-.08	−.10	−.01
Borderline features				
Affective instability	.00	−.05	−.18	−.20
Identity problems	.05	.06	−.14	−.09
Negative relationships	−.18	−.14	-.11	−.12
Self-harm	.18	.08	.05	.04

*$p < .01$

associated with peer rejection in both males and females. Further, female athletes who were nominated by their teammates as verbally aggressive, reported higher levels of alcohol use. These findings are unique in that previous research on overt aggression in athletes has yet to empirically examine psychosocial adjustment correlates. From these results, we might speculate that observable aggressive behaviors contribute to rejection among teammates. Similarly, alcohol may serve as a coping mechanism, albeit a maladaptive one, for the increased peer rejection experienced by female athletes. Alternatively, alcohol use by females may be associated with an increased likelihood of verbal aggressive behaviors. There are several implications of these findings. Coaches and athletic personnel would be well advised to identify aggressive team members to prevent damage to team cohesion and, if warranted, refer the athlete for appropriate psychological intervention. Storch and colleagues (2003) have also suggested that athletic personnel hold team meetings to voice and resolve interpersonal disputes and enhance communication among players and staff.

Contrary to our prediction, overt aggression was not associated with borderline personality features, depression, and social support. One possibility is that overt aggression in intercollegiate athletes is differentially related to some forms of maladjustment such as poor peer relations and alcohol use (Werner & Crick, 1999). Some have also suggested that athletic participation has distress buffering properties, perhaps resulting in lower base-rates of psychopathology among

athletes (International Society of Sport Psychology, 1992; Ryska, 2002; Steiner, McQuivey, Pavelski, Pitts, & Kraemer, 2000).

Limitations of this study should be taken into account when interpreting the results. First, a lack of statistical power may have contributed to non-significant findings. Second, findings from this study may not generalize to other sociodemographic groups given that we sampled Division I athletes from one public university in the Southeastern United States. Third, all members of each team did not participate in the study, perhaps resulting in a biased sample. Future studies should attempt to include entire team rosters. Fourth, overt aggression accounted for a relatively small amount of variance in psychosocial adjustment and thus, numerous other factors will be important to investigate to gain a clearer understanding of adjustment correlates. Fifth, rates of overt aggression towards peers may differ as a function of team membership, particularly when considering that certain sports have been associated with higher levels of aggressive behavior (e.g., football, hockey; Caron et al., 1997; Humphrey & Kahn, 2000). Future research should investigate if rates and psychosocial correlates of overt aggression differ in high and low aggressive teams. Finally, the correlational nature of this study prevents causality from being established. While this study views overt aggression as contributing to adjustment difficulties, it may in fact be that the temporal relationship is bi-directional. Despite these limitations this study offers the first known findings to investigate the relationship between overt aggression and psychosocial adjustment in intercollegiate athletes.

References

Caron, S. L., Halteman, W. A., & Stacy, C. (1997). Athletes and rape: Is there a connection? *Perceptual and Motor Skills, 85*(1), 117–127. https://doi.org/10.2466/pms.1997.85.1.117

Crick, N. R. (1996). The role of overt aggression, relational aggression, and prosocial behavior in the prediction of children's future social adjustment. *Child Development, 67*(6), 2317–2327. https://doi.org/10.2307/1131625

Crick, N. R. (1997). Engagement in gender normative versus nonnormative forms of aggression: Links to social-psychological adjustment. *Developmental Psychology, 33*(4), 610–617. https://doi.org/10.1037/0012-1649.33.4.610

Crick, N. R., Casas, J. F., & Mosher, M. (1997). Relational and overt aggression in preschool. *Developmental Psychology, 33*(4), 579–588. https://doi.org/10.1037/0012-1649.33.4.579

Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development, 66*(3), 710–722. https://doi.org/10.2307/1131945

Humphrey, S. E., & Kahn, A. S. (2000). Fraternities, athletic teams, and rape. *Journal of Interpersonal Violence, 15*(12), 1313–1322. https://doi.org/10.1177/088626000015012003

International Society of Sport Psychology. (1992). Physical activity and psychological benefits: A position statement from the International Society of Sport Psychology. *Journal of Applied Sport Psychology, 4*(1), 94–98. https://doi.org/10.1080/10413209208406462

Kaukiainen, A., Salmivalli, C., Björkqvist, K., Osterman, K., Lahtinen, A., Kostamo, A., & Lagerspetz, K. (2001). Overt and covert aggression in work settings in relation to the

subjective well-being of employees. *Aggressive Behavior, 27*(5), 360–371. https://doi.org/10.1002/ab.1021

Kerr, J. H. (1999). The role of aggression and violence in sport: A rejoinder to the ISSP position stand. *The Sport Psychologist, 13*(1), 83–88. https://doi.org/10.1123/tsp.13.1.83

Mintah, J. K., Huddleston, S., & Doody, S. G. (1999). Justifications of aggressive behavior in contact and semicontact sports. *Journal of Applied Social Psychology, 29*(3), 597–605. https://doi.org/10.1111/j.1559-1816.1999.tb01403.x

Morey, L. C. (1991). *The Personality Assessment Inventory*. Psychological Assessment Resources.

Nicholi, A. M. (1987). Psychiatric consultation in professional football. *New England Journal of Medicine, 316*(17), 1095–1100. https://doi.org/10.1056/NEJM198704233161706

Prinstein, M. J., Boergers, J., & Vernberg, E. M. (2001). Overt and relational aggression in adolescents: Social-psychological adjustment of aggressors and victims. *Journal of Clinical Child Psychology, 30*(4), 479–491. https://doi.org/10.1207/S15374424JCCP3004_05

Rowe, C. J. (1998). Aggression and violence in sports. *Psychiatric Annals, 28*(5), 265–269. https://doi.org/10.3928/0048-5713-19980501-06

Ryska, T. A. (2002). Perceived purposes of sport among recreational participants: The role of competitive dispositions. *Journal of Sport Behavior, 25*(1), 91–112.

Steiner, H., McQuivey, R. W., Pavelski, R., Pitts, T., & Kraemer, H. (2000). Adolescents and sports: Risk or benefit? *Clinical Pediatrics, 39*(3), 161–166. https://doi.org/10.1177/000992280003900304

Storch, E. A., Werner, N. E., & Storch, J. B. (2003). Relational aggression and psychosocial adjustment in intercollegiate athletes. *Journal of Sport Behavior, 26*(2), 155–167.

Werner, N. E., & Crick, N. R. (1999). Relational aggression and social-psychological adjustment in a college sample. *Journal of Abnormal Psychology, 108*(4), 615–623. https://doi.org/10.1037/0021-843X.108.4.615