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The Effects of Moral Identity on Moral Emotion and Antisocial Behavior in Sport

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**Abstract**

Given the prevalence and significance of antisocial behavior in sport, researchers have begun to explore the role that self-conscious moral emotions play in reducing such behavior. In this research, we examined whether moral identity inhibits antisocial behaviour and whether these effects are mediated by anticipated guilt. Using a cross-sectional design, Study 1 showed that moral identity was negatively related to antisocial behavior. Study 2 found that the negative association between moral identity and antisocial behavior was mediated by anticipated feelings of guilt. Using an experimental design, Study 3 showed that priming moral identity reduced antisocial behavior, and this effect was mediated by moral judgment, and in turn, anticipated guilt. The present findings suggest that athletes with a robust internalized moral self-schema are less likely to engage in antisocial behavior because of the intense feelings of guilt they are likely to experience when they engage in such behavior.

Keywords: anticipated guilt; moral behavior; moral identity; morality.

1        **The Effects of Moral Identity on Moral Emotion and Antisocial Behavior in Sport**

2            Understanding the conditions that lead athletes to engage in aggressive and other  
3 antisocial acts while playing sport is important in our efforts to create a psychologically  
4 healthy sport environment, where negative social interaction is minimized. Indeed, this has  
5 been a topic of research interest for several decades (e.g., Bredemeier, 1985; Shields &  
6 Bredemeier, 1995), and researchers have identified a variety of personal and social  
7 environmental factors that are associated with antisocial behavior in sport (see Kavussanu,  
8 2008), defined as behavior intended to harm or disadvantage another individual or group of  
9 individuals (Sage, Kavussanu, & Duda, 2006). However, the importance one places on being  
10 a moral person, known as moral identity (Aquino & Reed, 2002) has received scant attention  
11 in sport psychology research (e.g., Sage & Kavussanu, 2010). Moreover, the process through  
12 which moral identity might influence antisocial behavior has not been examined. The present  
13 research was designed to fill this gap in the literature.

14        **Moral Identity, Behavior, and Emotion**

15            Moral identity has been conceptualized in a variety of ways and different models of  
16 moral identity have different assumptions (see Hardy & Carlo, 2011). In our research, we  
17 adopted the social cognitive view of moral identity proffered by Aquino and colleagues, who  
18 defined moral identity as the cognitive schema that people hold about their moral character  
19 (Aquino, Freeman, Reed, Lim, & Felps, 2009). Aquino and Reed (2002) proposed that moral  
20 identity is organized around a set of moral traits such as caring, compassionate, honest, and  
21 generous and is stored in memory as a complex knowledge structure that comprises moral  
22 goals, traits, and values along with behavioral scripts. People vary in the degree to which they  
23 consider being moral as a central part of who they are, or the self-importance of moral identity  
24 (Aquino & Reed, 2002). Although we have many identities, at any given time, we can be  
25 conscious of only a subset of them, which are collectively known as the working self-concept

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1 (Aquino et al., 2009). When moral identity is cognitively salient in the working self-concept,  
2 it is more likely to affect thoughts and emotions (Aquino, Reed, Thau, & Freeman, 2007).

3 Moral identity is a strong source of moral motivation, that is, the motive to behave  
4 morally, due to our desire to maintain self-consistency (Blasi, 1984; Aquino et al., 2009). In  
5 empirical research, moral identity has been associated with moral behavior in a variety of  
6 contexts. For instance, individuals whose moral identity was central to their self-concept  
7 were more likely to donate food to the needy (Aquino & Reed, 2002) and less likely to lie in a  
8 salary negotiation (Aquino et al., 2009). In the context of sport, only two studies have  
9 examined moral identity in relation to moral behavior. These studies have shown that team  
10 sport players with strong moral identity reported less frequent antisocial behavior toward their  
11 opponents (Kavussanu, Stanger, & Boardley, 2013; Sage et al., 2006). Thus, there is some  
12 evidence linking moral identity to antisocial behavior in sport, but more research is needed to  
13 replicate these findings with larger and more diverse samples.

14 There is also evidence linking moral identity and emotion. In one experiment, activating  
15 moral identity through a priming task led American university students to experience  
16 somewhat stronger negative emotional reactions to a newspaper story describing abuse of  
17 Iraqi prisoners-of-war by American soldiers, who were guarding them (Aquino et al., 2007).  
18 Specifically, the participants in a moral identity group felt slightly more ashamed, distressed,  
19 guilty, and upset than those in a non-moral identity group. Moral identity has also been linked  
20 to accentuated startle blinks while viewing affective images depicting players, who were hurt  
21 by an opponent or were badly injured during play, providing the first objective evidence for  
22 the link between moral identity and emotional processing in athletes (Kavussanu,  
23 Willoughby, & Ring, 2012). However, these studies examined emotional reactions to the  
24 unethical behavior of others rather than one's own behavior. It is still not known whether  
25 moral identity influences moral emotions in relation to one's own morally relevant behavior.

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1 Anticipated self-conscious moral emotions could act as the mechanism through which moral  
2 identity inhibits unethical conduct.

3 An emotion that is a prime candidate for this mechanism is guilt. Guilt involves a  
4 negative evaluation of the *behavior* (e.g., *I did a bad thing*), and is accompanied by remorse  
5 and regret and a drive to make amends through confession and apologizing (Tangney et al.,  
6 2007). Guilt is an adaptive emotion: Individuals who experience guilt try to take  
7 responsibility over their actions and attempt to repair any damage done. Guilt is referred to as  
8 moral, self-conscious emotion, because it is generally elicited by violations of one's moral  
9 standards (Tangney et al., 2007; Zebel, Doosje, & Spears, 2009). Greater proneness to  
10 experience guilt in social situations has been associated with lower levels of aggression  
11 (Stuewig, Tangney, Heigel, Harty, & McCloskey, 2010). Anticipated guilt has also been a  
12 negative predictor of delinquent and aggressive behavior in children (Bandura, Barbaranelli,  
13 Caprara, & Pastorelli, 1996) and has been associated with lower reported likelihood to behave  
14 antisocially in athletes (Stanger, Kavussanu, Boardley, & Ring, 2013; Stanger, Kavussanu, &  
15 Ring, 2012). Thus, an accumulating body of evidence suggests that individuals, who  
16 experience guilt after transgressing, are less likely to engage in aggressive and other antisocial  
17 behaviors.

18 Based on the above evidence, it is reasonable to expect that athletes with a strong moral  
19 identity should experience guilt after engaging in antisocial behavior. Supporting evidence  
20 also comes from Bandura's (1991) theory of moral thought and action. According to this  
21 theory, through the course of socialization individuals develop moral standards which regulate  
22 behavior through evaluative self reactions: People experience self reproof when their actions  
23 violate their moral standards, and refrain from behaving in ways that bring self condemnation  
24 (Bandura, 1991, 2002). For example, people may refrain from deliberately hurting an  
25 opponent because of the feelings of guilt, which they anticipate they would experience if they

1 behaved aggressively. Anticipated affective self-sanctions (e.g., guilt) in reaction to one's  
2 behavior, keep behavior in line with moral standards. This parallels the view of Aquino et al  
3 (2009) that moral identity should lead one to behave morally due to the desire people have to  
4 maintain self-consistency. Similar to the individuals who feel being moral is an important part  
5 of their identity, people who have developed high moral standards, feel that behaving in the  
6 right way is important.

### 7 **The Present Research**

8 In sum, moral identity, a strong source of moral motivation due to our desire for self-  
9 consistency (Blasi, 1984) has been associated with moral behavior in a variety of contexts,  
10 including sport (e.g., Aquino & Reed, 2002; Kavussanu et al. 2013; Sage et al., 2006). Guilt is  
11 assumed to inhibit unethical behavior and has been associated with low aggression (Bandura,  
12 1991; Tangney et al., 2007). Moreover, individuals whose moral identity was salient reported  
13 negative emotional reactions to the aggressive behavior of others (Aquino et al., 2007).  
14 However, we still do not know whether moral identity influences moral emotion in relation to  
15 one's own transgressive behavior. Importantly, the process through which moral identity  
16 could affect moral behavior has not been elucidated. The main purpose of this research was  
17 twofold: First, to investigate the effects of moral identity on antisocial behavior and  
18 anticipated guilt; and second to examine whether anticipated guilt mediates the effects of  
19 moral identity on antisocial behavior. As a secondary purpose, we also investigated whether  
20 moral judgment plays a mediating role in this process.

21 We investigated these purposes in three studies. In Studies 1 and 2, which were cross  
22 sectional, we investigated the relationship between moral identity and antisocial behavior  
23 toward teammates and opponents in sport. To date, this relationship has been examined in  
24 only two studies with relatively small samples (Kavussanu et al., 2013; Sage et al., 2006);  
25 establishing a link between moral identity and antisocial behavior directed towards teammates

1 and opponents in large samples would provide stronger evidence for the role of moral identity  
2 on antisocial sport behavior. In Studies 2 and 3, we investigated whether the relationship  
3 between moral identity and antisocial behavior is mediated by anticipated guilt. Study 2 was  
4 designed to provide preliminary cross-sectional evidence for mediation, while in Study 3, we  
5 used an experimental design to examine the effects of moral identity on athletes' likelihood to  
6 engage in antisocial behavior, and the mediating role of anticipated guilt. As part of this  
7 process, in Study 3, we also investigated whether moral identity influences moral judgment  
8 and anticipated guilt, and whether moral judgment mediates the effects of moral identity on  
9 antisocial behavior via its effects on guilt.

## 10 **Study 1**

### 11 **Method**

12 **Participants.** Participants were male ( $n = 457$ ) and female ( $n = 409$ ) university  
13 students who competed in team sports. Their average age was 21.15 ( $SD = 4.57$ ) years, and  
14 their main sport was soccer ( $n = 231$ ), rugby ( $n = 183$ ), netball ( $n = 171$ ), field hockey ( $n =$   
15 143), basketball ( $n = 72$ ), lacrosse ( $n = 54$ ), or American football ( $n = 12$ ). At the time of data  
16 collection, participants had been competing in their main sport on average for 8.78 ( $SD =$   
17 5.27) years, and the highest level at which they had competed was club (50%),  
18 regional/county (35%), national (10%), and international (5%).

### 19 **Measures**

20 **Moral identity.** Moral identity was assessed using the 5-item internalized dimension of  
21 the moral identity scale (Aquino & Reed, 2002). Participants were presented with nine traits  
22 (e.g., *caring, fair, kind, helpful*) validated as necessary characteristics of a moral person  
23 (Aquino & Reed, 2002), and were asked to respond to statements concerning these traits (e.g.,  
24 "It would make me feel good to be a person who has these characteristics"). Responses were  
25 made on a 7-point scale, anchored by 1 (*strongly disagree*) and 7 (*strongly agree*). Reed and

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1 Aquino (2003) have provided evidence for the reliability ( $\alpha = .83$ ) of this scale. The mean of  
2 the five items was calculated and used in all analyses. Aquino and Reed (2002) argued that  
3 asking people to think about someone who possesses the nine traits would make more  
4 accessible other traits around which the moral identity of a person is organized. Thus, the  
5 centrality of moral identity to the self can be assessed in this manner. This argument is based  
6 on the social-cognitive phenomenon of spreading activation (Collins and Loftus, 1975) among  
7 clustered self-relevant and moral traits in memory (cited in Aquino et al., 2009). The  
8 internalization dimension of moral identity is treated as synonymous with the concept of  
9 moral identity centrality (Aquino, McFerran, & Laven, 2011).

10 **Antisocial behavior.** Antisocial behavior was measured with two subscales from the  
11 Prosocial and Antisocial Behavior in Sport Scale (PABSS; Kavussanu et al., 2013; Kavussanu  
12 & Boardley, 2009): antisocial behavior toward opponents (eight items; e.g., deliberately  
13 fouled an opponent; tried to injure an opponent) and antisocial behavior toward teammates  
14 (five items; e.g., verbally abused a teammate, argued with a teammate). Participants were  
15 presented with the 13 antisocial behavior items and were asked to indicate how often they  
16 engaged in each behavior while playing their main sport; responses were made on a 5-point  
17 scale, anchored by 1 (*never*) and 5 (*very often*). Kavussanu and colleagues (Kavussanu et al.,  
18 2013; Kavussanu & Boardley, 2009) have provided extensive evidence supporting the validity  
19 and reliability of the PABSS. In a study that included both observed and reported antisocial  
20 behaviors similar to the ones measured by the PABSS (Kavussanu, Seal, & Phillips, 2006),  
21 the correlation between the two sets of behaviors was very strong ( $r = .71$ ).

### 22 **Procedure**

23 Prior to the beginning of the study, the research protocol was approved by the local  
24 research ethics committee; the same procedure was followed in the two subsequent studies.  
25 Athletes were approached by one of the authors, who informed them of the study's aims, its



1 voluntary nature, and that honesty in responses was vital, the data would be used only for  
2 research purposes, and the information would be kept confidential. Participants were asked to  
3 complete the questionnaires with respect to their main team sport.

#### 4 **Results and Discussion**

5 Descriptive statistics, Cronbach's (1951) alpha coefficients, and zero-order Pearson  
6 correlations between moral identity, antisocial behavior, and gender are presented in Table 1.  
7 Alpha coefficients were very good (range = .82–.86). This group of athletes had a relatively  
8 strong sense of moral identity and reported engaging rarely to sometimes in antisocial  
9 behavior while playing their sport. Moral identity was negatively related to antisocial  
10 behavior toward both opponents and teammates; the effect sizes were moderate-to-large ( $r$ s –  
11 .35, –.40). The mean scale values and the relationships identified in this study are in line with  
12 those reported in previous research (e.g., Aquino & Reed, 2002; Kavussanu & Boardley,  
13 2009; Kavussanu et al., 2013; Sage et al., 2006). Moral identity was also found to be higher in  
14 females compared to males, which is also consistent with previous research (Aquino & Reed,  
15 2002). Finally, males reported more frequent antisocial behavior than females, replicating  
16 previous studies on sport morality (for reviews see Kavussanu, 2007, 2012).

#### 17 **Study 2**

18 In the second study, we investigated the extent to which moral identity was related to  
19 participants' anticipated guilt, if they were to commit an antisocial act, and, in turn, whether  
20 this moral emotion would be associated with their antisocial sport behavior. We expected that  
21 moral identity would be positively related to anticipated guilt in relation to an antisocial act  
22 and negatively related to antisocial behavior. We also expected that anticipated guilt would  
23 mediate the effects of moral identity on antisocial behavior.

#### 24 **Method**

##### 25 **Participants and Procedure**

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1 Participants were male ( $n = 160$ ) and female ( $n = 86$ ) university students participating in  
2 team sports, whose average age was 20.22 ( $SD = 2.68$ ) years. Their main sport was soccer ( $n$   
3 = 119), netball ( $n = 46$ ), field hockey ( $n = 37$ ), rugby ( $n = 26$ ), basketball ( $n = 9$ ), korfbal ( $n =$   
4 6) or lacrosse ( $n = 3$ ). At the time of data collection, participants had been competing in their  
5 main sport for an average of 9.09 ( $SD = 4.13$ ) years; the highest level at which they had  
6 competed was club (41%), regional/county (49%), national (6%), and international (4%). The  
7 procedure was identical to that described in Study 1.

### 8 **Measures**

9 **Moral identity and antisocial sport behavior.** These variables were assessed using the  
10 scales described in Study 1.

11 **Anticipated guilt.** This emotion was assessed using the 5-item guilt subscale from the  
12 State Shame and Guilt Scale (Marschall, Saftner, & Tangney, 1994). First, participants read  
13 the following scenario, which was adapted from previous research (Stanger et al., 2012):  
14 *“While playing a critical match you are marking the opposing team’s best player. Your*  
15 *opponent is getting the better of you. You decide to deliberately foul your opponent which*  
16 *results in them getting seriously injured”*. Next, participants were asked to imagine that they  
17 had committed that foul and indicate how they would feel afterwards. The stem “After  
18 injuring my opponent I would feel...” was followed by items measuring guilt. Example items  
19 are “remorse, regret” and “bad about what I had done” and responses were made on a 5-point  
20 scale, anchored by 1 (*not at all*) and 5 (*extremely*).

### 21 **Results and Discussion**

22 Descriptive statistics, alpha coefficients, and zero-order correlations for all variables are  
23 presented in Table 2. Cronbach’s (1951) alpha coefficients were very good ( $\alpha s = .83-.95$ ) for  
24 all measures. Athletes reported a relatively high moral identity; that they engaged rarely to  
25 sometimes in antisocial behavior while playing sport; and that after deliberately fouling and

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1 injuring an opponent, they would feel moderate levels of guilt. Moral identity was negatively  
2 associated with antisocial behaviors towards opponents and teammates, and positively linked  
3 to guilt. Thus, individuals, who placed greater importance on being a moral person, expected  
4 to experience more guilt after having hurt another player. In addition, anticipated guilt was  
5 negatively related to antisocial opponent behavior: Players who indicated that they anticipated  
6 feeling less intense guilt after committing the bad foul, also tended to engage in antisocial  
7 behavior. No significant relationships were noted between guilt and antisocial teammate  
8 behavior. This may be because the behavior described in the scenario (with respect to which  
9 participants indicated their anticipated guilt) was directed towards an opponent rather than a  
10 teammate, and involved physical injury, which is more severe than verbal antisocial behaviors  
11 typically directed toward teammates. The negative relationships between moral identity and  
12 antisocial behavior identified in the first study were replicated in Study 2.

13       Mediation analysis using bootstrapping (Preacher & Hayes, 2008) and PROCESS for  
14 SPSS v2.1 (Hayes, 2013) was conducted in order to examine whether anticipated guilt  
15 mediated the relationship between moral identity and antisocial behavior. Results of this  
16 analysis are presented in Figure 1, where it can be seen that moral identity predicted antisocial  
17 opponent behavior both directly ( $-0.318$ , 95% CI =  $-0.401$  to  $-0.235$ ) and indirectly, via  
18 anticipated guilt ( $-0.042$ , 95% CI =  $-0.087$  to  $-0.015$ ). Based on recommendations by  
19 Preacher and Kelley (2011), the kappa-squared ( $\kappa^2$ ) statistic, which is the ratio of the obtained  
20 indirect effect to the maximum possible indirect effect, is reported as the effect size for  
21 mediation. This is interpreted in terms of Cohen's (1988) effect size guidelines for squared  
22 correlation coefficients, with values of .01, .09, and .25, representing small, medium, and  
23 large effect sizes, respectively. The mediation effect was small-to-medium ( $\kappa^2 = .064$ , 95%  
24 CI = .025 to .121) and was not moderated by gender, as shown by Hayes' (2015) index of  
25 moderated mediation.

1 Overall, these findings reveal that the effects of moral identity on antisocial opponent  
2 behavior could be explained, in part, by the intensity of guilt that participants anticipate  
3 feeling if they were to commit a foul that would result in injuring another player. These  
4 results provide preliminary evidence for the mediating role of anticipated guilt in the  
5 relationship between moral identity and antisocial behavior in sport.

6 **Study 3**

7 The findings of Study 2 add to the literature showing that moral identity is negatively  
8 associated with antisocial behavior in sport (Kavussanu et al., 2013; Sage et al., 2006) and  
9 positively linked to negative emotional responses to abusive behaviour of others (Aquino et  
10 al., 2007). Study 2 also provided some evidence for mediation, but the evidence was based on  
11 cross-sectional data. In addition, in Study 2, antisocial behavior was measured in a general  
12 manner, by asking participants to indicate the frequency of their antisocial behavior while  
13 playing their sport, whereas anticipated guilt was assessed with respect to a specific scenario.  
14 This could explain, in part, why the mediation effect size was small to medium. In Study 3,  
15 we aimed to address these limitations using an experimental design and assessing both  
16 antisocial behavior and anticipated guilt with respect to the same specific behavior.

17 We also examined moral judgment as a potential mediator of the effects of moral  
18 identity on antisocial behavior. It has been suggested that individual differences on moral  
19 identity have implications for the criteria one uses to judge the morality of the conduct (Hardy  
20 & Carlo, 2011). It is reasonable to expect that an individual who places high importance on  
21 being moral will view harmful behavior to be morally wrong. Indeed, Sage et al. (2006) found  
22 that male soccer players with a robust moral identity were less likely to judge antisocial  
23 behaviors as appropriate, while Aquino and Reed (2002) found that participants who placed  
24 high importance on being a moral person also reported more mature levels of moral  
25 reasoning, as measured by a three dilemma version of Rest's Defining Issues Test (1979). In

1 our research, we used the term moral judgment to refer to the cognitive evaluation or  
2 judgment of the morality of the conduct, similar to Aquino et al (2007). Accordingly, we  
3 hypothesized that higher moral identity would be associated with more severe judgments that  
4 committing a transgression is morally wrong, and in turn, stronger anticipated guilt (Bandura,  
5 1991; Stets & Burke, 2005; Stets & Carter, 2011). Thus, both these cognitive and emotional  
6 responses were, in turn, expected to inhibit antisocial behavior.

7 The current study fills a gap in the literature by experimentally examining whether  
8 moral identity inhibits antisocial behavior in sport, and, whether the effects of moral identity  
9 on antisocial behavior are mediated by moral judgment and anticipated guilt. We  
10 hypothesized that moral identity would lead athletes to judge a specific antisocial behavior to  
11 be more morally wrong, anticipate experiencing more intense guilt, and report lower  
12 likelihood of engage in the behavior. Moral judgment and anticipated guilt were expected to  
13 mediate the effects of moral identity on antisocial behavior. In this study, we presented  
14 participants with a scenario describing a specific antisocial behavior and asked them to  
15 indicate how likely they were to engage in the behavior. Thus, the term antisocial behaviour  
16 in study 3 refers to reported likelihood to behave antisocially. We use this term for simplicity  
17 reasons and to maintain consistency with the other two studies reported in this manuscript.

### 18 **Method**

#### 19 **Participants**

20 Eighty-six (48 males, 38 females) university students enrolled in an undergraduate sport  
21 and exercise sciences programme participated in the study. Their mean age was 18.85 ( $SD =$   
22 1.13) years.

#### 23 **Procedure**

24 Upon approval of the study by the local ethics committee, participants were randomly  
25 assigned to either a moral identity (24 males, 18 females) or a control (24 males, 20 females)

1 group. Then, participants were administered a manipulation depending on their assigned  
2 group, followed by completion of measures assessing the study variables and finally a  
3 manipulation check. These are described in detail below.

4 **Manipulation.** First, participants completed the experimental manipulation, using the  
5 method devised by Aquino and colleagues (Aquino et al., 2007, 2009) and used in previous  
6 sport research (Kavussanu et al., 2012). Specifically, participants were presented with nine  
7 words and were instructed to think about what each word means to them, and then to copy, by  
8 hand, each word four times on a sheet of paper. Next, they were told to think about each of  
9 the nine words and write a short story about themselves using each of the words at least once.  
10 Finally, they were asked to re-read their story and circle each of the nine key words every  
11 time it appeared in their story.

12 For participants in the moral identity group, the words, which referred to moral traits,  
13 were: *caring, compassionate, fair, friendly, generous, helpful, hardworking, honest, and kind*.  
14 Asking participants to think about themselves in terms of these traits was expected to make  
15 moral identity more salient in their working self-concept because the traits are strongly  
16 associated with the moral self-schema (Aquino et al., 2007) thereby increasing the  
17 accessibility of moral identity within the working self-concept. The control group performed  
18 the same task but used nine words that referred to everyday household objects that were  
19 devoid of moral content: *book, car, chair, computer, desk, house, pen, street, and table*.  
20 Asking these participants to write and use nine words devoid of moral content was not  
21 expected to activate the moral self-schema in the control group (Aquino et al., 2009).

22 **Measures.** Following the experimental manipulation, participants completed measures  
23 of moral judgment and antisocial behavior with respect to a scenario - adapted from previous  
24 research - describing an antisocial behavior (Kavussanu & Roberts, 2001; Stanger et al.,  
25 2013). Participants read: “*Imagine that you are playing in a very important match. The score*

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1 *is tied and the game is almost over. Your opponent has the ball and is in a good position to*  
2 *score. The only way to prevent them from scoring will result in them being hurt and*  
3 *experiencing severe pain”*. In line with previous research (Kavussanu & Ring, in press;  
4 Stanger et al., 2013), participants were asked to indicate (a) the extent to which they thought  
5 that hurting their opponent was *morally wrong* on a 7-point scale (1 = *not at all wrong*; 7 =  
6 *extremely wrong*) and (b) how likely they would be to hurt their opponent in such a situation,  
7 on a 7-point scale (1 = *not at all likely*; 7 = *very likely*). These items measured moral  
8 judgment and antisocial behavior (or likelihood of behave antisocially), respectively. The  
9 specific described portrayed in the scenario is one of the behaviors included in the antisocial  
10 opponent behavior subscale of the PABSS (Kavussanu & Boardley, 2009).

11 Next, participants completed a measure of anticipated guilt with respect to the same  
12 scenario described above, with one exception: They were asked to imagine that they *had*  
13 *deliberately fouled their opponent to prevent them from scoring, which caused them to*  
14 *experience severe pain*. Following the scenario, participants were asked to indicate how they  
15 would anticipate feeling after hurting their opponent in this situation. They responded to the  
16 stem “After hurting my opponent I would feel...” followed by the 5-items from the guilt  
17 subscale of the State Shame and Guilt Scale (Marschall et al., 1994), as per Study 2 above.

18 **Manipulation check.** At the end of the session, participants completed a manipulation  
19 check. They were asked to think about the story they wrote, and indicate, on a 7-point scale,  
20 anchored by 1 (*to some extent*) and 7 (*to a great extent*), how much the story reflected how  
21 they see themselves from the perspective of a moral person, a student, and a member of an  
22 organization. A 2 Group (moral identity, control)  $\times$  2 Gender (male, female) ANOVA  
23 revealed that the moral identity group ( $M = 5.34$ ,  $SD = 1.15$ ) provided significantly higher  
24 moral ratings than the control group ( $M = 3.28$ ,  $SD = 1.91$ ),  $F(1, 80) = 34.70$ ,  $p < .001$ ,  $\eta_p^2 =$

1 .30. The two groups did not differ on the other items, and there were no gender differences.

2 Thus, the manipulation check confirmed that our manipulation was successful.

### 3 **Results and Discussion**

4 In the analyses reported below, we controlled for gender, because previous research has  
5 documented gender differences in emotion and moral variables (e.g., Conroy, Silva,  
6 Newcomer, Walker, & Johnson, 2001; Kavussanu, Stamp, Slade, & Ring, 2009; Whittle,  
7 Yucel, Yap, & Allen, 2011). Partial eta-squared ( $\eta_p^2$ ) is reported as the effect size, and equals  
8 the adjusted  $R^2$  obtained in regression analyses (Tabachnick & Fidell, 2007); values of .02,  
9 .13 and .26 for  $\eta_p^2$  indicate small, medium and large effect sizes, respectively (Cohen, 1992).  
10 Separate 2 Group (moral identity, control) ANCOVAs (controlling for gender) revealed that,  
11 compared to the control group, the moral identity group judged that the behavior described in  
12 the scenario was more morally wrong,  $F(1, 83) = 5.25, p < .03, \eta_p^2 = .06$  (Figure 2A),  
13 anticipated feeling more guilt if they had hurt their opponent,  $F(1, 83) = 5.32, p < .03, \eta_p^2 =$   
14  $.06$  (Figure 2B), and reported less likely antisocial behavior,  $F(1, 83) = 4.71, p < .04, \eta_p^2 = .05$   
15 (Figure 2C).

16 A serial-step mediation analysis was conducted employing bootstrapping using the  
17 PROCESS SPSS macro (Hayes, 2013) to determine whether moral judgment and anticipated  
18 guilt mediated the effects of moral identity on antisocial behavior. As can be seen in Figure 3,  
19 moral identity negatively antisocial behavior indirectly via moral judgment and, in turn, via  
20 anticipated guilt (point estimate of  $-.092$ , 95% CI =  $-.303$  to  $-.016$ ). When controlling only  
21 for moral identity, moral judgment was a significant negative predictor of antisocial behavior  
22 ( $\beta = -.36, p < .001$ ). However, when controlling for guilt this relationship was attenuated ( $\beta =$   
23  $-.24, p = .02$ ). In contrast, when controlling for only moral identity, guilt negatively predicted  
24 antisocial behavior ( $\beta = -.44, p < .001$ ), but still remained a strong negative predictor of



1 antisocial behavior when also controlling for moral judgment ( $\beta = -.35, p < .001$ ). These  
2 analyses support the hypothesized sequencing of the mediating effect.

3 In sum, our findings revealed that the effects of moral identity on antisocial behavior  
4 can be explained in part by augmented judgments that behaving antisocially in this situation  
5 would be morally wrong, and in turn, increased anticipated feelings of guilt if players were to  
6 harm another player. These findings provide experimental evidence that moral identity  
7 reduces players' likelihood to act antisocially by heightening their moral judgment, which, in  
8 turn, increases their own anticipated feelings of guilt with regard to engaging in an antisocial  
9 act.

### 10 **General Discussion**

11 The construct of moral identity has recently received attention in sport psychology (e.g.,  
12 Sage & Kavussanu, 2010), with some evidence indicating a link between moral identity and  
13 antisocial behavior toward opponents (Kavussanu et al., 2013; Sage et al., 2006) and  
14 teammates (Kavussanu et al., 2013). However, this evidence is based on cross-sectional data,  
15 precluding assertions about the direction of causality. Moreover, the process through which  
16 moral identity may affect antisocial behavior has not been investigated in previous research.  
17 We conducted two cross-sectional studies and one experiment to examine whether moral  
18 identity influences antisocial behavior in sport and whether these effects occur through moral  
19 judgment and anticipated guilt.

20 A consistent finding across the two cross-sectional studies was the negative relationship  
21 between moral identity and antisocial behavior toward both opponents and teammates. The  
22 effect size was medium to large. Interestingly, the relationship was somewhat stronger for  
23 behavior toward opponents compared to teammates. This may be due to the nature of  
24 behaviors included in the two antisocial behavior subscales. Specifically, opponent behaviors  
25 such as trying to injure an opponent, physically intimidating and deliberately fouling an

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1 opponent, and breaking the rules of the game, are somewhat more severe from an ethical  
2 point of view compared to acts of arguing, swearing, and verbally abusing, which are some of  
3 the antisocial teammate behaviors that we measured. Our findings replicate the results of  
4 previous research (Kavussanu et al., 2013; Sage et al., 2006) using two large samples  
5 providing further support for the role of moral identity on antisocial behavior in sport. The  
6 findings show that those athletes who view being moral as an important part of their sense of  
7 self, are less likely to engage in antisocial behavior toward not only their opponents but also  
8 their teammates.

9         In Study 3, we experimentally primed moral identity to examine its effects on antisocial  
10 behavior. Participants responded to a scenario that described a hypothetical situation, where  
11 they had the opportunity to deliberately foul an opponent leading him or her to experience  
12 severe pain. Participants in the moral identity group were less likely than those in the control  
13 group to indicate that they would hurt their opponent if they were in this situation, providing  
14 the first experimental evidence for the causal role of moral identity on antisocial sport  
15 behavior. Our findings are in line with previous research that has reported a link between  
16 moral identity and antisocial behavior in sport (Kavussanu et al., 2013; Sage et al., 2006) and  
17 extend the findings of Aquino et al. (2009), who showed that individuals with a strong moral  
18 identity are less likely to lie in a salary negotiation.

19         A novel contribution of the present research is the mediating role of anticipated guilt on  
20 the relationship between moral identity and antisocial sport behavior. Thus, participants  
21 whose moral identity was primed were more likely to indicate that they would feel guilt if  
22 they deliberately fouled their opponent leading them to experience pain. This emotional  
23 response in turn predicted antisocial behavior, such that participants who expected to  
24 experience guilt were less likely to indicate that they would hurt their opponent. Our findings  
25 represent the first experimental evidence that moral identity affects antisocial behavior via its

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1 effects on anticipated guilt. Although previous studies have reported a link between moral  
2 identity and negative emotions, such studies have predominantly focused on evaluating the  
3 conduct of others (e.g., Aquino et al., 2007; Kavussanu et al., 2012), rather than acts  
4 committed by the self. Our findings extend this work and are in line with previous research  
5 that has shown that anticipated guilt is likely to deter someone from transgressive behavior  
6 (Bandura et al., 1996; Stanger et al., 2012, 2013).

7 Another novel contribution of our research is the influence of moral identity on moral  
8 judgment. Specifically, participants in the moral identity group were more likely to indicate  
9 that it would be morally wrong to hurt their opponent. Bringing moral identity to the working  
10 self concept heightened the evaluation of the morality of the conduct thereby leading to  
11 anticipated guilt, and in turn to less likely antisocial behavior. In their seminal work  
12 describing the construct of moral identity, Aquino and Reed (2002) found that participants  
13 who placed high importance on moral identity also reported more mature moral reasoning.  
14 Our findings support and extend this research by indicating, in an experimental setting, that  
15 moral identity augments judgments about the morality of the conduct; the findings are also in  
16 line with previous research in sport (Sage et al., 2006) and with proposals that the criteria for  
17 judging behavior often stem from individual differences in the centrality of moral identity  
18 (Hardy & Carlo, 2011).

19 Importantly, moral judgment mediated the effects of moral identity on antisocial  
20 behavior via its effects on guilt. Making moral identity salient may have made participants  
21 more sensitive to moral issues, leading them to judge a behavior that is harmful to others as  
22 morally wrong. This in turn elicited anticipated guilt that acts as deterrent of antisocial  
23 behavior. That judgment, guilt, and behavior were in the hypothesized direction in the moral  
24 identity group supports the view that moral identity is a source of moral motivation (Aquino  
25 & Reed, 2002; Blasi, 1984). Our findings have theoretical implications for the social

1 cognitive model of moral identity (Aquino et al., 2009; Aquino, McFerran & Laven, 2011).  
2 They suggest a mechanism through which moral identity could influence moral behavior,  
3 highlighting the important role of moral cognition and moral emotion in this process.

### 4 **Limitations and Future Research Directions**

5       Although our research provided some interesting insights, it also has some limitations,  
6 which need to be considered when interpreting the findings. First, we measured behavior  
7 using self-reports, thus we relied on participants accurately indicating their previous and  
8 future antisocial behavior. Although we emphasized the confidentiality of the findings and  
9 responses were anonymous, self reports are susceptible to bias. Future research could examine  
10 actual behavior (e.g., Kavussanu et al., 2006, 2009).

11       Second, in Study 3, we measured moral judgment and antisocial behavior using only  
12 one item, in line with previous research (e.g., Stanger et al., 2012, 2013; Stephens &  
13 Bredemeier, 1996). We did this because we were interested in judgment and reported  
14 likelihood to act with respect to a single antisocial behavior. Single-item measures are often  
15 used when the construct is simple and single-faceted, and in fact it is very difficult to develop  
16 many different items for such simple constructs without the items being redundant (e.g.,  
17 Poon, Leung, & Lee, 2002). Although we are not able to assess the reliability of these  
18 measures, both moral judgment and antisocial behavior evidenced the anticipated  
19 relationships with other variables (see Figure 3), providing evidence for their validity.  
20 Nonetheless, future studies should attempt to replicate the present findings with measures of  
21 moral judgment and behavior that consist of more than one item, as multi-item measures are  
22 preferable to single-item ones (Diamantopoulos et al., 2012).

23       Third, anticipated guilt in Studies 2 and 3 as well as judgment and behavior in Study 3  
24 were assessed in relation to one hypothetical situation. Although this situation – in which  
25 players have the opportunity to deliberately foul and hurt opponents – is relatively common

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1 (Kavussanu & Boardley, 2009), the conditions that could influence judgment, emotion and  
2 behavior may vary depending on other factors. For example, Aquino et al. (2011) showed that  
3 the percentage of participants, who had high moral identity centrality and lied in a salary  
4 negotiation was higher when performance incentives were present than absent. Future  
5 research could examine the effects of moral identity on antisocial behavior under different  
6 conditions, for example, by manipulating the extent to which officials are likely to sanction  
7 the transgression, the levels of provocation in the situation, and the importance of the situation  
8 to the individual. Finally, the utility of other models of moral identity (e.g., Stets & Carter,  
9 2011) in predicting antisocial behavior in sport could be investigated.

### 10 **Conclusion**

11       Understanding why people engage in antisocial sport behavior is an important topic of  
12 investigation with implications for the quality of the sport experience. The findings of the  
13 present research extend previous literature by providing empirical support for the social  
14 cognitive model of moral identity (Aquino et al., 2009; Aquino & Reed, 2002). We found that  
15 moral identity led to less likely antisocial conduct both directly and indirectly via augmenting  
16 anticipated feelings of guilt. Our findings have important implications for our understanding  
17 of the process through which moral identity inhibits antisocial behavior, but also demonstrate  
18 that moral identity is worthy of consideration by practitioners, who wish to reduce antisocial  
19 behavior in sport.

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Table 1

*Zero-order Correlations, Alpha Coefficients, and Descriptive Statistics: Study 1 (N = 966)*

Variable	<i>M</i>	<i>SD</i>	1	2	3
1. Moral identity	5.86	0.89	(.82)		
2. AB opponent	2.40	0.77	-.40**	(.86)	
3. AB teammate	2.01	0.69	-.35**	.48**	(.82)
4. Gender	0.47	0.50	.21**	-.38**	-.44**

AB = antisocial behavior. Gender was coded as 0 for males and 1 for females. Possible range was 1 -7 for moral identity and 1-5 for the two antisocial behaviors. Alpha coefficients for each measure are presented in brackets on the diagonal.

\*\*  $p < .01$ .

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Table 2

*Zero-order Correlations, Alpha Coefficients, and Descriptive Statistics: Study 2 (N = 246)*

Variable	<i>M</i>	<i>SD</i>	1	2	3	5
1. Moral identity	5.58	1.04	(.86)			
2. AB opponent	2.50	0.77	-.49**	(.86)		
3. AB teammate	2.26	0.75	-.33**	.55**	(.83)	
4. Anticipated guilt	3.40	0.91	.30**	-.32**	-.11	(.85)
5. Gender	0.35	0.48	.37**	-.38**	-.38**	.18**

AB = antisocial behavior. Gender was coded as 0 for male and 1 for female. Possible range was 1 -7 for moral identity and 1-5 for all other variables.

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

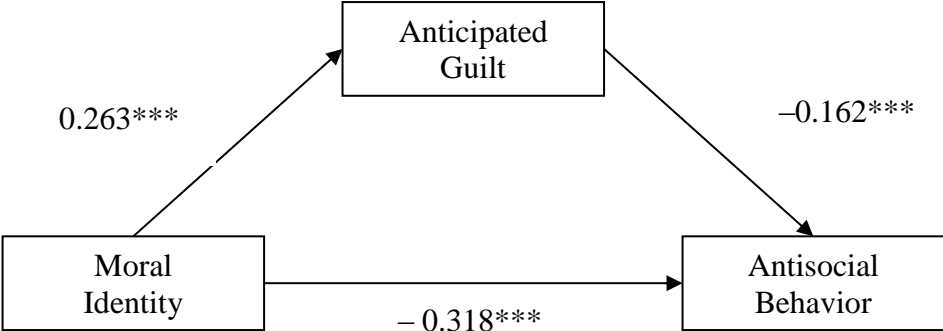


Figure 1. Effects of moral identity on antisocial behavior toward opponents, in Study 2.

Values refer to standardized regression coefficients; the uncorrected coefficient is shown in brackets.

\*\*\*  $p < .001$ .

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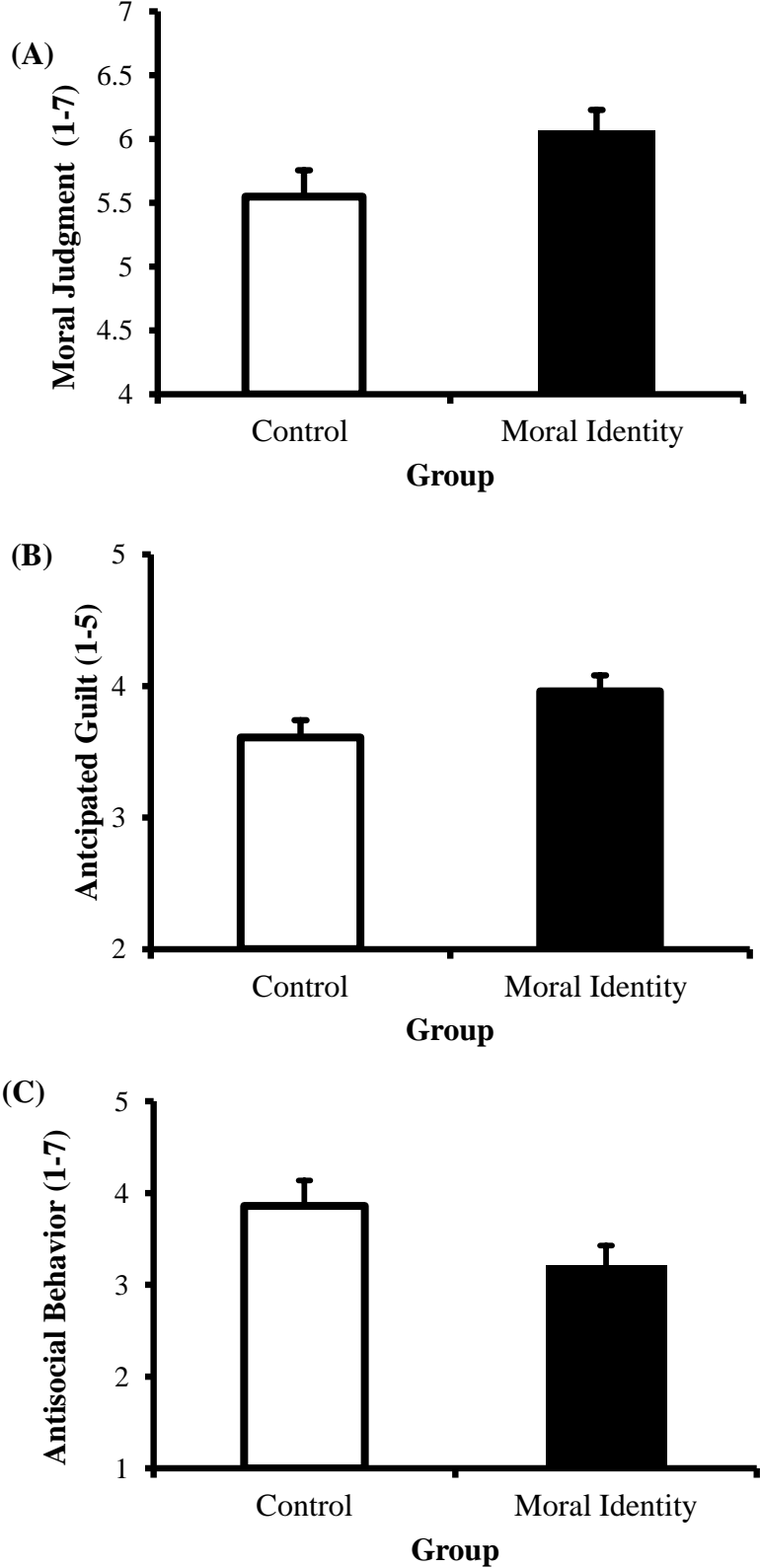


Figure 2. Effects of moral identity on moral judgment (panel A), anticipated guilt (panel B), and antisocial behavior (panel C) in Study 3.

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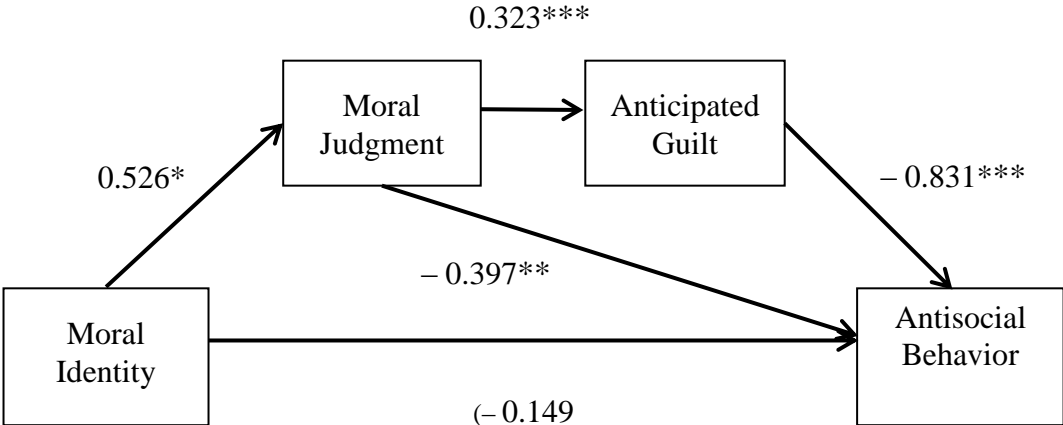


Figure 3. Effects of moral identity on antisocial behavior, in Study 3. Moral identity group was coded 1, and the control group was coded 0. Values are unstandardised regression coefficients.

\*  $p < .05$ ; \*\*  $p < .01$ , \*\*\*  $p < .001$ .