

Effects of Gender and Sport Type on Intercollegiate Athletes' Perceptions of the Legitimacy of Aggressive Behaviors in Sport

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This study examined 162 Division I-A intercollegiate athletes' perceptions of the legitimacy of aggression in sport. Athletes in collision, contact, and noncontact sports completed the Sport Behavior Inventory (Conroy, Silva, Newcomer, Walker, & Johnson, in press). Overall, the athletes did not consider aggression legitimate. A 3 (sport type) x 2 (gender) ANOVA ($\alpha = .05$) with post hoc comparisons showed that athletes in contact and noncontact sports scored lower than those in collision sports. Females scored lower than males. A significant interaction revealed a greater gender difference in noncontact sports than in collision or contact. In noncontact sports, gender role expectations could be the dominant influence for males, while role expectations and in-sport behavioral norms influence females. In collision and contact sports, in-sport norms could reinforce role expectations for males but encourage females to demonstrate behaviors inconsistent with traditional expectations.

Cette étude porte sur les perceptions de 162 athlètes universitaires de Division 1-A à l'égard de la légitimité de l'agression en sport. Des athlètes impliqués dans des sports de collision, de contact et de non-contact ont complété l'Inventaire du Comportement Sportif (Conroy, Silva, Newcomer, Walker et Johnson, sous presse). En général, les athlètes n'ont pas considéré l'agression comme légitime. Une analyse ANOVA 3(type de sport) x 2 (sexe) ($\alpha = .05$) avec des comparaisons post hoc permet de démontrer que les athlètes en sports de contact ou de non-contact ont des scores plus faibles que ceux dans des sports de collision. Les femmes ont également eu des scores moins élevés que les hommes. Une interaction significative a révélé une différence de genre plus grande dans les sports de non-contact que dans les sports de contact ou de collision. Dans les sports de non-contact, les attentes reliées aux rôles sexuels pourraient être l'influence dominante pour les hommes, tandis que les attentes de rôle et les normes de comportement associées au sport pourraient influencer les femmes. Dans les sports de contact ou de collision, les normes de comportement associées au sport pourraient renforcer les attentes de rôle chez les hommes mais encourager les femmes à avoir des comportements contraires aux attentes traditionnelles.

Aggression in sport has been defined as behaviors or actions performed with the intent to harm an opponent, either physically or psychologically (Bandura, 1973, 1978; Bredemeier, 1985; Silva, 1983). Aggressive sport behaviors include actions such as illegal hitting, striking an opponent with a piece of equipment, deliberately physically debilitating a competitor, and psychologically tormenting opponents. As Stephens (1998) pointed out, competitive sport frequently rewards such aggressive behaviors, even though they are contrary to social norms. In boxing, for example,

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the most celebrated victories are those in which one competitor renders the other unconscious. In men's ice hockey, some players are designated as "enforcers," who are charged with playing aggressively in order to intimidate the opponents. The fact that aggressive behavior is accepted and even encouraged within some sports raises questions about how athletes learn to be aggressive and whether some sport environments foster aggression to a greater extent than others.

Social learning theory postulates that individuals learn behaviors from subcultures and primary social groups via modeling, vicarious learning, and reinforcement (Akers, 1998; Bandura, 1973, 1977, 1978; Donnelly & Young, 1988; Smith, 1983). According to Akers, social learning occurs through an individual's association with others, the individual's observation of which behaviors are reinforced, and her/his exposure to a preponderance of particular types of behaviors. Theoretically, the individual's learned behaviors ultimately will conform to the behaviors of the group.

Sport, Gender, and Learned Aggression

Following the tenets of social learning theory, it is reasonable to suggest that athletes may learn aggressive sport behaviors through the influences of primary social groups such as their teammates and coaches. In an examination of this notion, Silva (1983) investigated male and female students' perceptions of the legitimacy of rule-violating behavior. The athletes in Silva's sample participated in collision sports (i.e., football, ice hockey, men's lacrosse, and men's and women's rugby), contact sports (i.e., basketball, field hockey, soccer wrestling, and women's lacrosse), noncontact sports (i.e., baseball, softball, swimming, track and field, and volleyball), or a combination of two or more of these categories. Silva showed the students slides that clearly depicted rule-violating behaviors in sport (e.g., brushback pitches, elbowing, spearing, slashing). He asked the students to rate their perceptions of the legitimacy of the behaviors depicted in the slides and found that male athletes were accepting of these aggressive acts, while female athletes found the behaviors unacceptable. Silva also found that within all four groups, males were significantly more likely to approve of the acts than were females. Similar results were later reported by Bredemeier (1985), who found a gender difference in perceived legitimacy of aggression among high school and college basketball players, with males endorsing a significantly greater number of aggressive acts than females.

Silva (1983) also found that males, but not females, were more accepting of aggression as the level of physicality of sport increased from noncontact to collision, the number of years of participation increased, and the level at which the athletes had competed (youth sport to college) ascended. Bredemeier (1985) did not find a comparable difference between the high school and college athletes in her sample. In a subsequent study, however, Bredemeier, Weiss, Shields, and Cooper (1986) found a positive correlation between self-reported physical aggression tendencies and experience in high-contact sports for boys and participation in medium contact sports for girls.

Bredemeier, Weiss, Shields, and Cooper (1987) used slides depicting potentially injurious acts to ascertain perceptions of the legitimacy of sport aggression among male and female youngsters in the fourth through the seventh grades. Similar

to Silva (1983), they found that boys who had participated longer in high-contact sports perceived more acts as legitimate than did boys who had participated for shorter periods of time. Girls' legitimacy judgments were not related to their sport involvement.

In a study of female high school basketball players, Ryan, Williams, and Wimer (1990) used the Continuum of Injurious Acts (CIA; Bredemeier, 1985) to assess experienced athletes' (i.e., >1 year) and inexperienced athletes' (i.e., first-year) perceptions of the legitimacy of aggression. Prior to the season, the inexperienced players were more accepting of aggressive acts than were the experienced players. At the end of the season, however, the perceptions of the inexperienced players had declined to the same level as the experienced players, whose perceptions had remained constant across the season. Ryan et al. posited that team norms related to the legitimacy of aggressive behaviors might have influenced the new players to develop judgments of legitimacy of aggression similar to those of the veteran players.

Stephens and Bredemeier (1996) provided additional evidence of the effects of in-sport socialization among female soccer players who were 14 years of age or younger. They found moderate relationships between players' expressed likelihood of committing an aggressive act in sport and (a) their perceptions of their teammates' pro-aggressive norms and (b) their perceptions of their coaches' emphasis on ego-oriented goals. Stephens and Bredemeier concluded that these variables, along with players' psychological levels of moral development, act in concert to produce a team's moral atmosphere which, in turn, influences athletes' perceptions of the legitimacy of aggressive acts in sport.

Using the Sport Behavior Inventory (SBI), Conroy, Silva, Newcomer, Walker, and Johnson (in press) assessed perceptions of children and adolescents in collision, contact, and noncontact sports. Although the athletes as a group did not perceive aggressive sport behaviors to be acceptable, males scored significantly higher on the SBI than did females. Regression analysis revealed, however, that when the effects of participation in collision sport were partialled out, gender was not a predictor of legitimacy perceptions. The amount of variance accounted for by participation in collision sport was significant, but small ($R^2 = 3\%$).

Nixon (1997) studied the incidence of aggressive acts outside sport for male and female college athletes in contact and noncontact sports. He found a significant, but relatively weak, relationship between type of sport (contact vs. noncontact) and incidence of aggressive behavior outside of sport for both males ($f^2 = .08$) and females ($f^2 = .06$). Nixon also found a link between gender and a belief in the value of "toughness" in sport, with males being more likely to value toughness than females ($f^2 = .05$). Consistent with Silva (1983), Nixon suggested that participation in intercollegiate contact sport might "induce, or at least reinforce, aggressive behaviors outside sport among females as well as males in intercollegiate athletics" (p. 388).

Post-Title IX Athletes

Blinde (1989) observed that following the implementation of Title IX, women's sport programs moved from the process-oriented model of athletics promulgated by the Association for Intercollegiate Athletics for Women (AIAW)

toward the male model, which emphasizes recruiting and scholarships, winning, and a complex system of rules. She asked female athletes, who had participated at 10 NCAA Division I institutions between 1970 and 1986, to rate the degree to which a series of characteristics applied to the sport programs in which they had participated. Examples of characteristics associated with the male model of sport were availability of athletic scholarships, more than 25% of team members on scholarship, high interest in recruiting, and strong emphasis on winning. Blinde also asked the participants to identify values associated with their sport programs. Examples of values primarily associated with the male model of sport were competitive, demanding, and serious. Examples of values associated with an alternative model were student-centered, fun, and educational. Blinde found a moderate relationship ($r^2 = .28$) between the extent to which women's athletics programs paralleled the characteristics of men's program and the extent to which the athletes identified those values associated with male model of sport. Based on these results, Blinde suggested that changes in women's intercollegiate sport brought about by Title IX could have resulted in the norms and values of some women's sports becoming similar to those in the traditional male model of sport.

According to Coakley (1994), the tendency for tolerance of rule violations to rise as the competitive level rises is more obvious among males than among females. He speculated that the increased rewards for winning that are currently available to female athletes in some sports could have influenced them to adopt the male definition of sports and consequently to increase their use of aggressive tactics. Conroy et al. (in press) and Nixon (1997) also conjectured that if women's participation in "aggressive" sport increases and if they adopt male values toward aggression in sport, it would be reasonable to expect traditional gender differences in attitudes toward aggression to diminish. Nixon further hypothesized that if sport involvement results in both genders becoming more aggressive, it could be that the social learning that occurs in the sport setting affects women and men differentially. That is, factors that promote the acceptance of aggression in sport might *reinforce* conventional gender role expectations for males but encourage females to engage in behaviors that *challenge* gender stereotypes.

In summary, researchers have suggested that perceptions of the legitimacy of aggression in sport might be learned through the socialization process as athletes observe and accept team norms and atmospheres. Research has also suggested that this socialization process promotes an acceptance of aggression to a greater degree among athletes in high-contact sports than those in low-contact or noncontact sports (Conroy, et al., in press; Nixon, 1997) and among male athletes more so than among female athletes (Bredemeier, 1985; Silva, 1983). Silva (1983), Blinde (1989), Coakley (1994), and Nixon (1997) have wondered if post-Title IX female athletes' perceptions of the legitimacy of aggressive behavior might begin to approximate the perceptions of male athletes as a result of their involvement with the model of sport promoted by the NCAA. If so, one could expect gender differences to diminish.

The purpose of this study, therefore, was to examine contemporary male and female, Division I-A, intercollegiate athletes' perceptions of the legitimacy of aggressive behaviors in collision, contact, and noncontact sports. The first research question was whether females and males differ in their perceptions of the legitimacy of aggression in sport. Given that Silva (1983) and Bredemeier (1985) found males more accepting of aggression in sport than females, we hypothesized

that the male athletes in this sample would perceive aggressive behaviors as more legitimate than would the females.

The second research question was whether athletes in different types of sports (i.e., collision, contact, and noncontact) have different perceptions of the legitimacy of aggression in sport. There are contradictions in the literature concerning the influence of in-sport socialization of athletes' perceptions of the legitimacy of aggression. Silva (1983) found evidence to suggest that, for males, the amount of physicality fundamental to specific sport types was associated with the degree of aggression athletes in these sports consider legitimate. Ryan et al. (1990) and Stephens and Bredemeier (1996) also found evidence of the existence of in-sport socialization, but its effects were unrelated to contrasting physical demands of sport types. Conroy et al. (in press) discovered significant, but small, effects related to sport type and athletes' perceptions of the legitimacy of aggression in sport. Based on the findings reported by Silva, Ryan et al., Conroy et al., and Stephens and Bredemeier, we hypothesized an effect of in-sport socialization such that athletes in collision sports would perceive aggression as more legitimate than would athletes in the other two sport types.

Finally, we raised a question that had not been directly addressed in previous studies. It is intuitively appealing to assume that athletes are influenced simultaneously by societal gender role expectations and team norms and environments. No study, however, has investigated the possibility of an interaction between gender and sport type with respect to athletes' perceptions of aggression. Silva's (1983) and Bredemeier et al.'s (1987) findings intimated that such an interaction might exist when they reported that, for males but not for females, involvement in high-contact sports was a significant predictor of acceptance of aggression in sport. The design of their studies, however, did not permit the detection of an interaction. Our third research question, therefore, was whether an interaction exists; that is, are gender differences in perceptions of the legitimacy of aggression in sport greater in some sport types than in others and, if so, what might such a finding mean? This question was exploratory, so we advanced no hypothesis.

Method

This study was conducted at a mid-sized NCAA Division I-A institution in the Midwestern United States in spring, 1999. An a priori statistical power analysis revealed that 159 participants would generate .80 power to detect an f of .25 at an alpha level of .05 (Bachner, Faul, & Erdfelder, 1996; Cohen, 1988).

Participants

The sample consisted of 81 female and 81 male athletes. Five ethnic groups were represented: Black/Non-Hispanic (6.8%), Hispanic (2.5%), Multi-racial (3.1%), White/Non-Hispanic (87.0%), and other (.6%). The ages of the participants ranged from 18 to 24 years, with an average age of 19.75 years ($SD = 1.38$).

We applied the delineation used by Silva (1983) and Conroy et al. (in press) to differentiate between sport types (i.e., collision, contact, noncontact). Of the 162 participants, 55 participated in collision sports (women's rugby; men's ice hockey and football). Fifty-three athletes participated in contact sports (women's and men's basketball and soccer), and 54 were in noncontact sports (women's

softball, gymnastics, and volleyball; men's baseball; women's and men's tennis, golf, swimming, and track and field/cross country).

Instrument

A modified Sport Behavior Inventory (SBI; Conroy et al., in press) was used to measure the participants' perceptions of legitimacy of aggressive sport behaviors.¹ The SBI presents 10 sport scenarios. In the modified version, each scenario poses 6 questions regarding the participant's perception of the legitimacy of the actions portrayed in the scenario.² The first question asks if the respondent believes it is "OK" to do what is portrayed in the scenario (e.g., intentionally kick a soccer ball directly into a defender's stomach). Five questions ask if that action would be "OK" under certain conditions (e.g., the athlete knew she/he wouldn't be caught by the official, 2 min were left in a close game, or someone from the other team had done it first). Participants respond to the questions on an 8-point scale (1–2 = *Never OK*; 3–4 = *Seldom OK*; 5–6 = *Often OK*; 7–8 = *Always OK*).³ Conroy et al. designate 4.5, the midpoint of the 8-point scale, as the "threshold of legitimacy"; that is, if a participant's score on an item is 4.5 or above, the inference is that she/he considers the action described in that scenario to be legitimate. Each participant's score is the mean of the 60 items.

Procedure

We employed stratified random sampling to select female and male participants from collision, contact, and noncontact sports. After obtaining their informed consent, the first author administered the SBI in a classroom setting. To maximize internal validity, the participants were encouraged to provide honest responses and were assured that all responses would be anonymous.

Data Analysis

The data were analyzed with a 3 x 2 analysis of variance (ANOVA), with type of sport (3 levels) and gender (two levels) as the independent variables and the SBI score as the dependent variable. Alpha was established at .05.

Results

In this sample, the internal consistency of the 60-item SBI was stable with a Cronbach's alpha of .99. For the sample as a whole, the average score on the SBI items was 3.45 ($SD = 1.60$), which was in the "Seldom OK" category. As shown in Table 1, all group means were below 4.5, indicating that each group considered the aggressive behaviors described in the SBI scenarios to be "Never" or "Seldom" acceptable.

The ANOVA detected significant main effects for gender and sport type, as well as a significant interaction (Table 2). Although neither males nor females characterized the aggressive behaviors described on the SBI as legitimate, the females perceived them as being significantly less legitimate than did the males (Cohen's $d = .45$). With respect to sport type, a post hoc Fisher-Hayter sequential procedure for unequal n (Kirk, 1995) showed that participants in contact sports were significantly less accepting of the aggressive behaviors than were athletes in collision sports (q

Table 1 Legitimacy of Aggression Item Means and Standard Deviations for Gender and Sport Type^a on the Sport Behavior Inventory^b

Group	N	M	SD
Female	81	3.10	1.39
Male	81	3.80	1.73
Collision	55	4.02	1.68
Contact	53	3.10	1.37
Noncontact	54	3.20	1.60

^aCollision sports (women's rugby, men's ice hockey, men's football); Contact sports (women's and men's basketball, women's and men's soccer); Noncontact sports (women's softball, gymnastics, volleyball; men's baseball; women's and men's tennis, golf, swimming, track and field/cross country).

^bThe higher the score, the more legitimate the participant considers the act. The group mean is the average of the item scores of all the participants in the group. The range of possible scores is 1 to 8.

Table 2 Analysis of Variance for Gender and Sport Type Effects on Scores on the Sport Behavior Inventory (SBI)

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	<i>h</i> ²
Gender	1	20.29	20.29	9.18	.003	.049
Sport type	2	28.19	14.10	6.38	.002	.068
Gender 3 sport type	2	20.26	10.13	4.58	.012	.049
Error	156	344.79	2.21			
Total	161	413.50				

= 4.55, $p < .05$; $d = .61$). Noncontact sport athletes also expressed less approval than athletes in collision sports ($q = 4.05$, $p < .05$; $d = .50$).

As shown in Figure 1, the gender difference in perception of the legitimacy of aggressive behaviors was considerably greater in noncontact sports than in contact and collision sports, resulting in the significant interaction between gender and sport type. The combined effects of gender, sport type, and the interaction explained 16.6% (h^2) of the variance in SBI scores.

Discussion

The first finding of this study is that none of the groups in the sample consider aggression in sport to be legitimate. All group means are below the threshold for legitimacy and reflect the value of "seldom OK" on the SBI scale. These findings

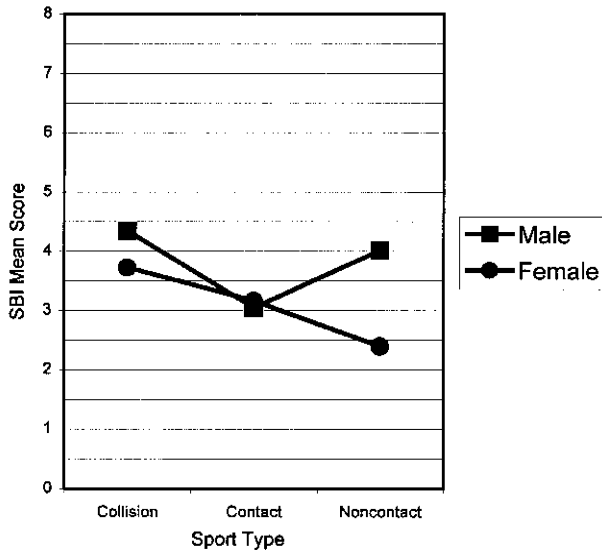


Figure 1 — Significant gender-by-sport type interaction for intercollegiate athletes' perceptions of the legitimacy of aggression in sport as measured by the Sport Behavior Inventory (SBI).

are congruent with those of Conroy et al. (in press), who also found that group means in their sample of children and adolescents did not reach the threshold of legitimacy on the SBI. Conroy et al. attributed this result, in part, to a possible lack of ecological validity of research designs that require participants to react to stressful situations in a noncompetitive environment, such as a classroom. Although the participants in the present study also completed the instrument in a classroom, we are reluctant to accept the ecological invalidity argument because the instrument asks athletes if they “believe” certain acts are “OK,” not if they would actually commit those acts. It is possible, however, that the internal validity of this study was compromised by the social desirability effect, wherein the athletes would report perceptions of the legitimacy of aggression that are compatible with known social norms rather than their actual feelings about aggression.

In this sample, female athletes are less accepting of aggressive behaviors in sport than are male athletes, and participants in contact and noncontact sports are less accepting than participants in collision sports. These findings support our hypotheses, but they are qualified by the significant interaction, which indicates that gender and sport type have a *joint* influence on the athletes' perceptions. The interaction, therefore, is the focal point of the interpretation.

As Figure 1 shows, the significant interaction is due to the fact that the gender difference in noncontact sports is markedly greater than the gender differences in contact and collision sports. This result is congruent with Nixon's (1997) conjecture that females' and males' perceptions of the legitimacy of aggressive acts in sport may be affected differentially within different sport types. For example, females in noncontact sports might be influenced by gender role expectations promulgated by the larger society. They might also be influenced by the noncontact sport environment, which does not reward aggressive behaviors. These combined influences

could explain the relatively low level of acceptance of the legitimacy of aggressive behaviors expressed by the females in this sample. On the other hand, men in noncontact sports, might be influenced more by the traditional societal belief that male athletes should be "tough" (Nixon) than by a team environment that does not reward aggression. This hypothesis is consonant with Nixon's suggestion of a dominant influence of gender role learning in the broader social context for male athletes.

The smaller gender difference in collision sports might indicate that both males and females in those sports are influenced by team norms that do reward aggressive behaviors. If so, this finding would provide some support for Nixon's (1997) suggestion that high-contact sports could reinforce societal gender role expectations for men while outweighing the effects of societal gender role learning for women.

The similarity of perceptions of females and males in both contact and collision sports might be related to changes in the female sport environment since women's sports were incorporated into the NCAA. Little is known about women's earlier attitudes toward aggression in collision sports because sports involving heavy body contact (e.g., rugby) were not available to most women prior to Title IX. Nonetheless, the findings of this study could lend some credence to previous speculation that female athletes exposed to post-Title IX intercollegiate sport might adopt values more consistent with the male model espoused by the NCAA (Blinde, 1989; Coakley, 1994; Nixon, 1997; Silva, 1983).

Previous studies of intercollegiate athletes did not use the SBI, however, so it is unknown whether female college athletes' perceptions of the legitimacy of aggression have become more like men's, or males' perceptions have become more like women's. The assumption that women have adopted male values by virtue of operating within the NCAA model ignores the socializing influence of the larger society for this cohort of athletes. It also devalues the influence that women have brought to the environment in combined athletic programs. Moreover, the fact that neither the males nor the females in this sample consider aggression in sport to be legitimate suggests the possibility that contemporary athletes have been socialized both in society and in the combined sport environment to restrain aggressive behaviors (Conroy et al., in press). This possibility should be considered in future research.

The variables in this study account for 16.6% of the variance in SBI scores. Although Cohen (1988) characterizes an effect of this magnitude as large, the 83.4% of the variance that is unexplained can not be ignored. Intercollegiate athletes are exposed to a variety of social influences. Their perceptions of aggression in sport are shaped by many factors, resulting in competing explanations for the results of this study. For example, the design of this study did not allow for the identification of athletes who might have been predisposed, for whatever reasons, to either approve or disapprove of aggression. If athletes who approve of aggression were skilled in high-contact sports, they might tend to select these sports as outlets for aggressive behaviors. Likewise, athletes who are not inclined to approve of aggression might gravitate toward sports that are compatible with their psychological dispositions. Longitudinal studies with sport type as the independent variable could go far in clarifying the perennial issue of social learning vs. self-selection in perceptions of the legitimacy of aggression within various sport types. The study also did not control for other influences such as parents, coaches, peers, moral

development, and personal values. As noted by Stephens and Bredemeier (1996), a full understanding of athletes' perceptions of aggressive behavior in sport would require examination of such factors.

Another aspect of the study that presents challenges for interpretation is the characterization of specific sports as *collision*, *contact*, or *noncontact*. For purposes of comparison of results, we used categories that were consistent with Conroy et al.'s (in press) classifications. If, however, basketball had been classified as "collision" rather than "contact" or baseball and softball had been classified as "contact" rather than "noncontact," the results of the study might have been different.

An additional question raised by this study relates to the apparent curvilinear pattern among male athletes across collision, contact, and noncontact sports (Figure 1). The present study used an interaction design and, as such, did not examine the data for differences *within* gender. If the differences that appear to exist among males in this sample are real (i.e., statistically significant), they would be incongruent with previous research in which males' perceptions of aggression increased with the level of contact involved (Bredemeier et al., 1987; Silva, 1983). A research design in which sport types are nested within gender could detect differences that might exist among males and among females and would make important contributions to our understanding.

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Notes

¹An expert panel of psychologists, sport psychologists, and an experienced referee verified the content validity of the SBI. They examined the 10 scenarios and confirmed that they described behavior that was "clearly intentional, potentially-injurious, and rule-violating" (Conroy et al., in press). Moreover, the panel affirmed that the questions associated with the scenarios "appeared to tap the construct of perceived legitimacy." Conroy et al. established the internal consistency of the SBI with a Cronbach's alpha of .99 in a sample of participants ranging in age from 8 years to 19 years.

²The original version of the SBI poses six additional questions related to the legitimacy of the action at specific levels of competition (e.g., high school, intercollegiate, professional).

³The presentation of four response categories in clusters of 2 points each along a continuous scale of 1 to 8 allows respondents to express perceptions of greater or less legitimacy within each cluster.

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